

CHAPTER - I

INTRODUCTION

1.1 General Background

Nepalese Economy is predominantly a subsistent agricultural economy, which contributes about 40 percent of GDP and provides employment to more than 80 Percent of the economically active population. Financial institutions, like Banks, accumulate the savings of the people from all the economic sectors and mobilize them to productive and effective sector in a systematic manner. So, sound-banking system is the crucial means to accelerate the development of a country by strengthening the economic condition in today's globalized economy of the twenty-first century. This requires the well-developed corporate culture, proper management of risk and return and healthy competitive environment that facilitate mobilization of small saving in the commercial and industrial sectors that will enhance the economic and social welfare of a country.

A modern financial sector provides electronic banking services. ATM services, credit cards debit cards, innovative insurance products and services, attractive pension schemes derivatives, hedging and financial future. It can provide a wide range of financial service at lower costs while minimizing financial risk to a large number of customers. Non-Performing Assets (NPA) or Non-Performing Loan (NPL) is a burning problem of Nepalese financial sector. In the present banking scenario, NPA is being more headaches for the banking sector. In the general context, non-performing assets are nothing but those advances that do not generate income. In other words it refers to those unproductive assets of any firm that cannot be converted into cash within specified time limit. If the credit allowed by banks and financial institutions turns bad, it creates. NPA percentage in assets portfolio shows health of a bank. The performance of any financial institution is

greatly measured with the coverage of NPA in that particular institution. Since the prime sources of income for the bank are generated through income from loan and advances, increase in non-performing assets may lead bank in the verge of collapse.

As per the rules laid down by Nepal Rastra Bank, the loan and advances, which is overdue for 3 months or more, should be treated as NPA. Therefore, the significance of the study is for banking sector. Major impacts of NPA lie in the fact that it does not generate income. The credit remains idle. Also it hits in the profit of a bank by requiring a large sum from its Income as provisions. As overdue ageing more than 3 month, 6 months and one year requires 25%, 50% and 100% provisions respectively as per the NRB directives. A large sum of money goes as a provision from income, which is virtually sure to reduce the profit. Furthermore, borrowing cost of resources locked in NPA and opportunity loss due in none recycling of funds are other impacts. It also increases the administrative and recovery cost and legal cost as well. Effect on employee morale and decision-making. Lower image and rating of bank and reduce investor and foreign aid agencies confidence are some of the prominent impacts.

The primary objective of a bank like any other commercial organization would be to enhance profitability form their operation, generate surpluses adequate for ensuring growth and increase shareholder's value. In today's competitive scenario, profits and the index of the efficiency and banks rating are decided on the basis of the return on assets, return on equity and the profits generated. These indicate the functional, operating and allocate efficiency of the banks and investors compare these indices to evaluate the banks. "The capital adequacy norms ensure that banks cannot increase their assets without increasing their assets without increasing their capital". Only profitable banks or those that are perceived to name clear edge over the others to generate future profits are likely to be rewarded by the investors with

their funds. In the era where capital markets decide allocation of funds among competitive investments, profitability is the key factor for such allocation.

1.2 Statements of the Problem

Despite the better performance and quality services, there are still problems within commercial banks, which need to be resolved. In the recent year, number of development banks, finance companies, joint-venture banks, rural banks and co-operative societies came into existence bringing high competition in the market. They have been facing neck-to-neck competition against one another. Government policy of economic liberation has further intensified the competition, which has ultimately affected the profitability of the banks. It was observed that commercial banks are concentrating their activities in urban areas. In Nepal, 90 percents of population live in the rural areas and 81 percent of population depends on agriculture. It is difficult to solve the credit problems of the country because commercial banks are reluctant to enter rural, and agriculture areas. Besides other problems, the country is facing the major challenge of high non-performing loan (NPL) of banking sector, which comes around 30 percent of the total loan. This basically happened by the weak management with two large public sector banks who's NPL is around 60% of the total loan. The supervision and regularity system of the central bank along with slowdown in economic activities has attributed to this situation.

Poor governance was resulted from political and insider-lending lack of independency at the top management weak information system, and weak legal framework and accounting system etc, are the main cause of increasing NPL in government owned two banks. Such malpractices further deteriorated the conditions of the banks. Moreover, the board of directors, the apex body in both banks was not able to withstand pressures form outside and virtually failed to chalk out the clear future strategy.

Lack of adequate and effective analysis and evaluation in connection with the purposed project or customer, weak legal regularity framework. Lack of effective monitoring and supervision, misuse of loan provided for the particular purpose, unsecured collateral and willful defaulter is the main causes, which may deteriorate the quality of the investment. In this regard, study deals with following issues:

-) What is condition of NPA in Nepal Investment Bank Limited and Machhapuchhre Bank Ltd?
-) What is the trend of NPA?
-) What are the main factors behind the increment of NPA?
-) What measures should be adopted to overcome the problem of NPA?

1.3 Objectives of the Study

The main objective of this study is to compare and analyze the financial performance of Nepal Investment Bank and Machhapuchhre Bank with special focus on NPA. The specific objectives are as follows:

-) To present and analyze data related to NPA and performance of sample banks.
-) To analyze the capital adequacy position of the selected banks.
-) To observe the relationship of NPA with return on assets, return on equity, return on loan and advances, loan loss provision, total assets and advances, total deposit.
-) To find out the impact of NPA on total assets, total deposit, total loan and advances, performing loan, and net profit of selected banks,
-) To make relevant suggestions and recommendation based on the analysis of data.

1.4 Limitations of the Study

Main source of data collections secondary, i.e. from the banks publication of the annual reports and from their websites. Availability of data is the main limitation of this study. There are some difficulties to get sufficient information as banks hesitate to provide data easily. Another limitation of this study is the time limitation as the deadline to submit the study was almost came to an end. Every study has its own limitation and here is some other limitation and difficulties occurred while conducting this study:

-) The main focus of this study is based on two-selected commercial bank, Nepal Investment Bank Ltd. and Machhapuchhre Bank Ltd.
-) The operation periods for both banks are very few so the time period covered by the study is only seven years. Therefore, the sample size was very low for statistical analysis.
-) Some of the statistical as well as financial tools of comparison and analysis shall be used in this used. Hence, the drawbacks and weakness of those tools may adversely affect the outcomes of the study.
-) This study has been conducted to fulfill the requirement of the MBS program to TU not for generalization purpose.
-) This study only concerns with the NPL and related variables of NPL.
-) As being the partial requirement and the nature of data to be used in this study, basically secondary data will be used.
-) The time was very constraints and in very short time span the study was conducted.

1.5 Significance of the Study

The significance of this study will also be for development banking sector, finance companies, co-operative, researches/students who want to study in this topic, other interested parties and of course, the selected two banks.

The management can identify the comparative status between NIBL and MBL and they can understand their weak area, which should be corrected. The analysis may also help to identify effective use of resources for efficient and profitable operation having the efficient service to the people. The study will be helpful to the policy makers while formulating the policy and people can understand how much they are taking benefits from commercial banks.

1.6 Organization of the Study

The study has been divided into following five chapters:

Chapter I deal with the subject matter of the study consisting introduction, background of the study, statement of the problem, objective of the study, limitations of the study, significance of the study and organization of the study.

Chapter II deals with the review of literatures related to this study.

Chapter III deals with research methodology employed in the study which includes the research design and sample, nature and sources of data and analysis method and processes that are planned for conductive this study.

Chapter IV includes presentation and analysis of data according to research methodology.

Chapter V provides summary of the study, its conclusion and some suggestion and recommendation will be provided to the sample banks to overall banking system also.

CHAPTER - II

REVIEW OF LITERATURE

The review of literature is a very important aspect of the research. It is reviewing of research studies of other relevant proposition in related area of the study, so that, all the past studies, their conclusion and deficiencies may be known and further research can be conducted. For this, several books, dissertation, reports, hands out and articles published in journals and Newspapers are reviewed. This chapter has been divided into the following parts.

2.1 Conceptual Framework

2.1.1 Origin of Nepalese Financial System

The origin of the word "Bank" is linked to: Latin word "bancus" meaning a bench, Italian word "banca" meaning a bench, French word "banque" meaning a bench. Since there is no unanimity, it is difficult to say exactly from which of these words, the term "bank" has been derived from. With the gradual development of bank. Its functions are also increasing. It only dealt with the exchanges of money in its preliminary phase, but later it started accepting deposits from the public against interest and providing them in the form of loans to the needy persons were the basic functions defined. Today, however, banks cover wide range of activities. Modern banking is said to originate in medieval Italy. The Bank of Venice, the first public banking institution was established in Italy in 1157 A.D. Subsequently, "Bank of Barcelona" of Spain, the world's second bank was established in 1401 A.D. and "Bank of Geneva" of Switzerland was established in 1407 A.D. "Bank of Amsterdam", the Netherlands was set up in 1609 A.D. was among the very popular commercial banks in the world. The Bank of 'Hindustan', regarded as India's first commercial bank, was established in 1770. As so in 1694 A.D., "the Bank of England" was established, which changed the process of establishing the

banking institutions remarkably. This was a big landmark in the history of banking development. The idea of commercial banks was rapidly spread to all over the world only after the establishment of this bank.

In course of time, banks are among the most important financial institution in the economy and essential business in thousands of local town and cities. In this context, there is much confusion about exactly what a bank is? Certainly. Banks must be identified by the functions they perform in the economy. However, the word bank is generally used to denote a certain kind of trading in money, which mainly consists the exchanging of money, the lending of money, the depositing of money and the transmitting of money.

Due to the rapid modernization and industrialization of the world, banking institutions have been indispensable for the resource mobilization and all around development of the country as they are important to individuals and institutions such as the public, businesses, organizations, government, and other institutions. It provides resources for economic development that maintains economic confidence of various segments and expands credit to people. The bank accumulates surplus money form the public, who cannot use the money at the time and lends to those who are in need of that to use for productive purposes. It refers to any institution that deals in money. However, today banks are established for specific purpose such as commercial bank, industrial bank, merchant bank, development bank, rural bank and so on. When the bank lends the loan to the customers for earning interest, the bank draw the money from institution or individual or people pay the interest amount by the certain interest rate, There are different types of bank focus on different types of service to their customers although the basic principle is same i.e. mobilize idle resources from productive sectors to the growth of trade. Industry and commerce. Today's banks in different countries render various different services to the people for strengthening the whole country's economy. As

an open policy of the government to allow private and foreign investors to invest in banking under the Commercial Bank Act 2031 B.S., many new banks were established, and many more are coming into existence.

Since then, banking has undergone a revolution with technology transforming the way Americans bank. First telephone banking, and then ATMs, debit and credit cards, has leaded the way to new innovations. Today, online banking and electronic money are evolving. Banks strive to serve the greater public in a competitive market that ensures a safe and sound banking system. From religious temples and Italian desks to coffee houses and the Industrial Revolution, banking has forever changed the way we live.

2.1.2 Non-Performing Loan/Assets

"Non-performing assets means an asset or account of borrower, which has been classified by a bank or financial institution as sub-standard, doubtful or loss asset, in accordance with the directions or guidelines relation to asset classification issued by RBL". Non-performing loan/Assets is that part of loan that is not current yielding on return. NPAs are defined as debt instruments whose obligors are unable to discharge their liabilities as time became due. The term debt instruments refer to both loans and bonds.

When the date of the loan becomes past dues, the loan becomes non-performing assets of the institution. In some developing countries of Asia-Pacific Economic Corporation (APEC) forum, a loan is clarified as non-performing only after if it has been in arrear for at least six income, any date out to reschedule was considered as NPA on the book of account.

The determination of NPL depends upon the judgment or central bank of the country on the basis of the situation, need and international accounting norms of

banking sector. Few 22 countries have adopted some flexible loan classification and loan loss provisioning and other many countries have followed rigid and internationally adopted practice. An amount due under any credit facility is treated as "Past due" when it has not been paid within 30 days from the due date. Due to the improvement in the payment and settlement systems, recovery climate, up gradation of technology in the banking system, etc. it was decided to dispense with 'Past due' concept with effect from March 31, 2001. Accordingly as from that date, a non performing asset shall be an advance where:

1. Interest / installment of principal overdue for a period of more than 180 days in respect a term loan
2. The account remaining 'out of order for a period of more than 180 days in respect of an overdraft/cash credit
3. The bills remains overdue for a period of more than 180 days in the case of bills purchased and discounted.
4. Interest/ installment of principal remaining overdue for two harvest seasons but for a period not exceeding half years in the case of an advance granted for agricultural purpose.
5. Any amount to be received remains over due for a period of more than 180 days in respect of other accounts.

For getting the real meaning of non-performing assets first of all the meaning of assets should be clearly understood. Assets mean "the property of a persons or a company" This indicates that the assets are the property of a company accumulated with the help of sources. "A Non-performing asset is defined as an asset noncontributing to the income of the bank. It is a risk asset whose recovery (principal and/ or interest) has been difficult for the bank/ financial institution for whatever reasons. In other words a risk asset from which repayment of principal or interest is not forthcoming as per the agreement between the bank and the borrower, or as demanded by the bank, is as an NPA."

In case of the banks the loans and advances are the assets of the banks. As the bank flow loans from the fund generated through shareholders equity, money deposited by the people and fund having through the borrowing, it expect the repayment of funds with some additional amount that is interest so that it could meet its all kinds of expense. When any loans could not be repaid in time, it directly effects to the performing of the banks. Hence, non-performing assets means that loans and advances, which are net performing well or those, loan and advance which are irregular; a non-performing asset shall be a loan or an advance.

2.1.3 Impacts of NPA

Under the circumstances assets that do not earn any income or these assets that are categorized as NPAs affects to the bank in many ways that are described below:

A) Impacts of Profits

-)] The resources locked up in NPA are borrowed at cost and have to earn a minimum return to service this cost but NPA earn any interest and other income. Thus NPAs directly affect to the profitability of the banks.
-)] NPAs on the hand do not earn any income but on the other hand drain the income earned by performing assets through the claim of provisioning them; NPAs reduce the net profit of the bank.
-)] Since they do not earn the interest, they bring down the yield on advances and the net interest margin or the spread.
-)] NPAs have direct impact on return on assets and return on equity, the two main parameters for measuring the profitability of the bank
-)] Return on Assets will be affected because while the total assets included the NPAs , they do not contribute to profits, which is the numerator in the ratio.
-)] Return on Equity is also as provisioning eats more and more from operating profits earned.

B) Impacts on Capital Adequacy

- J The risk weighted on Non-Performing Assets in hundred percent and capital has to be blocked these assets do not produce income to sustain the capital blocked by them, which again drain the profits earned on the other performing assets.
- J If the bank is required to provide for the entire outstanding NPAs (not provided so far) it could wipe out half of our net worth and reduce the capital adequacy.

C) Increase Other Costs

As the income on performing assets subsidies NPAs, the ability of the banks to offer their spreads to good customer comes down. This in turn makes the best customer choose other cheaper financing option and banks assets portfolio quality deteriorates this result in future NPAs.

The cost of monitoring non-performing assets includes administrative costs, legal costs and cost of procuring the resources locked.

D) Impact on Capital Market Perception

- ↳ NPAs bring down the profits, affect the shareholder's value and thus adversely affect the investor's confidence.
- ↳ In extreme cases, it brings customers confidence also and increase borrowing costs.
- ↳ It also affects the ability of the banks to start other business ventures.

Apart from the major impacts mentioned above, non-performing assets have other adverse impacts on banks activities. They are:

- Regulators view increasing NPA seriously and they might prescribe harsher measure.

-) Increasing level of NPA means no or less bonus and other benefits which ultimately lowers employee morale and reduces their affiliation with organization and decision making capacity.

2.2 Capital Adequacy Norms for Commercial Banks

2.2.1 Meaning of Capital

While talking about capital, the authorized capital is the maximum amount that a bank may issue during the course of its operation, which is mentioned in the memorandum of association of the banks. The issued capital is that portion of the capital, which is issued by the bank to the public for subscription. The subscribed capital is the amount of capital subscribed by the general public. It can be either whole or just part of the issued capital. Called up capital is the amount of capital that the shareholders need to pay. The paid up capital is the capital already paid by the shareholder. This is the only cash that have been realized by the bank.

2.2.2 Maintenance of Minimum Capital Fund

With the objective to develop a healthy, capital and served banking system for promoting economic growth of the country as well as to protect the interest of depositors, as provided under Section 2.3 (1) of Nepal Rastra Bank Act 2058 relating to development and regulation of banking system, this directives in respective of Maintenance of minimum capital fund by the commercial bank has been issued.

All Commercial banks need to maintain the prescribed proportion of minimum capital fund in the risk-weighted assets. As per directive issued by the central Bank, the banks need to follow the following time table.

Table 1.1

Required Capital Fund on the basis of Weighted Risk Assets (in percentage)

Time Table	Core Capital	Total Capital fund
For F/Y (2058/59)	4.5	9
(2059/60)	5	10
(2060/61)	5.5	11
(2061/62)	6	12

Source: NRB Directives 2003 Edition

2.2.3 Classification of Capital

For the purpose of calculation of capital fund, the capital of the bank is divided into the following two components.

1. Core Capital
2. Supplementary Capital

1. Core Capital

Core capital of the commercial banks includes the following:

- a. Paid up capital
- b. Share Premium
- c. Non-redeemable Preference share
- d. General reserve
- e. Accumulated profit and loss account

2. Supplementary Capital

Supplementary capital of the commercial banks includes the following:

- a) General loan loss provision: Under this heading, provision made only against the pass loan shall be included. Previously, the total amount of loan loss provision made for all six category of loan used to be included in the supplementary capital but now with the new directives, the amount of general

loan loss provision shall be included in the supplementary as per the following time table:

Table 2.2

Provision available for inclusion in the Supplementary Capital

Time Table	Provision available for inclusion in the supplementary
For F/Y(2058/59)	Pass, substandard and Doubtful loans
(2059/60)	Pass, substandard loans
(2060/61)	Pass loan

Source: NRB Directives 2003 Edition

The amount of general loan loss provision shall not exceed 1.25% of the total risk weighted assets.

- b) Exchange equalization reserve
- c) Assets Revaluation reserve: For the purpose of calculating supplementary capital, the amount of Assets Revaluation Reserve shall limited up to 2% of the total supplementary capital, inclusive of the amount of this reserve.
- d) Hybrid Capital Instruments
- e) Unsecured subordinated term debt
- f) Other free reserve not allocated for a specific purpose

2.2.4 Total Capital Fund

Total capital fund is defined as the sum of core capital and supplementary capital. Value of goodwill shall not be included for the purpose of calculation of capital fund.

2.2.5 Total Weighted Risk Assets

For the purpose of calculation of capital fund, the risk weighted assets has been classified in the following two components:

- a) On-Balance sheet Risk-weighted Assets
- b) Off- Balance sheet Risk-weighted items

a) On-Balance sheet Risk-weighted Assets

On-Balance sheet of the bank are grouped into three categories and assignment of separated risk-weighted. To determine the risk-weighted credit balance sheet assets,, the notional value of the various balance sheet assets are multiplied by their respective risk weights and then added together.

b) Off-Balance Sheet Risk-Weighted items

In order to determine the value of risk-weighted of off-balance sheet items of a bank, the items are grouped into three categories and according to risk-weighted of 20%, 50% and 100% have been assigned. In determining the total risk-weighted amount of off-balance sheet items the values of the off-balance sheet items shall be multiplied by their respective risk-weights and then added together.

2.2.6 Capital Fund Adequacy Ratio

This ratio would measures the total capital fund adequacy on the basis of total risk weighted assets. The capital fund adequacy ratio shall be determined as follows:

$$\text{Capital Fund Ratio} = \frac{\text{Core Capital} + \text{Supplementary Capital}}{\text{Sum of Total Risk Weighted Assets}} \times 100$$

Sum of risk weighted Assets = Total on-balance sheet risk weighted assess – Total off-balance sheet risk weighted assets.

2.3 Loan Classification and Provisioning

NRB issues various directives for banking r regulation and prudential norms. Directives issued in 2001 have total 12 directives. Out of 12 directive no. 2 is relating to loan classification and provisioning.

a. Pass

Loan and advances, which principal and interest payment has not exceed the due date a period of 3 months shall be included under this category. These are classified and defined as Performing Loan.

b. Substandard Loan

All the loans and advances, which principal and interest that have exceeded the due date for a period of 3 months to 6 months shall be included in this category.

c. Doubtful Loan

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

d. Bad Loan

All the loans and advances which principal and interest has crossed the due for a period of more than 1 year as well as advances which have least possibility of recovery or considered unrecoverable and those having thin possibility of even partial recovery in future shall be included in this category. Loan and Advances falling in the category of Sub-standard, Doubtful, and Bad Loan are classified and defined as Non-Performing Loan.

Additional Arrangement in Respect of Pass Loan

Loans and advances fully secured by gold, silver, fixed deposit receipts and HMG securities shall be included under “Good Loan”/Pass Loan category. However, where collateral of fixed deposit receipt or HMG securities or NRB Bonds is placed as security against loan for other purposes, such loan has to be classified on the basis of ageing. Loans against Fixed Deposit Receipts of other banks shall also qualify for inclusion under Pass Loan.

Additional Arrangement in Respect of “Bad Loan”

Even if the loan is not past due, loans having any or all of the following discrepancies shall be classified as “Bad Loan”

- i. No security at all or security that is not in accordance with the borrower’s agreement with the bank.
- ii. The borrower has been declared bankrupt.
- iii. The borrower is absconding or cannot be found.
- iv. Purchased or discounted bills are not realized within 90 days from the due date.
- v. The credit has not been used for the purpose originally intended.
- vi. Owing to non-recovery, initiation as to auctioning of the collateral has passed six months and if the recovery process is under litigation.
- vii. Loans provided to the borrowers included the black list and where the credit information Bureau blacklists the borrower.

Note: Bills purchased/Discounted are to be classified into Bad Loan if they are not realized within 90 days from the due date. Accordingly, bills would have only two classifications (i.e. Pass and Bad)

Additional Arrangement in Respect of Term Loan

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

Loan Loss Provisioning

The loan loss provisioning on the basis of the outstanding loans and advances and bills purchases are classified as per the new unified directives 2005, shall be provided as follows:

Classification of Loan Loss Provision

Good	1 Percent
Substandard	25 Percent
Doubtful	50 Percent
Bad loan	100 Percent

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

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

Additional Provisioning in the case of Personal Guarantee Loans

Where the loan is extended only against personal guarantee, a statement of the assets, equivalent to the personal guarantee amount not claimable by any other shall be obtained. Such loans shall be classified as per above and where the loans fall under category of Pass, Substandard and Doubtful, in addition to normal loan loss provision applicable for the category, an additional provision 20% point shall be provided. Classification of such loans and advances shall be prepared separately. Hence the loan loss provision required against the personal guarantee loan will be 21%, 45% and 70% for Pass, Substandard and Doubtful category respectively.

Rescheduling and Restructuring of Loan

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

- i. The internal and external causes contributing to deterioration of the quality of loan
- ii. The reduced degree of risk inherent to the borrower/enterprise determined by analyzing its balance sheet and profit and loss account in order to estimate recent cash flows and to project future one in addition to assessing market conditions.
- iii. Evidence of existing of adequate loan documentation
- iv. An evaluation of the borrower/enterprise/s management with particular emphasis on efficiency, commitment and high standards of business ethics.

2.4 Review of Related Terms

2.4.1 Loan and Advances

Granting loans and advances are important function of the commercial bank. Commercial bank grants loan to needy individuals and institutions against the security of valuable assets. This is the most important item on the assets side of the balance sheet of the bank. Loan and advances generate income for the bank. Therefore, the profitability of the bank depends upon the extend to which it grants loan and advances.

2.4.2 Performing Loan and Non-Performing Loan

Performing assets are those loans that repay principal and interest to the banks form the cash flow it generate. Loans are risky assets, though a bank interest most of its resource in granting loan and advances. If an individual bank has around 10 percentage non-performing assets/loan, it sounds the death knell of that bank ceteries paribus call other thing remaining constant. The objectives of bond loan policy is ot maintain the financial health of the banks which result in safety of depositor's money and increase in returns to the shareholder. Since the loan is a risky asset, there is inherent risk in every loan. However, the bank should not take risk above the certain degree irrespective of returns prospects

2.4.3 Loan Loss Provisioning

Loan loss provisioning is the vehicle for adjusting the value of loans, so as to reflect loan review and classification. For example, when a review shows that a loan value has become “doubtful”, a provision needs to be established to reflect the loss of value. In some respects, provisioning is similar to the concept of depreciation of the property and equipment for non-banks. The cost of provision constitutes a normal business expenses and reduces bank profit. For a prudential perspective, an important distinction is made between specific and general provisioning.

2.4.4 Loan Classification System

To assess loan quality, credit analyst segregate the bank’s loan portfolio into risk categories according to certain specification the U.S. guideline are the good example of a relatively simple and transparent grid. The system includes five categories standard, special mention, substandard, doubtful and loss.

Standard Assets

Loan in this category are performing and have sound fundamentals (fundamentals include the borrower’s overall financial condition, resources and cash flow, credit history, and character. They also include the purpose of the loan and types of secondary sources of repayment).

Specially Mentioned Loans

Loans in this category are performing but have potential weaknesses, which, if not corrected, may weaken the loan and the bank asset quality. Example is: credit that the lending officer is unable to properly supervise; an inadequate loan agreement uncertainty of the condition of collateral or other deviations from prudent lending practices.

Substandard Loans

Loans in this category have well-defined weakness, where the current sound worth and paying capacity of the borrower is not assured. Orderly repayment of debt is in jeopardy.

Doubtful Loans

Doubtful loan exhibits all the characteristics of substandard loan with the added characteristics, that collection is full is highly questionable and improvable classification of loss is defatted because of specific pending factors which may strengthen the asset. Such factors include merger, acquisition, liquidation, procedure, and capital injection, perfecting liens on additional collateral and re-financing plans.

Loss Loans

Loss loans are considered uncollectable and of such little value that their continuance as bankable assets is not warranted. This classification does not mean that the assets have absolutely no recovery or salvage value, but rather that it is not practical or desirable to defer full provision or writing off this basically worthless loan. Partial recovery may be affected in the future.

2.4.5 Assets Management Company

This is a company to which the bad loans and assets are transferred from the problem banks. The AMC could be owned and funded by the state or by private owners. An assets management company is a special purpose limited liability company, agency or undertaking which facilitates the:

Transfer of problem assets from financial institutions in exchange for a consideration.

) Financing and resolution of problem loan and assets.

-) Expert management of problem loans through reconstruction and rehabilitation.
-) Specialist management of loan security (real, estate, share etc)
-) Expert and focused management of the process of maximizing net returns (i.e. after costs) over a reasonable time frame.

2.5 Review of Related Studies

On way to conduct this research some books, articles, 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 book and some thesis have been consulted such as Tannan's banking law and practice in India in (1997).

2.5.1 Review of Journals, Reports and Articles

Assessing the gravity of the problem Tannan found saying that banks and financial institution at present face considerable difficulties in recovery of dues from the clients and a significant portion of the funds of banks and financial institutions is thus locked in unproductive assets. Likewise for taking reference book on Management of banks credit written by Suneja (1992) has also been consulted. Suneja pointing out the cause of NPA says that the risk connected with leading to business depend on an enormous number of factors. For any particular trend in demand for the product or service provided, competition from any other suppliers, financial resources are too limited and management skills are lacking. Reiterating the 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 to be taken to recover the debt.

Pradhan (2063), in his article *“NPA Some Suggestions To Tackle them”* found 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 utilize properly due to hesitant liberalization policies. Large corporate 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 initiatives to take timely action against willful defaulters, indecision on existing out of bad loans for fear of investigation agencies like special police CIAA, public accounts committee of the parliament have also contributed in whatsoever measures to the worsening situation on 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.

Dhungana (2064), in his article *“Problem of NPL and the Need of Financial Discipline in the Nepalese Banking System”* states that Nepalese financial system still has a high level of NPL. System’s soundness cannot be restored without resolving the problem of NPL. He further says, the level of total loan is the highest level in the Nepal in 2003 than that of other South Asian Countries. According to him, the main causes for NPL problem in the Nepalese banking system are internal and external factors consist poor system, procedures and credit culture in credit management, management oversight deficiencies in policy level and lack of competencies in the Board of Directors to monitor risk, limited supervision by the bank itself and fraud in lending and recovery, poor recovery efforts even the loan is categorized under bad, lack of loan write-off policies, poorly managed few

banks. External factors consists lack of financial discipline within borrowers and in financial system, poor legislative regime, fragmented legal environment, lack of supportive institutions helping ton reduce the NPA, deterioration in economic growth rates and activities last few years, poor legislative and super visioning capacity of the central bank in the past, security problems and conflicts in the economy. He further suggests that for the management of the NPL and a good banking there should be a proper risk management. Preventive and curative measures are acquired to be initiated in the system. He insists that the financial discipline is most crucial to enhance the good credit culture for the benefit of the society and achieving the high level of economic growth. Preparation of best CPG, establishing best credit approval procedures installing proper credit management system and credit culture are some of the preventive measures to control NPL growth. Curative measure such as assisting the banks and financial institutions to dispose the distress loan and facilitating to recover NPL are also equally important. He says both strengthening of the internal capacity of the financial institution and improving capacity of the system, building financial discipline in the system as a whole is the need of the day.

Basyal (2065), discussing about the financial sector reform in his article *Financial Sector Reform Program in Nepal: Prospects and Challenges*” states that the host of challenges and complexities that confront the financial system of Nepal could be categorized as the weak financial position of most of the government – owned financial institutions as reflected in their negative net worth and huge accumulated losses, higher portions of NPA, predominance of the informal financial system, high interest rate differential between the formal and informal sectors, large interests spread between lending and borrowing rates in the formal financial sector etc. it is estimated that the size of the NPA in the commercial banking is as high as 18% and 50% of this ratio we can found in the two largest banks (RBB and NBL). For resolving this situation the government has initiated FSR program. He argues

that the government has a paramount role in building an atmosphere for paving the way for the emergence of professional management and efficient financial operations not only in the institutions owned by it but also in the private owned institutions. To tackle this problem, the financial system should be strengthened by improving its regularity and supervisory systems. He explains the FSR strategy should ensure that financial institutions are run in accordance with the sound business principles and practices. The central bank's capability for effective supervision of the financial institutions should be enhanced. Similarly, financial discipline based on adequate provisions of disclosure and implementation of internationally recognized accounting and auditing practices and systems should be ensured. Competition oriented policies should be pursued along with strong regulatory supervisory framework to enhance financial sector efficiency and effectiveness.

He gives an example of Asian crisis of 1997-98 and suggests taking lessons from it. The crisis seriously affects the financial system and economic stability of the region. Large currency depreciation, capital market collapses, large scale bankruptcies, swollen NPA level of the financial system, negative economic growth rate, massive unemployment, disrupted social services, dwindled investor confidence and sharp reduction in the general standard of living were the immediate effect of crisis. It is commonly believed that one of the critical factor behind the crisis was the absence of central banking autonomy which substantially reduce the efficiency and effectiveness of the central banking functions and responsibilities. He suggests the concerned parties should review the measures they taken for solution of the crisis.

Poudel (2066), in his article *“Financial System, Impaired Assets and Their Resolution in Nepal”* states that NPL/total loan ratio of Nepal is the highest among China, Japan, Korea, Malaysia, Philippines and Thailand. NPL in Nepalese

banking sector has been mounting since early 1990.s and its main resource are two public sector banks, RBB and NBL, he adds. Moreover, NPL of these banks is as high as 60% of their Total Loan Portfolio, poor governance resulted from political inference and insider lending, lack of independency at the top management, weak information system and weak legal framework and accounting practices in the main cause of NPA problem, he clarifies. Heavily concentrated lending in a few large groups beyond normal prudent risk acceptability, larger consortium loans, higher credit risk exposures with a serious collateral short falls adversely affected both banks liquidity, profitability, asset quality and capital base. He insists lack of responsibility and accountability, weak regulation and supervision of banks, global security problem after September 11 incident and domestic insurgency problems affected repayment rates of their total loan. He agrees with the intervention of NRB over NBL and RBB by handing over the bank management to foreign management groups. He says the NRB should formulate and implement all the necessary rules, regulation, acts, policies and guidelines to address the NPA problem. He supports that enactment of banks and financial institutions Act establishment of Debt tribunals, enactment of banks and financial institution Act 2004 are expected to reduce NPL and avoid future shocks in the banking system. In addition, Assets Management Company is in the process of establishment in near future, which aims at acquiring, managing and realizing cash by disposing impaired bank assets. Speaking at the inauguration of a two-day management conference of the NBL, Alexander Pitt, Resident Representative of IMF Nepal, said “we are all now waiting for action and the government must rise to the challenge and step up support to the banks effort to collect debt” printed on the Kathmandu Post on Nov.3, 2006. Another participant Bharat Bahadur Karki, Coordinator of the NBL management committee, said, “It is important that we track down the property of willful defaulters, which they have amassed here and parked abroad”. He also expressed vexation over defaulter’s audacity to protest the idea that they should repay what they owe to the banks.

World Bank, principal donor of the country, has clarified that it will not start any new Budget support to loan negotiation as long as the government does not take concrete actions against blacklisted willful defaulters, posted on the Kathmandu Post on dated Nov. 24, 2006. Made it clear by WB vice- president for South Asia Praful Patel in Ktm that the WB first wants action against defaulters before initiating any future loan negotiations. Addressing an interaction organized by FNCCI in Ktm, Assistant Secretary General of United Nations Kulchandra Gautam expressed his views about NPA that FNCCI should take a strong stand against bank defaulters and encourage its members to be law-abiding citizens. “It is unconscionable that well-to-do businessmen, industrialists and investors abuse the banking system and get away with impunity, while small borrowers are deprived of loans and penalized for delayed payment” he said, he urged the business community to act responsibility and ensure that the defaulters pay off the debts promptly.

Sharma (2006), former vice chairman of NPL said, “*Courts are Easily Issuing Stay Orders to Defaulters Hurting the Bank’s Loan Recovery Initiatives. The government must Act Urgently to Address it*”, printed on Kathmandu Posts. He added it must exert social pressure against willful defaulters from the states facilities, should be implemented. Addressing the banker’s conference 2006. Ken Ohasi, Country Director of WB, viewed the defaulters issue was no longer an issue of survival of banks, but the issue of survival of the market system in Nepal. He said the political leaders and the government should deal with the matter seriously and urgently.

In an article “*Is Biz Community Only the Culprits*” published on Kathmandu Post on Aug 28, 2006, Arun K. Subedi, Industrialist, Printing and Packaging, Hetauda argues that business community not solely responsible for the growth of NPA but bankers also equally responsible. He says the fails to analyze study the report

financially, managerially and technically. He says it is the cash flow that repatriates the loan not the collateral that most bankers rely on. So, existing investigation and analyses must be concentrated on project status. He further states it is the duty and right of the banker to undertake the project before the problems arise because a bank is not only the financier but also the partner of the project. Hence, the bank must undertake and start to recover the loan by operating and managing it. He agrees writing off the loan may be controversial but necessary. He gives the true example of Haratic Wire. It took loan for exporting copper wire to India and at that time wire export to India was free. The company commissioned and started to production. Then India band the copper wire import and now it is a sick unit and promoters are blacklisted. In such case, bankers together with the promoters have to sell the properties. If it is inadequate for recovery, the loan is to be written off instead of claming unrelated properties of the promoters. They must not be blacklisted because they could promote other business. He supports liabilities of particular company are to be limited to company.

2.5.2 Review of International Studies

In order to get the idea of analyzing NPA, the researcher has visited several web sides. No actual core studies were found during web search. How're, various journals, working papers & seminar papers from the web sites of IMF, World Bank, IFC & Nepal Rastra Bank in course of searching pilot studies were found. In order to gather concepts and conclusions about the various aspects of non-performing asset the researcher has collected and studied those journals, working papers & Seminar papers. Conclusions drawn from those studies are presented here in below:

Adrian M. Bloem and Corneils No. Gorte have classified non-performing assets according to internal statistical manuals and international norms of Banking and accounting institution. They analyzed the NPA's on both the standards as

mentioned above. Main finding of their study was the income effect of NPA as the NPAs reduce the pie of earning assets.

Luis Cotbaria & Inwon Song, on their working paper entitled "*Loan Review provisioning and Macroeconomic Linkages*" Luis Cotbaria & Inwon Song analyzed the classification of Loans with their respective provisioning effect and trace out the linkage of NPAs' with Capital Adequacy Ratio. They find out the provisioning for NPA (Specific Provisioning) could not be included in Capital fund but it reduces the portion of net income by eating through means of provisioning for NPA thus, NPA reduces the Capital adequacy ratio.

Lue Laeven and Giovanni Majononi analyzed the relationship of loan loss provisioning with the loan portfolio of large commercial Banks in different geographical areas of the world. Their studies revealed that a sound bank should show positive association between the amount of loan loss provisioning and the growth of loan portfolio. In their conclusion they are station that " We find the positive link between earning provisioning is stronger for countries with highly in development countries than in developing countries".

Alain Laurin and Giovanni Majononi presented the finding of World Bank survey of loan classification and provisioning practices in the countries represented on the BASEL Principal Liaison Group. Through their working paper they find that differences in provisioning and classifications approaches have made it difficult to compare the banking system weakness across different region, making peer pressure and market discipline difficult.

Kay Ellen Herr and Goe Miyazaki find out the securitization as a better solution to solve the problems of non-performing assets. They analyzed that securitization would helps the Banks to reduce the levels of non performing assets from their

balance sheet and enables them to get tax benefit which would otherwise not been by simple write off of nonperforming assets.

Prashant R. Reddy, on his thesis entitled " *A Comparative Study of Non-performing Asset in India in the Global Context: Similarities, Dissimilarities and Remedial Measures*" Mr. Prasant R. Reddy analyzed the noticeable improvement in the financial health of India banking sector as the ratio of gross NPA and net NPA to total credit have been falling from 23.18% and 12.4% to 14.46% & 6.74 & respectively. On his research he further nailed that " the level of NPA on large industrial sector is very high in India but the overall level of NPA of Indian Banking Sectors seems low mind manageable in comparison to chain's 28% and Indonesia's 26%.

2.6 Review of Related Thesis

Khadka (2008), studies on "*Non-Performing Assets of Nepalese Commercial Banks*". He has taken the main objective to examine and study of level of non-performing assets, total deposits and total lending of Nepalese Commercial banks. He says escalating level of NPA has been becoming great problem in banking business in the world. It is well known fact that the bank and financial institution in Nepal have been facing the problem of swelling NPA and the issue is becoming more and more unmanageable day by day, he adds. His study is especially focused in five Nepalese commercial banks i.e. Nepal SBI bank, Nepal Investment Bank, Nepal Bangladesh Bank, Bank of Kathmandu and NABIL bank Ltd. Only. Among these five sampled commercial banks, he found the NPA of NBBL seems very worse than all other banks. He concludes that the level of NPA in sampled banks is not so alarming and the situation is quite satisfactory. He warns ahead if the increasing trend remains continue in coming days, the situation will be unmanageable. He states the commercial banks could not give full attention towards supervising their lending and towards recovering their bad loans perfectly.

He recommends overcoming the problem of NPA than being loan a risky asset; effort should be made to have proper control in every step of loan management. Corporate structure of the bank play key role in the effective loan management. He further insists the banks should take collateral from the borrower so that in the event of default this collateral is disposed for recovery of loan. The bank should do proper financial analysis of the borrower. He thinks the fundamental changes are necessary to correct business practices based on connections, bribery and lenient credit screening by banks. He has followed descriptive research design with analytical approach. His research is based on secondary data among them five banks, are taken as sample bank by the researcher. He has used simple percentage tool like arithmetic tool, Karlpearson coefficient of correlation and regression analysis for data processing procedures. His research based on research variables like NPL and the level of NPL in different parameter.

Kafle (2009), aims to study the level of NPL in total assets, total deposits and total lending by Nepalese commercial banks and to find out whether the Nepalese commercial banks are following the NRB directives regarding loan loss provision for NPL or not in his thesis titled “*Non-Performing Loans of Nepalese Commercial Banks*”. He found the level of NPA in Nepalese banking sector is alarming and increasing. His study is focused only on five banks i.e. Nepal SBI Bank, Nepal Investment Bank, Nepal Bangladesh Bank, Bank of Kathmandu and NABIL bank Ltd. Only. Level of NPA in the sample banks is not so alarming and the situation is quite satisfactory. He further states not any bank could meet the requirement of NRB directives. He thinks that corporate structure of the bank play key role in the effective loan management. Lack of proper financial analysis, management efficiency, and the lack of proper collateral are the causes of high-level NPA. Nepalese commercial banks should strongly think on these areas, he recommends. He has followed descriptive research design with analytical approach. His research is based on secondary data. He considers twelve

commercial banks as target population. Among them five banks are taken as sample bank by the researcher. He has used simple percentage tool like arithmetic tool, Karl Pearson coefficient of correlation and regression analysis for data processing procedures. His research based on research variables like NPL and the level of NPL in different parameter.

Saroja (2010), says ineffective credit policy, political pressure to lead to uncreditworthy borrower, overvaluation of collateral are the major cause of mounting non-performing assets of the banks in her thesis titled “*A Study of the Non-Performing Assets Of Commercial Banks Of Nepal*” To identify effects of NPA on ROA and ROE, to solve one of the cases of the NPA i.e. analysis and interpretation of the case and to find out the factors behind the accumulation of NPA, to analyze whether the Nepalese commercial banks are following the NRB directives regarding loan loss provision for NPL/NPA or not and to recommend to overcome the difficulties in managing NPA . She takes NABIL and SCBNL for the sample of the study. She found negative correlation between NPA and ROA and VNPA and ROE of different commercial bank. She found that these two banks have NPL in control and accordingly provision for such loan. These banks are very much cautious about the matter regarding NPA. She states present loan classification and provisioning directives seems more stringent than previous one. She further says adequate provisioning strengthens the financial health of the banks and makes them able to face any kind of future contingencies. She recommends that there should be regular supervision and follow up for proper utilization of loan. Strict monitoring and control system should be there for timely recovery of the loan, she adds. She recommends to create separate department in every commercial bank to control their NPA like credit appraisal dept., credit administrative dept., legal dept., etc. On the way of her conducting research, she follows analytical and descriptive research design in research methodology. Population for her study comprised all the license commercial banks of the

country and sample for her study comprised two commercial banks namely NABIL and SCBNL by using judgmental sampling method. She thinks these two banks could represent true picture of so-called successful commercial banks that is why we select these banks as sample. Different kind of appropriate mathematical, statistical, and financial tools have been applied for analysis purpose. Correlation analysis, ratio analysis and different diagrams and graphs are used in her research as tools and techniques. Though these studies are formed to be quite useful in their own side but the question of NPA and its cause as well as effect on various aspects empirically and qualitatively in Nepal Bank & Banijya Bank, commercial bank is yet to be researched. These theses are mainly focused on the condition of NPA in Nepalese banking sector and other policies and directives regarding this topic. The contribution of NPA of these two banks is more than 60% on overall NPA. Previous researchers have analyzed only other commercial bank NPA problem. None of them could address the cause and effect of NPA in profitability of these two major commercial banks. NPA problem in these two commercial banks are mounting regularly. The problems are needed to be solved promptly. In view of these, this study has been based on the various contributing factors that increase NPA level in these banks specifically in Nepalese perspective and its effect on profitability position of the banks. The methodology adopted in this research are research design, population and sample, type and nature of data, data gathering procedure, data processing procedure, techniques of analysis and so on. Secondary as well as primary data are used for the purpose of the study. Primary data is based on opinion survey, which focused on the causes of NPA from the perspective of employees of the sampled banks.

2.7 Research Gap

There is a certain gap between the present research and past research. Previous several researches are done in this topic called *Non-performing Assets*. The information of this very research is also based on secondary data as well as

primary data, but many effective tools and techniques are used to get the desired result as per the objective of this study. To analyze the facts financial tools as well as statistical tools were used to get the desired objective of the study. Financial tools include ratio analysis and the statistical tools include mean, standard deviation, coefficient of variation, and correlation of coefficient analysis and also include trend analysis. In present context, these are the heart issue in Nepalese commercial banks. The previous researchers could not submit the present fact. This research will deliver the answer to the recent questions and it will also give the latest information about the current practices of concerned commercial banks.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Introduction

Research Methodology describes the entire methodological approaches employed in the study. It is the procedure by which researchers go about their work of describing, explaining and predicting phenomena. Mostly in the case of the empirical studies, the consistencies of findings are solely based on empirical methodologies it has employed. Research methodology is way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them.

Research methodology refers to the various sequential steps to be adopted by the researcher while the studying a problem with certain object in view. Its focus is made on the application of the technique and procedure to analysis the relevant variables to see the basic relationship between relevant topics. To achieve the basic objectives of the study, this chapter has been divided into 5 sections. Sections-1 represents the research design of the study, while section-2 describes the nature and source of data from the related organizations or institutions. Section-3 indicates the sample and population size of the Nepalese Commercial banks. Sections-4 explains the method of analysis employed in interpretation of data. Similarly, conclusion and results verification defines on key terms are indicated, in 5 sections.

3.2 Research Design

The formidable problem that follows that the task of defining the research problem is the preparation of the design of the research project, popularly known as the

"research design". Research design stands for advance planning of the methods to be adopted for collecting the relevant data and the techniques to be used in their analysis, keeping in view the object of the research and the availability of staff, time and money (Kothari, 2005:32).

"The Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance. The plan is the overall scheme or program of the research" (Kerlinger, 1986:275).

"A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure" (Claire Selltiz, 1962:52).

In fact, the research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data. Decisions regarding what, where, when, how much, by what means concerning an inquiry or a research study constitute a research design. As such the design includes an outline of what the researcher will do from writing the hypothesis and its operational implications to the final analysis of data. Preparation of the research design should be done with great care as any error in it may upset the entire project. Research design, in fact, has a great bearing on the reliability of the result arrived at and as such constitutes the firm foundation of the entire edifice of the research work.

In detail, the research design has main two purposes. The first purpose is to answer the research question or test relationship; then other second purpose of a research design is to control variance. Thus research design is a plan of action to be carried out in connection with a research project. This study is based on both secondary and primary data. The requirement primary data and secondary data have been

collected from various sources covering a period of 5 (five) years for Nepalese Commercial Banks.

To study seeks to analyze the impact of NPA on profitability, NPA effects on externally and internally. The research design of the study is therefore combination of two major research designs i.e. description design for secondary data and survey research for primary data.

3.3 Nature and Sources of Data

This constitutes the most important factor affecting the choice of a particular method. The method selected should be such that it suits the type of inquiry that is to be conducted by the researcher. This factor is also important in deciding whether the primary data are to be used and the data already available (secondary data) are to be collected.

Generally this study aims to assess the NPA level and its influence on profitability of the banking system, so as to the necessary data and information have been collected from both primary and secondary sources. The primary sources are: data has been collected to visit and ask the questionnaire through the individual of banking staffs as well as most of the data are collected from the secondary sources. Those data are collected and contributed and Banks & Financial Institutions Regulation Department of Nepal Rastra Bank.

3.4 Population and Samples of Study

From a statistical point of view, the term ‘universe’ refers to the total of the items or units in any field of inquiry, whereas the term ‘population’ refers to the entire group of people, events or things of interest that the researcher wishes to investigate, or total of items about which information is desired. All units in any field of inquiry constitute

Universe and all elementary units constitute population. A sample is a collection of items or elements from population or universe. Hence, a sample is only a portion or subset of the universe or population. It comprises some observations selected from the population. Sampling may be defined as the selection of some part of an aggregate or totality on the basis of which judgment or inference about the aggregate or totality is made.

During the last two and a half decades, the Nepali financial system has grown significantly. The banking environment has gone through a sea change. At the beginning of 1980, there were only two commercial banks and two development banks. After the adoption of the economic liberalization policy, particularly financial sector liberalization, new banks and non-banking financial institutions came into existence.

The final step in the sampling process is the actual selection of the sample elements. Sample size has drawn from the elements of the target population. We drew only two Commercial Banks in the sample number one has their central office is outside in Kathmandu; then remaining has in the Kathmandu Valley and especially pure Nepalese Management bank and other is continuously Foreign and Nepalese Management (Joint Venture) Bank.

The following table, below clearly describes about total population, target population and sample drawn.

Table 3.1
List of Licensed Commercial Banks in Nepal

S.N	Name	Head office
1.	Nepal Bank Limited	Kathmandu
2.	Rastriya Banijya Bank	Kathmandu
3.	Agriculture Development Bank Ltd.	Kathmandu
4.	Nabil Bank Ltd.	Kathmandu
5.	Nepal Investment Bank	Kathmandu
6.	Standard chartered Bank Nepal Ltd.	Kathmandu
7.	Himalyan Bank Ltd.	Kathmandu
8.	Nepal SBI Bank Ltd.	Kathmandu
9.	Nepal Bangladesh Ltd	Kathmandu
10.	Everest Bank Ltd.	Kathmandu
11.	Bank of Kathmandu Ltd.	Kathmandu
12.	Nepal credit and commerce bank Ltd.	Siddharthanagar
13.	Lumbini Bank Ltd.	Narayanghat
14.	Nepal Industrial and commerce Bank Ltd.	Biratnagar
15.	Macchapuchhre Bank Ltd.	Pokhara, Kaski
16.	Kumari Bank Ltd.	Kathmandu
17.	Laxmi Bank Ltd.	Birgunj, Parsa
18.	Siddhartha Bank Ltd.	Kathmandu
19.	Global Bank Ltd.	Birgunj, Parsa
20.	Citizen Bank International Ltd.	Kathmandu
21.	Prime Commercial Bank Ltd.	Kathmandu
22.	Sunrise Bank Ltd.	Kathmandu
23.	Bank of Asia Nepal Ltd.	Kathmandu
24.	Development Credit Bank Ltd.	Kathmandu
25.	NMB Bank Ltd.	Kathmandu
26.	Kist Bank Ltd.	Kathmandu
27.	Janta Bank Ltd	Kathmandu
28.	Mega Bank Ltd	Kathmandu

Source: - www.nrb.org.np

3.5 Method of Data Analysis

Whenever the source and nature of data have been identified, the required data (primary and secondary) of this study have been gathered or collected from the respondents of concerned banks and annual reports through the head office of the concerned sample banks research departments of Nepal Rastra Bank, different websites.

3.5.1 Standard Deviation

The standard deviation is the absolute of dispersion in which the drawbacks present in other present in other measure of dispersion are removed. It is said to be the best measure of dispersion as it satisfies most of the requisites of a good measure of dispersion. Standard deviation is defined as the positive square root of the mean of the square of the deviation taken from the arithmetic mean. Standard deviation is calculated as follows:

$$d = \sqrt{\frac{\sum fd^2}{N} - \left(\frac{\sum fd}{N}\right)^2}$$

Where

d = Standard Deviation

$d = x - \bar{x}$

N = No. of observation

3.5.2 Coefficient of Variation

Standard deviation is the absolute measure of dispersion. The relative measure of dispersion based on the standard deviation is known as the coefficient of variation.

$$\text{Coefficient of Variation} = \frac{\text{s.d.}}{\text{Mean}} = \frac{\delta}{\bar{x}}$$

The coefficient of dispersion based on standard deviation multiplied by 100 is known as the coefficient of variation (C.V). IF $\bar{X}$ be the arithmetic mean and the standard deviation of the distribution, then the C.V.is defined by

$$C.V. = \frac{\sigma}{\bar{X}} \times 100$$

It is independent of unit. So, two distributions can be compared with the help of C.V. for their variability. Less the C.V. more will be the uniformity; consistency etc. and more the C.V. less will be the uniformity, consistency etc.

3.5.3 Analysis of Time Series

Time series analysis also called trend analysis. It is one of the statistical tools, which are used to determine the improvement or deterioration of financial situation.

A time series is a sequence of observations of variables made at regular points or intervals of time and arranged in a chronological order. Time series analysis is one quantitative technique to determine the patterns in data collected over time. A time series depicts the relationship between two variables, one of them being time mathematically. A time series is defined by the functional relationship.

$$Y=f(t)$$

Where, y is the value of the variables under the consideration at a time.

The least squared method has been adopted to measure the trend behavior of the selected banks. This method is widely used in practice. The formula for least square method for the straight-line trend is represented by the following formula.

$$Y_C = a + bx$$

Where,

Y_C = Trend values

a = Y intercept or the computed figures of the Y variables, when $x = 0$

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

x = Variable that represent time i.e. time variables

The value of the constraints a and b can be determine by solving the following two equations

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

$$\sum xy = a\sum x + b\sum X^2$$

Where, N = number of years.

For the simplification, if the time variable is measured as a deviation from its mean i.e. point taken as the origin. The negative value in the first half of the series balances out the positive values in the second half as that (□□□□□) the values of constant a , and b can be easily determine by using following formula.

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

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

3.5.4 Ratio Analysis

Ratio analysis is analysis of quantitative and numerical relationship between two variables. It is widely used tool of financial analysis. Ratio analysis indicates the strength and weakness of any organization and reflects the operating and financial growth of the organization.

Various ratios used in this study are as follows.

- a) Performing loan to total loan and advances
- b) Non-Performing loan to total loan and advances
- c) Substandard loan to total NPL
- d) Doubtful loan to total NPL
- e) Loss loan to total NPL
- f) Performing loan to total assets
- g) Performing loan to total deposit
- h) Performing loan to total loan and advances
- i) Non-performing loan to total assets
- j) Non-performing loan to total deposit
- k) Loan loss provision to total loan and advances
- l) Return on assets
- m) Return on equity

3.5.5 Correlation Analysis

Correlation analysis enables us in determining the degree and direction of relationship between two variables. Two variables are said to be correlated if change in the value of one variable appears to be related or linked with the change in other variables.

Correlation is an analysis of the covariance between variables and correlation analysis deals to determine the degree of relationship between variables, the measure of correlation, called correlation coefficient in one figure, the degree and direction of

correlation. The correlation analysis refers the closeness of the relationship between the variables. There are different techniques of calculating correlation coefficient. Among various techniques it is used Karl Pearson Coefficient of correlation. It is calculated as follows:

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

3.5.6 Diagrammatic and Graphical Representation

Data presentation in the form of chart and graph can provide a quick and concise insight in the subject under investigation. Diagrammatic representation of information has now become a popular way to communicate finding to readers. Diagrams and graphs are visual aids that give a bird eye view of a given set of numerical data. Hence various bar diagrams, pie charts and graphs have been used for the peregrination and analysis of data.

3.6 Research Variables

In this research, focus has been given to non-performing loan of Nepal Investment Bank and Machhapuchhre Bank for the seven year. For the analysis, non-performing loan is taken as independent variable and net profit, return on assets, return on equity are taken as dependent variables. In this way, effect of NPL on different variables is analyzed under the study.

3.7 Hypothesis

“The test of hypothesis is a process of testing of significance regarding the parameters of the population on the basis of the sample drawn from the population”(Shresthan and Manandhar 1994). Setting up and testing hypothesis is an essential part of statistical inference. In order to formulate such a test, usually some theory has been

put forward, either because it is believed to be true or because it is to be used as a basis for argument, but has not been proved. Generally, following steps are followed for the test of hypothesis.

Formulating Hypothesis

Nepal investment Bank Ltd. is one of the joint venture banks in Nepal and Machhapuchhre Bank is the first commercial bank in Nepal established by the Nepalese investors. The years of operation are different for these two banks. Correlation coefficients (r) of non-performing loan with different parameters such as Return on Assets (ROA), Total loans and Advances and Net Profit of both banks have been calculated. By the help of hypothesis, the significance of observed correlation with the parameter will be tested.

Null Hypothesis H_0 : There is no correlation between NPL and another parameter

Alternate Hypothesis H_1 : There is correlation between NPL and another parameter.

Computing of Test Statistics (t-test)

When sample size is less than 30, t-test is generally carried out. t-test can be used to test significance of observed correlation in the population.

Formula of t-test:

$$t = \frac{r \sqrt{n-2}}{\sqrt{1-r^2}}$$

where, t is the t-test

r = observed correlation of NPL with another parameter

n = no. of observations.

c) Fixing the Level of Significance

Level of significance $\alpha = 5\%$

Degree of freedom (d.f.) = $n - 2 = 7 - 2 = 5$

The tabulated value of t at 5% level of significance and 5 d.f. is 2.57

Making Decision

There is tabulated value of the t-test. The tabulated value is compared with the calculated value of t. The procedure of making decision is:

If $t_{cal} > t_{tab}$, then Null Hypothesis is rejected and Alternate Hypothesis is accepted.

If $t_{cal} > t_{tab}$, then Null Hypothesis is accepted and alternate Hypothesis is rejected.

CHAPTER - IV

PRESENTATION AND ANALYSIS OF DATA

In this chapter, data are presented and analyzed systematically to fulfill the objectives of the study. Inferences are made according to objectives stated in first chapter with relevant tables, figures and charts to make the data more understandable. Different arithmetical and statistical tools are used to analyze the data. In this chapter, efforts have been made to present and analyze the collected data.

Nowadays, Non-performing assets have been occupying major space in bank's total assets and total loan. It stands around 18% in Nepalese banking sector. Keeping this fact into the consideration, a provision has set by Nepal Rastra Bank in F/Y 2057/58 to control the level of NPAs of Nepalese commercial banks. According to that provision, every commercial bank has to classify its total loan and advances (including Bills purchased and Discounted) as pass loan, substandard loan, and Doubtful loan and Loss/Bad loan on the basis of overdue aging schedule. NRB.s directives for commercial banks 2061/62 direct commercial banks to maintain loan loss provision to find out and control the level of NPA in Nepalese commercial banks in future.

In the category of loan, Pass loan is called Performing assets and others i.e. Substandard, Doubtful and Loss loan are called Non-performing assets.

Data for five fiscal years have been presented starting from F/Y 2059/60 to 2065/66 to study and analyze the level of NPA. In this chapter conclusion is drawn regarding position of NPA of sample banks, various factors contributing for NPA, impacts of NPA on profitability and other suggestive measures for the

management and mitigation of NPA.s. To study about NPA ratio, analysis, trend analysis, Correlation analysis and opinion survey analysis is done.

4.1 Capital Adequacy Ratios of Commercial Banks

As per NRB directives, all commercial banks need to maintain the prescribed proportion of minimum capital fund on the risk weighted assets. Total capital fund of commercial banks include core capital and supplementary capital.

4.1.1 Capital Adequacy Ratio of core Capital to Total Risk Weighted Assets

As per NRB Directives, commercial banks should maintain its core capital 4.5%, 5%, 5.5% in FY 2059/60, 2060/61, 2061/62 respectively and 6% in FY 2062/63 onwards of total risk weighted assets. Table 4.1 presents the Capital Adequacy Ratios of the two commercial banks for core capital.

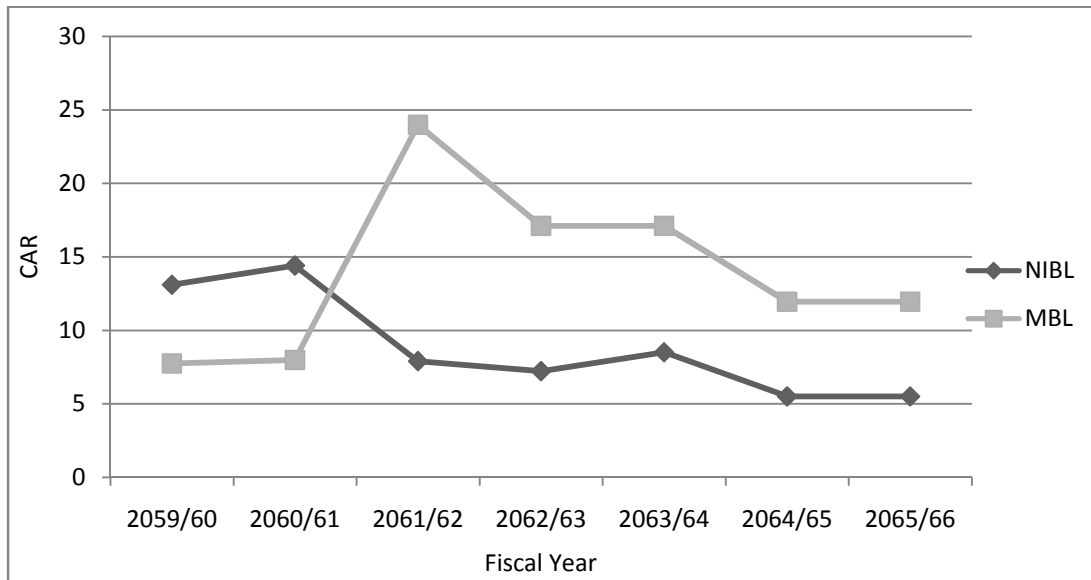
Table 4.1
Capital Adequacy Ratio for Core capital to Total Risk Weighted Assets
(in percentage)

FY	NIBL (%)	Change	MBL	Change	Average (%)	Change
2059/60	13.1	-	7.75	-	10.43	-
2060/61	14.4	9.92	7.99	3.1	11.19	7.29
2061/62	7.9	(45.14)	23.98	200.13	15.93	42.36
2062/63	7.22	(8.61)	17.1	(29.07)	12.12	(23.92)
2063/64	8.5	17.73	17.1	0	9.52	(21.52.)
2064/65	5.5	(35.29)	11.94	(29.81)	9.96	4.62
2065/66	5.5	0	11.95	0.084	9.29	(6.73)
Average	9.57		12.84		11.21	

Source: Annual Reports of NIBL and MBL

Figure 4.1

Capital Adequacy Ratio for Core Capital to Total Risk Weighted Assets



From the table 4.1

, it can be concluded that both banks have maintained more than 4.5% core capital to total risk-weighted assets. In FY 2059/60, Nepal Investment Bank has maintained 13.1% core capital of total risk weighted which is the highest than Machhapuchhre Bank (7.75%). In FY 2060/61 also, Nepal Investment Bank Ltd has maintained core capital 14.4% on total risk weighted and Machhapuchhre Bank has maintained 7.99% on total risk weighted. In FY 2061/62 onwards, maintaining the core capital on total risk weighted of Machhapuchhre Bank is higher than Nepal Investment Bank. But Nepal Investment Bank has also maintained enough core capital on total risk weighted according to the NRB Directives. MBL maintained 23.98%, 17.01%, 17.015, 11.94% and 11.95% core capital in FY 2061/62, 2062/63, and 2063/64 2064/65 and 2065/66 respectively. NBL has maintained 7.9%, 7.22%, 8.5%, 5.5% and 5.5% core capital in FY 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 respectively which is more than enough as per NRB Directives.

Among the sample period, NIBL has maintained highest core capital to total risk weighted in the FY 2060/61, which is 14.4%, and MBL has maintained highest core capital to total risk weighted in the FY 2061/62, which is 23.98%

Issue of share capital, increase in general reserve fund, increase in the volume of capital adjustment fund, increase in the volume of redemption reserve fund, increase in the volume of net profit are the reasons which increased core capital to total risk weighted assets ratios of the banks.

4.1.2 Capital Adequacy for Total Capital Fund to Total Risk Weighted Assets

As per NRB directives, all commercial banks should maintain its total capital fund 9%, 10% and 11% in FY 2060/61, 2061/62 and 2062/63 respectively and 12% in FY 2063/64 onwards of total risk weighted. Table 4.2 shows the capital adequacy ratios on total capital fund of the NIBL and MBL.

Table4.2

Capital Adequacy Ratio for Total Capital Funds to Total Risk Weighted Assets

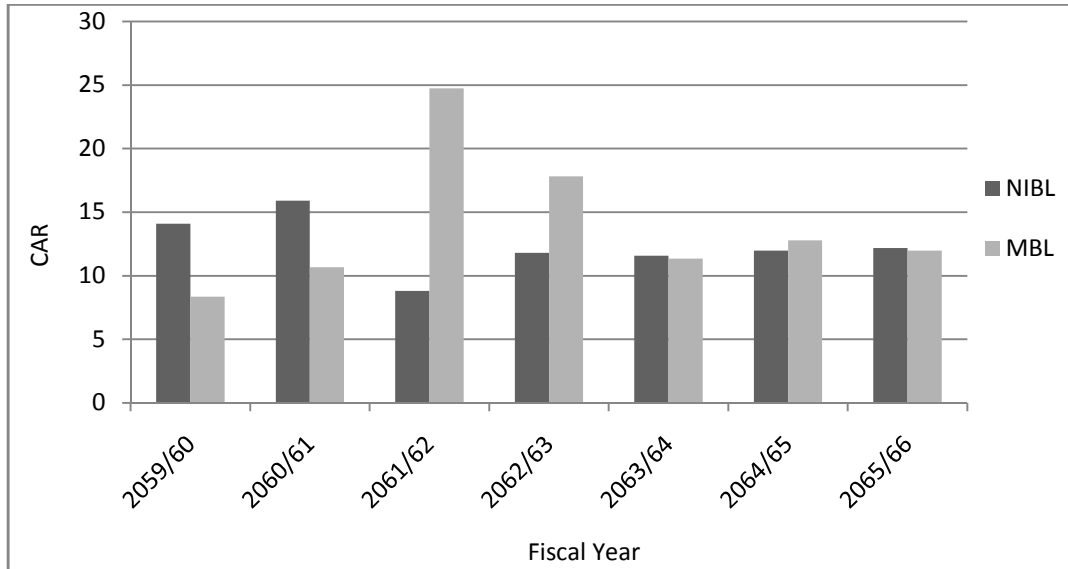
(In percentage)

FY	NIBL (%)	Change	MBL	Change	Average (%)	Change
2059/60	14.1	-	8.35	-	11.23	-
2060/61	15.9	12.77	10.68	27.90	13.29	18.36
2061/62	8.81	(44.59)	24.75	131.74	16.78	26.26
2062/63	11.18	26.90	17.82	(28.0)	14.50	(13.59)
2063/64	11.58	3.58	11.36	(36.35)	11.47	(20.90)
2064/65	11.97	3.37	12.79	12.59	12.38	7.93
2065/66	12.17	1.67	11.97	(6.41)	12.07	(2.5)
Average	12.24		13.96		13.10	

Source: Annual Reports of NIBL and MBL

Figure 4.2

Capital Adequacy Ratio for Total Funds to Total Risk Weighted Assets



From the above table, it can be concluded that NIBL had maintained enough total capital funds which is 14.1% in FY 2059/60 but MBL has failed to maintain the minimum total capital fund which is only 8.35%. But in the next FY, both the banks have maintained enough total capital funds i.e. 15.9% and 10.68% of NIBL and MBL respectively. In FY 2061/62 NIBL has failed to maintain its minimum total fund but MBL has maintained the highest among all the sample period i.e. 24.75%. In FY 2062/63 all commercial banks need to maintain 11% of minimum total capital fund to total risk weighted and both of the banks has maintained enough total capital fund i.e. 11.18% and 17.82% of NIBL and MBL respectively. From FY 2063/64 on wards, all commercial banks need to maintain the total capital fund to total capital fund to total risk weighted. In FY 2063/64 both the banks failed to maintain the minimum total capital fund, in FY 2064/65 NIBL has failed to maintain total capital fund but MBL has maintained its total capital fund, in FY 2065/66 NIBL has maintained its minimum total capital fund but MBL has failed to maintain the total capital fund to total risk weighted.

Issue of share capital, increase in general reserve fund, increase in the volume of capital adjustment fund, increase in the volume of redemption reserve fund, increase in the volume of net profit, loan loss provision maintained for pass loan exchange equalization reserve, issue of subordinate term debt are the reasons which increased the total capital fund to total risk weighted assets of the banks.

4.2 Loan Loss Provisioning and Total Capital Fund

Total capital funds of commercial banks include core capital and supplementary capital. Supplementary capital includes general loan loss provisioning as per NRB Directives. Therefore, general loan loss provisioning affects the capital funds and capital adequacy ratio of the banks.

General loan loss provision is loan loss provisions made only against the pass loan.

Table 4.3
Loan Loss Provisioning and Total Capital Fund Ratio

(In percentage)

FY	NIBL (%)	Change	MBL	Change
2059/60	4.12	-	20.6	-
2060/61	6.5	57.77	3.34	62.14
2061/62	8.23	26.62	3.12	(6.59)
2062/63	6.44	(21.75)	4.34	39.10
2063/64	6.27	(2.64)	7.42	70.97
2064/65	6.15	(1.91)	6.13	(17.39)
2065/66	6.08	(1.14)	6.38	4.08
Average	6.26		7.06	

Source: Annual Reports of NIBL and MBL

From the above table, it can be concluded that the LLP to Total Capital Fund Ratio of NIBL in FY 2059/60, 2060/61, 2061/62, 2062/63, 2063/64, 2064/65 and

2065/66 were 4.12, 6.5, 8.23, 6.44, 6.27, 6.15, and 6.08 respectively. Similarly, Total Capital Fund Ratio of MBL in FY 2059/60, 2060/61, 2062/63, 2063/64, 2064/65 and 2065/66 were 2.06, 3.34, 3.12, 4.34, 7.42, 6.13 and 6.38 respectively.

4.3 Comparative Analysis of Level of Total Assets, Total Deposits, and Total Loan and Advances, Total Performing Loan And Total Non-Performing Loan of the Selected Bank

Following tables and figures present comparative status of assets, deposits, loan and advances, performing and non-performing loans of NIBL and MBL

4.3.1 Analysis of Level of Total Assets

Table 4.4
Comparison of Total Assets of NIBL and MBL

(Rs. in amount)

FY	Total Assets			
	NIBL		MBL	
	Amount	% Change	Amount	% Change
2059/60	5,017,169,375	-	786,700,000	-
2060/61	4,973,890,169	(0.86)	1,104,377,362	140.38
2061/62	9,014,249,584	81.23	2,399,857,094	117.3
2062/63	13,255,496,016	47.05	2,399,857,094	43.7
2063/64	16,274,063,706	22.77	6,456,460,820	87.22
2064/65	21,330,137,542	31.07	9,069,830,401	40.48
2065/66	27,590,844,761	23.35	10,807,616,906	19.16

Source: Annual Reports of NIBL and MBL

Calculation of S.D. and C.V

Standard Deviation of NIBL = 784.80 and Standard Deviation of MBL = 367.20

C.V. of NIBL = 56.37% and C.V. of MBL = 75.44%

Figure 4.3
Comparison of Total Assets of NIBL and MBL

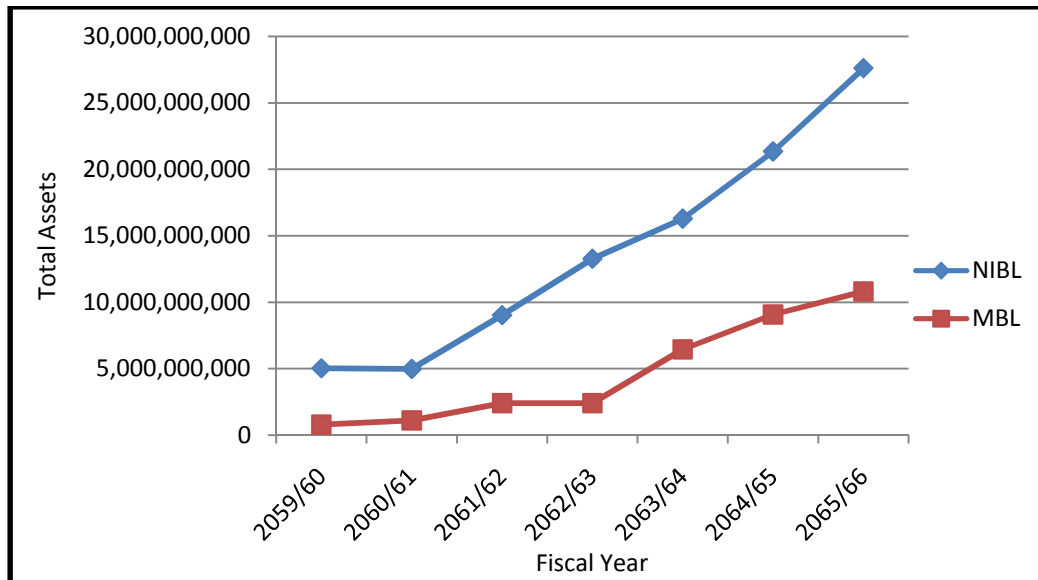


Table 4.4 and figure 4.3 shows that the total assets of NIBL were Rs.5,017,169,375 in FY 2059/60. They were slightly decreased by 0.86% and reached to Rs. 4,973,890,169 in FY 2060/61. In the next following FY, Total Assets were highly increasing Total assets in FY 2061/62, 2066/63, 2063/64, 2064/65 and 2065/66 was Rs. 9,014,249,584, Rs. 13,255,496,016, Rs. 16,247,063,706, Rs. 21,330,137,542 and Rs. 27,590,844,761 respectively. The increment in percentage in FY 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 were 81.23%, 47.05%, 22.77%, 31.07% and 29.35% respectively. There is a high growth in total assets from FY 2059/60 to 2065/66 respectively. There is high growth in total assets from FY 2059/60 to 2065/66.

Table 4.4 and figure 4.3 show that the total assets of MBL were Rs. 786,700000 in FY 2059/60. They were highly increased in FY 2060/61 by 140.38% and reached to Rs. 1,104,377,362. In the next following FY Total Assets were gradually increasing Total assets in FY 2061/62, 2062/63, 2063/64 2064/65 and 2065/66 was Rs. 2,399,857,094, Rs.3,448,634,251, Rs.6,456,460,820, Rs.9,069,830,401,

Rs.10, 807,616,906 respectively. The percentage increment in total assets in FY 2061/62, 2062/63, 2063/64 2064/65 and 2065/66 were 117.3%, 43.7%, 87.22%, 40.48% and 19.16% respectively. There is tremendous growth in total assets from FY 2059/60 to 2065/66.

4.3.2 Analysis of Level of Total Deposits

Table 4.5
Comparison of Total Assets of NIBL and MBL

(Rs. in amount)

FY	Total Assets			
	NIBL		MBL	
	Amount	% Change	Amount	% Change
2059/60	4,256,210,565	-	700,100,000	-
2060/61	4,174,762,439	(1.91)	994,816,732	42.1
2061/62	7,922,766,420	89.78	1,778,786,289	78.81
2062/63	11,524,679,645	45.46	2,754,632,089	54.86
2063/64	14,254,573,663	23.69	5,586,802,644	102.81
2064/65	18,927,305,974	32.78	7,893,297,672	41.28
2065/66	24,488,855,696	29.38	9,475,451,509	20.04

Source: Annual Reports of NIBL and MBL

Calculation of S.D. and C.V

Standard Deviation of NIBL = 703.82 and standard Deviation of MBL = 257.35

C.V. of NIBL = 57.59% and C.V of MBL = 87.90%

Figure 4.4

Comparison of Total Deposit of NIBL and MBL

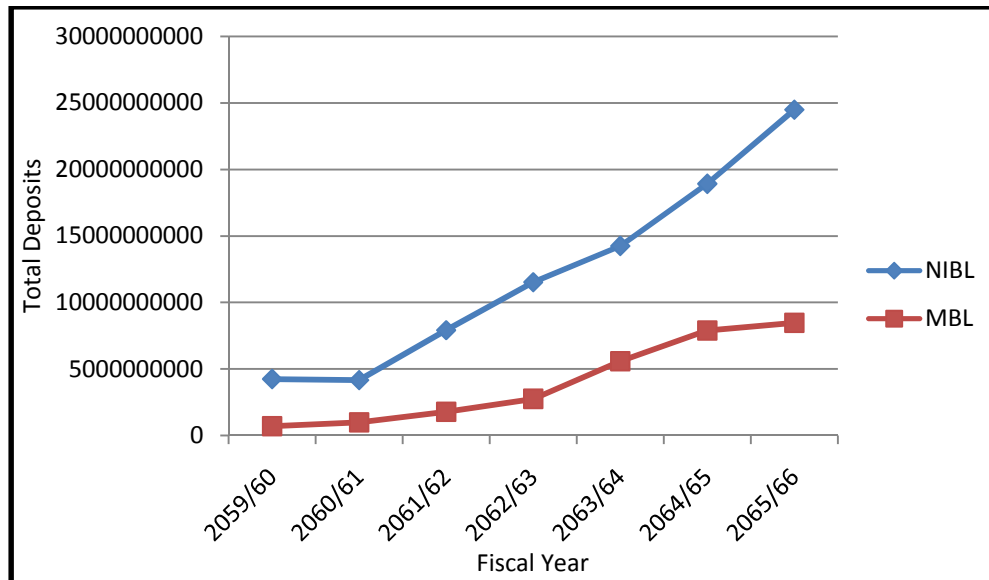


Table 4.5 and figure 4.4 show that the total deposits of NIBL were Rs. 4,256,210,565 in FY 2059/60. They were slightly decreased in FY 2060/61 by 1.91 and reached to Rs. 4,174,762,439. In the next following FY Total deposits were gradually increasing. The total deposits in the FY 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 were Rs. 7,922,766,420 Rs.11,524,679,645, Rs.14,254,573,663, Rs.18,927,305,974 and Rs.24,488,855,696 respectively. The percentage increment in total deposits in FY 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 were 89.78%, 45.46%, 23.69%, 32.78%, and 29.38% respectively. There is high increment in total deposit from FY 2059/60 to 2065/66, which is Rs.4,256,210,565 and Rs.24,488,855,696 respectively and the increment ratio is 475.37%, which is tremendously high.

Table 4.5 and figure 4.4 show that the total deposits of MBL were Rs.700,100,000 in FY 2059/60. They were slightly increased in FY 2060/61 by 42.10% and reached to Rs. 994,816,732. In the next following FY total deposits were gradually increasing total deposits in the FY 2061/62, 2062/63, 2063/64, 2064/65 and

2065/66 was Rs. 1,778,786,286, Rs. 2,754,632,089, Rs. 5,586,802,644, Rs.7, 893,297,672 and Rs. 9,475,451,509 respectively. The increment percentage in total deposits in the FY 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 were 78.81%, 54.86%, 102.81%, 41.28%, and 20.04%. There is high increment in total deposit also from FY 2059/60 to 2065/66 by 1253%, which is t tremendously high.

4.3.3 Analysis of Level of Total Loans and Advances

Table 4.6

Comparison of Total Loans and Advances of NIBL and MBL

(Rs. in amount)

FY	Total Assets			
	NIBL		MBL	
	Amount	% Change	Amount	% Change
2059/60	2,429,025,821	-	498,500,000	-
2060/61	2,713,524,871	11.71)	680,295,079	36.47
2061/62	5,921,788,103	118.23	1,495,865,109	119.88
2062/63	7,338,566,487	23.92	2,540,788,021	69.85
2063/64	10,453,163,997	42.44	5,130,223,362	101.91
2064/65	13,178,151,824	26.07	6,146,572,956	19.81
2065/66	17,769,099,903	34.84	7,319,939,264	19.09

Source: Annual Reports of NIBL and MBL

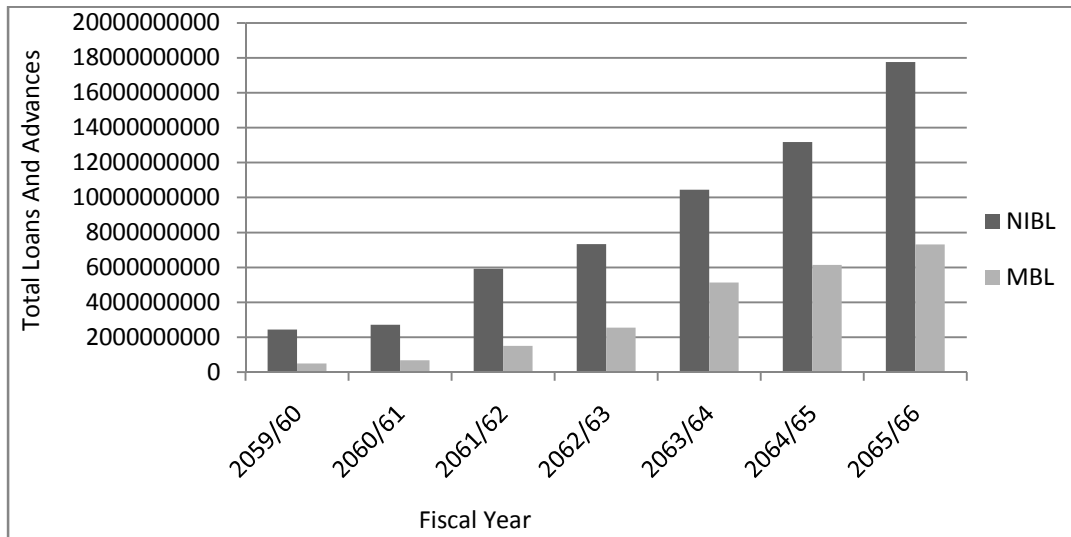
Calculation of S.D. and C.V

Standard Deviation of NIBL = 520.90 and standard Deviation of MBL = 256.58

C.V. of NIBL = 60.97% and C.V of MBL = 75.43%

Figure 4.5

Comparison of Total Loans and Advances of NIBL and MBL



Total loan and advances of NIBL in FY 2059/60 was Rs. 2,429,025,821 and it was slightly increased in the next FY 2060/61 by 11.71% and reached to Rs.2,713,524,871. The amount of total loan and advances was dramatically increased in the next following years. In FY 2061/62, 2062/63, 2063/64, 2064/65, 2065/66 the amount of total loan and advances were Rs.5, 921,788,103, Rs.7, 338,566,487, Rs. 10,453,163,997, Rs. 13,178,151,824 and Rs. 17,769,099,903 respectively. Percentage increment in total loans and advances in FY 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 were 118.23%, 23.92%, 42.445,26.07%, 34.84% respectively. The growth in total loan and advances form FY 2059/60 to FY 2065/66 is 613%.

Total loan and advances of MBL in FY 2059/60 was Rs.498,500,000 and it was slightly increase in the next FY 2060/61 by 36.47% and reached to Rs.680,295, 079. The amount of loan and advances was dramatically increased in the next following years. In FY 2061/62,2062/63,2063/64,2064/65, and 2065/66 the amount of total loan and advances were Rs. 1,495,865,109, Rs. 2,540,788,021, Rs.

5,130,223,362, Rs.6, 146,572,956 and Rs. 7,319,939,264 respectively. Percentage increment in total loans and advances in FY 2061/62,2062/63,2063/64, 2064/65 and 2065/66 were 119.88%, 69.85%, 101.91%, 19.81% and 9.09% respectively. The growth in total loan and advances from FY 2059/60 to FY 2065/66 is 1368%

4.3.4 Analysis of Level of Total Performing Loan

Table 4.7

Comparison of Total Performing Loans of NIBL and MBL

(Rs. in amount)

FY	Total Assets			
	NIBL		MBL	
	Amount	% Change	Amount	% Change
2059/60	2,227,592,186	-	493,963,650	-
2060/61	2,583,230,154	15.97	609,172,232,	23.32
2061/62	5,804,696,280	124.71	1,464,766,123	140.45
2062/63	7,157,131,478	23.30	2,515,804,974	71.75
2063/64	10,172,289,866	42.13	5,110,362,471	103.13
2064/65	12,905,658,783	26.87	6,129,656,359	19.95
2065/66	17,347,128,354	34.41	7,234,771,025	18.03

Source: Annual Reports of NIBL and MBL

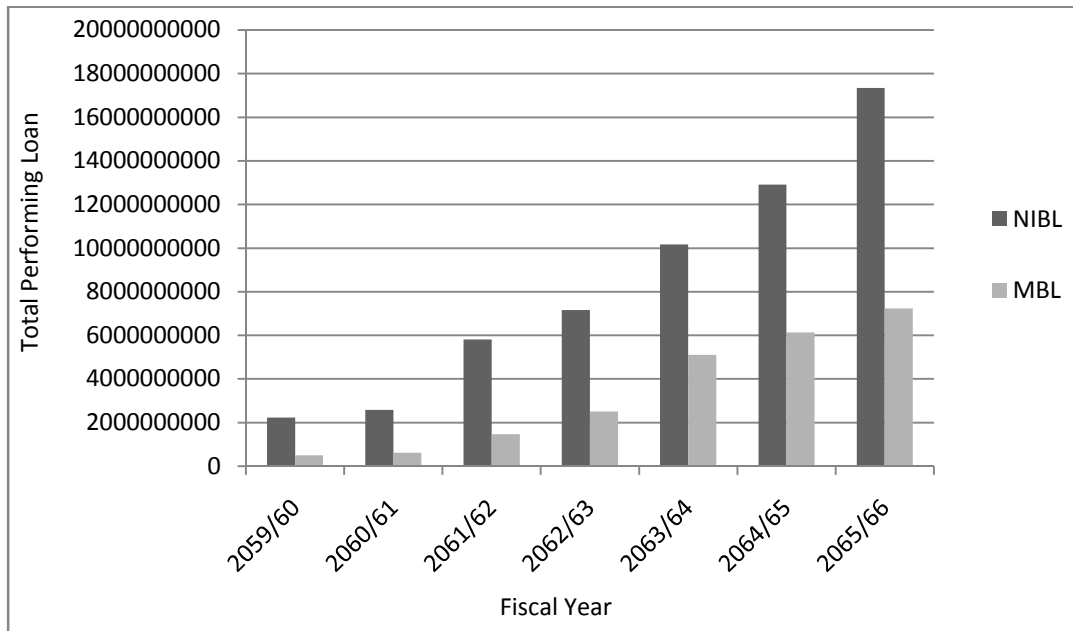
Calculation of S.D. and C.V

Standard Deviation of NIBL = 512.21 and standard Deviation of MBL = 255.89

C.V. of NIBL = 61.61% and C.V of MBL = 76.03%

Figure 4.6

Comparison of Total Loans and Advances of NIBL and MBL



Total performing loan shown by the table and figure is gradually increasing in sample period of NIBL. Total performing loan in FY 2059/60 was Rs.2,227,592,186 and increased by 15.97% and reached to Rs. 2,583,230,154 in FY 2060/61. Total performing loan in FY 2061/62, 2062/63, and 2063/64 2064/65 and 2065/66 were Rs. 5,804,696,280 Rs.7,157,131,478, Rs.10,172, 289, 866, Rs.12,905,658,783 and Rs.17,347,128,354 respectively. Increment percentage of total Performing loan of NIBL in FY 2061/62, 2062/63, and 2063/64, 2064/65 and 2065/66 were 124.71% 23.30%, 42.13%, 26.87% and 34.41% respectively.

Total Performing Loan shown by the table in gradually increasing in sample periods of MBL. Total performing loan in FY 2059/60 was Rs.493,963,650 and increased by 23.32% and reached to Rs.609,172,232 in FY 2060/61. Total performing loan in FY 2061/62, 2062/63, 2063/64, 2064/65, 2065/66 were Rs.1,464,766,123, Rs.2,515,804,974, Rs. 5,110,362,471 Rs. 6,129,656,359 and

Rs.7, 234,771,025 respectively. Percentage increment of Total performing loan in FY 2061/62, 2062/63, and 2063/64 2064/65 and 2065/66 were 124.71%, 23.30%, 42.13%, 26.87% and 34.41% respectively.

From the above table and figure, it can be conclude that both banks are successful to convert their loan and advances into performing loan.

4.3.5 Analysis of Level of Total Non-Performing Loan

Table 4.8

Comparison of Total Non-Performing Loans of NIBL and MBL

(Rs. in amount)

FY	Total Assets			
	NIBL		MBL	
	Amount	% Change	Amount	% Change
2059/60	201,433,635	-	4,536,350	-
2060/61	130,294,717	(35.35)	71,122,847,	1467.84
2061/62	117,091,823	(10.13)	31,098,987	(56.27)
2062/63	181,535,009	55.04	24,983,046	(19.67)
2063/64	280,874,131	54.72	19,860,891	(20.50)
2063/64	272,493,041	(2.98)	19,916,597	(14.82)
2065/66	421,971,550	54.86	85,168,239	403.46

Source: Annual Reports of NIBL and MBL

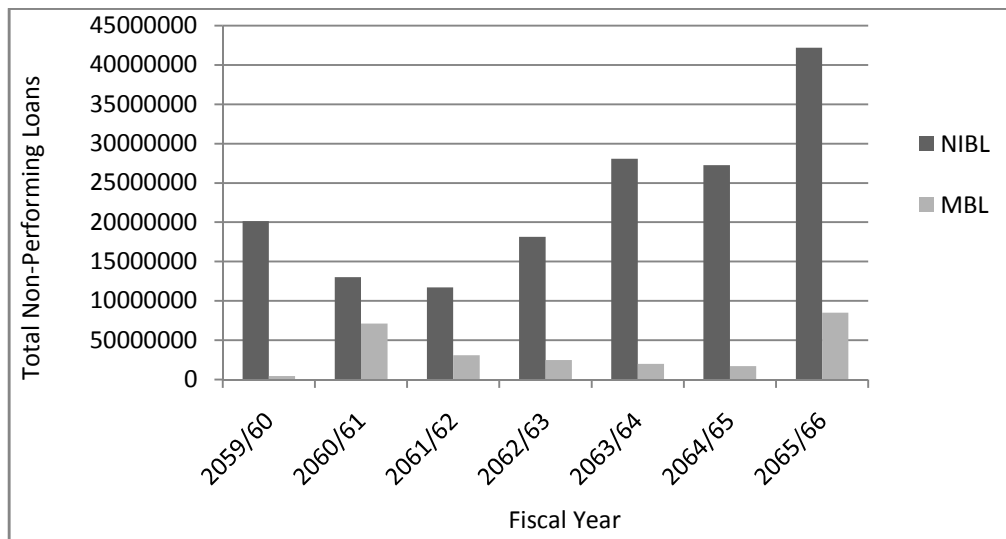
Calculation of S.D. and C.V

Standard Deviation of NIBL = 9.79 and standard Deviation of MBL = 255.89

C.V. of NIBL = 42.69% and C.V of MBL = 76.67%

Figure 4.7

Comparison of Total Non-Performing Loans of NIBL and MBL



Total Non-Performing Loan (NPL) of NIBL in FY 2059/60 was Rs.201,433,635 and was successfully decreased by 35.32% to Rs. 130,294,717 in FY 2060/61, which was good symbol for the bank's financial health. The amount of total NPL further decrease in the next year 2060/61 by 10.13% and reached to Rs.117,091823, which means the bank, was successfully converting its credit to assets. But in the next following years the amount of the NP was increased by 55.04% and 54.72% and 54.72% reached to Rs.181,535,009 and Rs.280,874,131 in FY 2062/63 and 2063/64 respectively. Level of NPL in FY 2064/65 of the bank was slightly decreased by 2.98 and reached to Rs.272,493,041 and increased in FY 2065/66 by 54.86% and reached to Rs.421,971,550.

Total non-performing loan (NPL) of MBL in FY 2059/60 was Rs.4,536,350 and tremendously increased by 1467.84% and reached to Rs.71,122,847 in FY 2060/61, which was not good symbol for the bank's financial health. There is highly fluctuation in NPL of the bank. The level of total NPL decreased by 56.27% in next year 2061/62 and reached to Rs.31, 098,987 which means the bank

was successfully concerting its credit to assets in that year. In the next FY 2062/63, 2063/64 and 2064/65 the level of NPL was further decreased by 19.67%, 20.50% and 14.82% and reached to Rs.24,983,046, Rs.19,860,891 and Rs.16,916,597 respectively but the level of NPL highly increased in FY 2065//66 by 403.46% and reached to Rs.85,168,239 which means the bank is not properly converting its loan and advances to the total assets.

4.3.6 Analysis of Level of Net Profit

Table 4.9
Comparisons of Net Profit of NIBL and MBL

(Rs. in amount)

FY	Total Assets			
	NIBL		MBL	
	Amount	% Change	Amount	% Change
2059/60	56,408,837	-	(15,500,000)	-
2060/61	57,105,284	1.23	(42,349,782)	(173.22)
2061/62	116,817,659	104.57	15,307,486	136.15
2062/63	152,670,976	30.69	46,689,945	205.01
2063/64	232,147,098	52.06	84,870,027	81.77
2064/65	350,536,413	51.0	133,996,709	57.88
2065/66	501,398,853	43.04	74,085,647	(44.71)

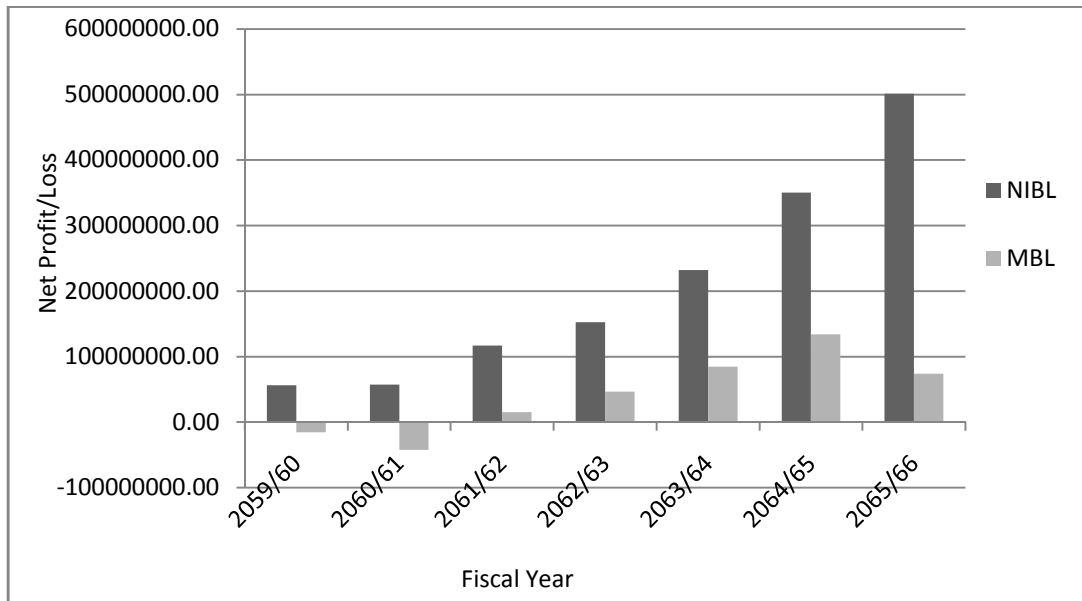
Source: Annual Reports of NIBL and MBL

Calculation of S.D. and C.V

Standard Deviation of NIBL = 15.31 and standard Deviation of MBL = 5.67

C.V. of NIBL = 73.05% and C.V of MBL = 133.48%

Figure 4.8
Comparison of Net Profit of NIBL and MBL



Total Net Profit of NIBL in FY 2059/60 was Rs.56,408,837 and was slightly increased by 1.23% and reached to Rs.57,105,284 in FY 2060/61. The amount of net profit tremendously increased in the next year 2061/62 by 104.57% and reached to Rs.116,817,649, which means the bank, was successfully converting its credit to assets. The level of net profit further increased in FY 2062/63, 2063/64, 2064/65 and 2065/66 by 30.69%, 52.06%, 51.0% and 43.04% and reached to Rs. 152,670,976, Rs.232,147,098, Rs.350,536,413 and Rs.501,398,853 respectively.

MBL has net loss in FY 2059/60 amounting Rs. 15,500,000. In the next year 2060/61 the loss was increased by 173.22% and the further loss was Rs.42,349,782. In FY 2061/62 the level of Net Profit increased in FY 2062/63, 2063/64 and 2064/65 by 205.01%, 81.77% and 57.88% and reached to Rs.46,689,945, Rs.84,870,027 and Rs.133,996,709 respectively. In FY 2065/66 the level of Net Profit was decreased by 44.71% and reached to Rs.74,085,647.

Weak regulation and supervision of banks, global security problem after September 11 incident, improper credit appraisal, ineffective credit monitoring and supervision, economic slowdown, borrower's misconducts, overvaluation of collateral, political pressure in lending, lack of responsibility and accountability of employees, domestic insurgency problem, financial distress in manufacturing and service sector's industries, insider lending, weak financial and management information, weak legal and accounting practice affected the repayment rate and NPL of the Nepalese commercial bank rose considerably in the previous years which ultimately decreased the overall performance of banks.

Similarly, reforming the financial sector laws and regulation, strengthen of NRB's regulatory and supervisory functions, setting up of recovery cell, regular, tactful follow up of borrowers, effective credit analysis of projects, issue of new directives by NRB, accurate valuation of securities and insurance coverage, rebate and concession in repayment of principal and interest, periodic supervision by NRB, establishment of bankers training institute, restructuring of Credit Information Bureau reduced the NPL level of banks in subsequent years which ultimately improving the overall performance of banks.

4.4 Financial Analysis

4.4.1 Ratios Related to Classified Loans

These ratios show the percentage of different classified loans to total loan and advances. Under this analysis, performing loan to total loans and advances, NPL to total loan and advances, substandard loan to total NPL, doubtful loan to total NPL and loss loan total NPL ratios of NIBL and MBL are analyzed. These ratios measure the proportion of performing loans and non-performing loans is total loan portfolio. As per NRB directives, the loans falling under category of pass loan is regarded as performing loan and loan falling under the category of substandard, doubtful and loss loan are regarded as non-performing loan. Higher the pass loan

to total loan and advances ratio implies the better quality of banks assets is the form of total loans and advances. Lower the performing loan to total loans and advances ratio implies the poor quality of assets of the banks, which is not desirable.

Ratio of the Nepal Investment Bank and Machhapuchhre Bank for the sample period are presented under:

Nepal Investment Bank Ltd.

Table 4.10
Different ratio Related to Classified Loan to Nepal Investment Bank Ltd for
the Sample Period

Ratio (Percentage	2059/60	2060/61	2061/62	2062/63	2063/64	2064/65	2065/66
Performing Loan to Total Loan	91.71	95.2	98.02	97.53	97.31	97.93	97.63
Non-Performing loan to Total Loan	8.29	4.8	1.98	2.47	2.69	2.07	2.37
Substandard loan to total NPL	18.55	13.23	18.81	5.97	0.29	16.23	22.96
Doubtful loan to total NPL	81.45	2.67	3.07	35.21	26.68	0.18	20.39
Loss loan to total NPL	-	84.1	78.12	58.82	73.03	83.59	56.65

From the above table it can be concluded that performing loan to total loan ration NIBL was 91.71%, which indicates that performing loan occupied 91.715 in total loan and advances in FY 2059/60. This ratio increased to 95.2% in FY 2060/61 and further increased to 98.025 in FY 2061/62, which indicates that the bank is able to recover its bad loans, as a result bank's performing loan is gradually increasing. In the next years the ratio is remain almost same. In FY 2062/63,

2063/64, 2064/65 and 2065/66 the ratio was 97.53%, 97.31%, 97.93% and 97.63% respectively.

Similarly NPL to total loan and advances ratio is gradually decreasing from FY 2059/60 to FY 2061/62. It was 8.29%, 4.8% and 1.98% in FY 2059/60, 2060/61 and 2061/62. But in the next year the ratio was increased to 2.47% in FY 2062/63 and further increased to 2.69% in FY 2063/64. The ratio decreased to 2.07% in FY 2064/65 and increased to 2.37% in FY 2065/66. It means there is variation in the ratio of NPL to total loan and advances.

By the end of FY 2065/66, total NPL comprises 22.96% substandard loan 20.39% doubtful loan and 56.65% loss loan, which means there is large amount of NPL occupied by loss loan.

Machhapuchhre Bank Ltd.

Table 4.11
Different Ratio Related to Classified Loan to Machhapuchhre Bank Ltd for
the Sample Period

Ratio (Percentage)	2059/60	2060/61	2061/62	2062/63	2063/64	2064/64	2065/66
Performing Loan to Total Loan	99.09	89.55	97.92	99.02	99.61	99.72	98.84
Non-Performing loan to Total Loan	0.91	10.45	2.08	0.98	0.39	0.28	1.16
Substandard loan to total NPL	90.42	92.42	19.46	3.38	10.46	0.39	22.65
Doubtful loan to total NPL	9.58	7.58	61.14	14.64	5.95	7.17	31.24
Loss loan to total NPL	-	-	19.40	81.98	83.42	92.44	46.11

From the above table we can find that performing loan to total loan ratio of MBL was 99.09%, which indicates that performing loan occupied 99.09% in total loan and advances in FY 2059/60. This ratio decreased to 89.55% in FY 2060/61 and increased to 97.92% in FY 2061/62, which indicates that the bank is able to recover its bad loans, as a result bank's performing loan is gradually increasing. In the next following years the ratio is gradually increasing to 99.02% 99.61% and 99.72%. In FY 2062/63, 2063/64 and 2064/65 respectively and it is decreased to 98.84% in 2065/66.

NPL to total loan and advances ratio in FY 2059/60 was 0.91% but it is highly increased in FY 2060/61 to 10.45%, which means the bank has large amount of total loan and advances as NPL. In the next 4 years the ratio was decreasing to 2.08%, 0.98%, 0.39% and 0.28% in FY 2061/62, 2062/63 and 2063/64. But in the next year the ratio was increased to 1.16% in FY 2064/65.

By the end of FY 2065/66, total NPL comprises 22.65% substandard loan, 31.24% doubtful loan and 46.11% loss loan, which mean there is large amount of NPL occupied by loss loan.

4.5 Comparative Analysis of different Ratios between NIBL and MBL

This analysis compares the ratios of NIBL and MBL for the sample period. These ratios are performing loan as percentage loan as percentage of total assets, performing loans as percentage of total deposit, performing loans as percentage to total loans and advances, non-performing loans as percentage to total assess, non-performing loans as percentage to total deposits, non-performing loan as percentage to total loans and advances.

4.5.1 Performing Loan to Total Assets Ratio

Performing loan to total Assets Ratio presents the percentage of performing loan is total assets for the sample period. In this analysis, comparison of the ratio between

NIBL and MBL is presented. Total assets calculate performing loan to total assets ratio dividing performing loan.

The ratio of performing loan to total assets ratio measures the volume of total performing loan in the structure of total assets. The high degree of ratio indicates that the good performance of the bank in mobilizing its fund in productive sector by the way of lending functions. As per NRB Directives, the loan falling under category of pass loan is considered as performing loan. Higher the ratio implies that better the quality of bank assets in the form of total assets. Lower the performing loan to total assets ratio implies poor the quality of assets of the bank, which is not desirable.

Table: 4.12
Performing Loan to Total Assets Ratio

FY	NIBL	MBL	Average
2059/60	44.4	62.79	53.59
2060/61	51.93	55.16	53.54
2061/62	64.39	61.0	62.69
2062/63	53.99	72.95	63.47
2063/64	62.51	79.15	70.83
2064/65	60.50	67.58	64.04
2065/66	62.87	66.94	64.91
Average	57.22	66.51	61.87

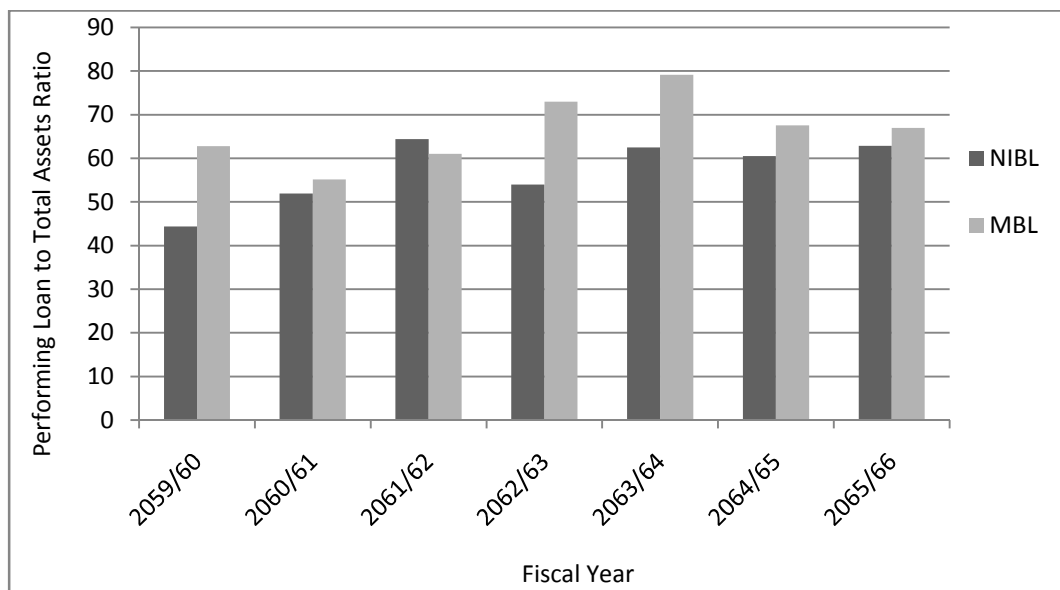
Above table clearly presents that performing loan to total assets ratio of NIBL and MBL were 44.4% and 62.79% respectively in FY 2059/60 performing loan to total asset ratio of MBL was higher than NIBL. Similarly in FY 2060/61 the ratio of NIBL and MBL was 51.93% and 55.16% respectively. The ratio of NIBL was increased but the ratio of MBL was decreased which means MBL was failed to convert its NPL to asset in comparison to NIBL in that particular FY.

In FY 2061/62 the ratio of performing loan to total assets ratio of NIBL and MBL was 64.39% and 61.0% respectively. In comparison, NIBL was highly successful to convert its NPL into total assets than MBL though the ratio of MBL was able to increase. Similarly, the ratio of NIBL and MBL in FY 2062/63 is 53.99% and 72.95% respectively. Similarly, the ratio of NIBL had decreased but the ratio of MBL had increased which means that MBL had been successful in that year to convert its loans to assets in comparison to NIBL. In the next FY 2063/64 the ratio of both banks had been increased to 62.51% and 79.15% respectively but comparatively the performance of MBL was better than NIBL. But in the next FY 2064/65, the ratio of both banks had been decreased to 60.50% and 67.58% respectively. But in comparison, the ratio of MBL was higher than NIBL. In the recent year 2065/66 the ratio of NIBL has been increased to 62.87% and the ratio of MBL has slightly decreased to 66.94% but still MBL has the highest ratio in comparison to the ratio of NIBL.

The figure below clearly indicates the above-described data.

Figure 4.9

Performing Loan to Total Assets Ratio



4.5.2 Performing Loan to Total Deposit Ratio

This ratio implies that to what extent banks was success in mobilizing their deposits on productive sector. This ratio measures the proportion of performing loans in the total deposits portfolio. As per NRB Directives, the loan falling under category of pass loan is considered as performing loan. Higher the ratio implies that better quality of banks assets in the form of total deposits. Lower the performing loan to total deposits ratio implies poor quality of assets of the banks, which is not desirable.

Table 4.13
Performing Loan to Total Deposit Ratio

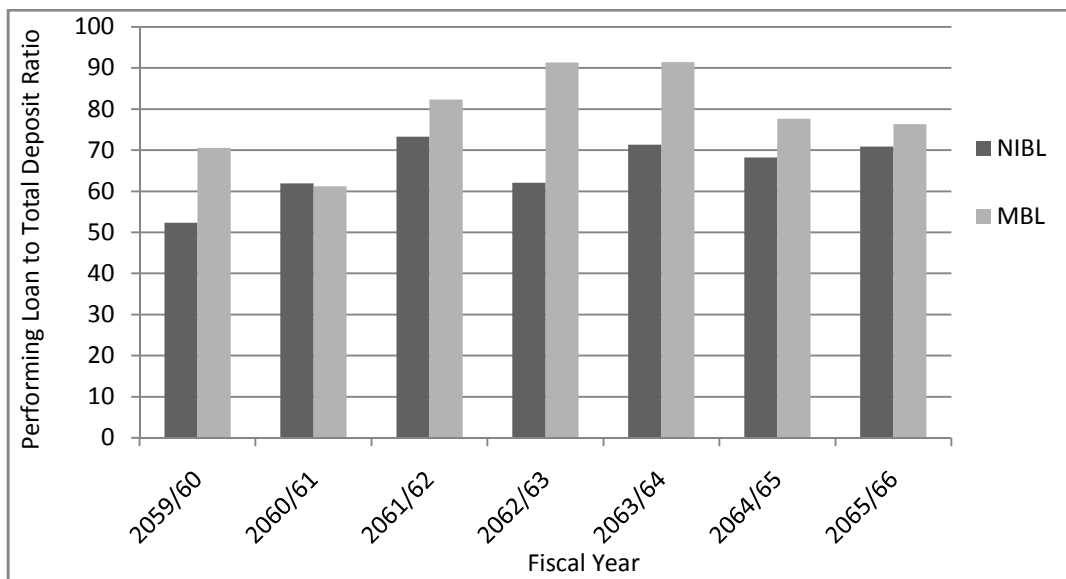
FY	NIBL	MBL	Average
2059/60	52.34	70.56	61.45
2060/61	61.88	61.23	61.55
2061/62	73.26	82.35	77.81
2062/63	62.1	91.33	76.71
2063/64	71.36	91.47	81.42
2064/65	68.19	77.66	72.93
2065/66	70.84	76.35	73.59
Average	65.71	78.71	72.21

In the above table, the comparative ratio of performing loan to Total Deposit of NIBL and MBL has been presented. Performing loan to total deposit ratio of NIBL and MBL were 52.34% and 70.56% respectively in FY 2059/60. In this FY the ratio of MBL was higher than NIBL. Similarly in FY 2060/61 the ratio of NIBL and MBL was 61.88% and 61.23% respectively. The ratio of NIBL was increased but the ratio of MBL was decreased which means MBL was failed to convert the ratio of performing loans to total deposits portfolio in comparison to NIBL in that particular FY.

In FY 2061/62 the ratio of performing loan to total deposits ratio of both banks had tremendously increased to 73.26% and 82.35% respectively. Comparatively,

MBL was highly successful to convert its total performing loans to total deposits portfolio than NIBL. Similarly, the ratio of NIBL and MBL in FY 2062/63 is 62.1% and 91.33% respectively. In this year, the ratio of NIBL had decreased but the ratio of MBL had highly increased which means that MBL had been successful in that year to convert its loan to total deposits portfolio in comparison to NIBL. In the next FY 2063/64 the ratio of both banks had been increased to 71.36% and 91.47% respectively but comparatively the performance MBL was better than NIBL. But in the next FY 2064/65. The ratio of both banks had been decreased to 68.19% and 77.66% respectively. Comparatively the ratio of MBL was higher than NIBL. In the recent year 2065/66 the ratio of NIBL has been increased to 70.84% and the ratio of MBL has slightly decreased to 76.35% but still MBL has the highest ratio in comparison to the ratio of NIBL. The figure below clearly indicates the above-described data.

Figure 4.10
Performing Loan to Total Deposit Ratio



4.5.3 Performing Loans to Total Loans and Advances Ratio

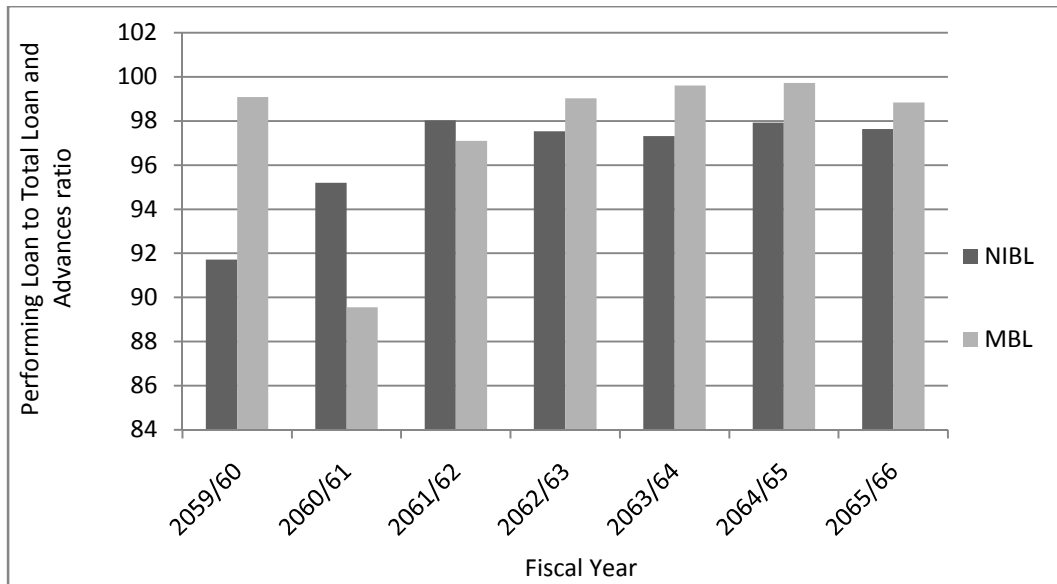
This ratio measures the proportion of performing loans in the total loan portfolio. As per NRB Directives, the loan falling under category of pass loan is considered

as performing loan. Higher the ratio implies that better the quality of banks assets in the form of total loans and advances. Lower the performing loans to total loan and advances ratio implies poor quality of assets of the banks, which is not desirable.

Table: 4.14
Performing Loan to Total Loan and Advances Ratio

FY	NIBL	MBL	Average
2059/60	91.71	99.09	95.4
2060/61	95.2	89.55	92.38
2061/62	98.02	97.92	97.97
2062/63	97.53	99.02	98.28
2063/64	97.32	99.61	98.46
2064/65	97.93	99.72	98.83
2065/66	97.63	98.83	98.24
Average	96.48	97.68	97.08

Figure: 4.11
Performing Loan to Total Loan and Advances Ratio



From above table and figure, it can conclude that the difference between performing loan to total loans and advances ratios in sample periods of both banks.

Performing loan to total loans and advances ratio of NIBL and MBL were 91.71% and 99.09% respectively in FY 2059/60 which means that MBL has higher ratio than NIBL and indicates that MBL has lower non-performing loans comparatively of NIBL. Similarly, in FY 2060/61 the ratio of NIBL and MBL was 95.2% and 89.55% respectively. Ratio of NIBL was increased but ratio of MBL was decreased which means non-performing loan of MBL has been increased in that particular FY.

In FY 2061/62 the ratio of performing loan to total deposits ratio of both banks had been increased to 98.02% and 97.92% respectively. Comparatively, NIBL has high ratio than MBL. Similarly, the ratio of NIBL and MBL in FY 2062/63 is 97.53% and 99.02% respectively. In this year the ratio of NIBL had decreased but the ratio of MBL had increased which means that MBL had been successful in that year to convert its non-performing loans in comparison with NIBL. In the next FY 2063/64 the ratio of NIBL had been slightly decreased to 97.31% and the ratio of MBL increased to 99.61%. But in the next FY 2064/65, the ratio of both banks had been increased to 97.93% and 99.72% respectively. Comparatively, the ratio of MBL was higher than NIBL. In recent year 2065/66 the ratio of NIBL and MBL had been slightly decreased to 97.634% and 98.84% but still MBL has the highest ratio in comparison with the ratio of NIBL.

4.5.4 Non-Performing Loan to Total Assets Ratio

This ratio measures the proportion of non-performing loans in the total assets portfolio. As per NRB Directives, the loan falling under category of substandard, doubtful and loss loan is considered as non-performing loan. Higher the ratio implies that poor quality of banks loans in the form of total assets. Hence lower the NPL to total assets implies best quality of assets of the banks, which is desirable.

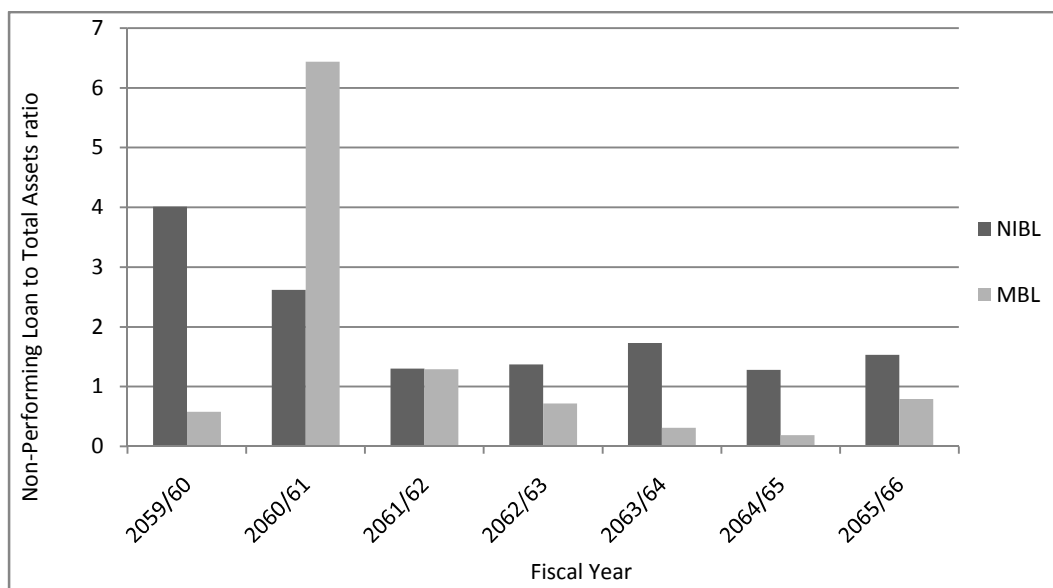
Table: 4.15

NPL to Total Asset Ratio

FY	NIBL	MBL	Average
2059/60	4.01	0.58	2.29
2060/61	2.62	6.44	4.53
2061/62	1.30	1.29	1.295
2062/63	1.37	0.72	1.05
2063/64	1.73	0.31	1.02
2064/65	1.28	0.19	0.74
2065/66	1.58	0.79	1.16
Average	1.98	1.47	1.73

Figure 4.12

Non-Performing Loan to Total Assets Ratio



From the above table and figure, we can clearly see the difference between non-performing loan to total assets ratios in the sample periods of both banks NIBL and MBL. Non-Performing Loan to Total Assets ratio of NIBL and MBL were 4.01% and 0.58% respectively in FY 2059/60 which means that MBL has the lower ratio than NIBL and indicates that MBL has lower non-performing loans comparatively of NIBL. Similarly, in FY 2060/61 the ratio of NIBL and MBL was

2.62% and 6.44% respectively. The ratio of NIBL was decreased but the ratio of MBL was tremendously increased which means non-performing loan to MBL has been increased in that particular FY.

In FY 2061/62 the ratio of non-performing loan to total assets ratio of both banks had been decreased to 1.30% and 1.29% respectively which was the good sign for both of the banks. Comparatively, MBL has lower ratio than NIBL. Similarly, the ratio of NIBL and MBL in FY 2062/63 is 1.37% and 0.72% respectively. In this year the ratio of NIBL had increased slightly but the ratio of MBL had decreased which means that MBL had been successful in that year to convert its non-performing loans to performing loans in comparison with NIBL. In the next FY 2063/64 the ratio of NIBL had been slightly increased to 1.73% and the ratio of MBL decreased to 0.31%. But in the next FY 2064/65, the ratio of both banks had been decreased to 1.28% and 0.19% respectively. Comparatively, the ratio of MBL was lower than NIBL which means MBL was more successful to convert the non-performing loans into assets than NIBL. In recent year 2065/66 the ratio of NIBL and MBL had been slightly increased to 1.53% and 0.79% but still MBL has the lowest ratio in comparison with the ratio of NIBL.

4.5.5 Non-performing Loan to Total Deposit Ratios

This ratio measures the negative indicators of the bank's deposits. This ratio also measures the proportion of non-performing loans in the total deposits portfolio. As per NRB Directives, the loan falling under category of substandard, doubtful and loss loan is considered as non-performing loan. Higher the ratio implies that poor quality of banks loan in the form of deposits. Hence lower the NPL to total deposits implies best quality of assets of the banks, which is desirable.

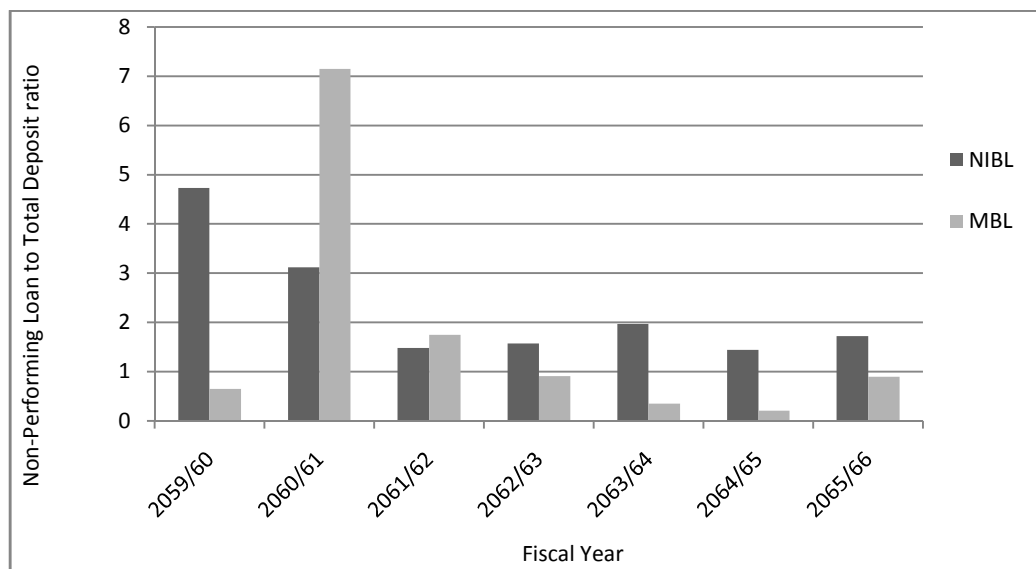
Table 4.16
NPL to Total Asset Ratio

FY	NIBL	MBL	Average
2059/60	4.73	0.65	2.69
2060/61	3.12	7.15	5.14
2061/62	1.48	1.75	1.62
2062/63	1.57	0.91	1.24
2063/64	1.97	0.35	1.16
2064/65	1.44	0.21	0.83
2065/66	1.72	0.90	1.31
Average	2.29	1.70	1.99

From the table and figure, we can clearly see the difference between non – performing loan to total deposit ratios in the sample periods of both banks NIBL and MBL. Non-performing loans to Total Deposit ratio of NIBL and MBL were 4.73% and 0.65% respectively in FY 2059/60, which means that MBL has the lower ratio than NIBL and indicates that MBL has lower non-performing loans comparatively of NIBL. Similarly, in FY 2060/61 the ratio of NIBL and MBL was 3.12% and 7.15% respectively. The ratio of NIBL was decreased but the ratio of MBL was tremendously increased which means non-performing loan of MBL has been increased in that particular FY.

Figure 4.13

Non-Performing Loan to Total Deposit Ratio



In FY 2061/62 the ratio of non-performing loan to total assets ratio of both banks had been decreased to 1.48% and 1.75% respectively which was the good sign for both of the banks. Comparatively, MBL has higher ratio than NIBL. Similarly, the ratio of NIBL and MBL in FY 2062/63 is 1.57% and 0.91% respectively. In this year the ratio of NIBL had increased slightly but the ratio of MBL had decreased which means that MBL had been successful in that year to convert its non-performing loans to deposit in comparison with NIBL. In the next FY 2063/64 the ratio of NIBL had been slightly increased to 1.97% and the ratio of MBL decreased to 0.35%. But in the next FY 2064/65, the ratio of both banks had been decreased to 1.44% and 0.21% respectively. Comparatively, the ratio of MBL was lower than NIBL which means MBL was more successful to convert the non-performing loans into deposit than NIBL. In recent year 2065/66 the ratio of NIBL and MBL had been slightly increased to 1.72% and 0.90% but still MBL has the lowest ratio in comparison with the ratio of NIBL.

4.5.6 Non-Performing Loan to Total Loan and Advances Ratio

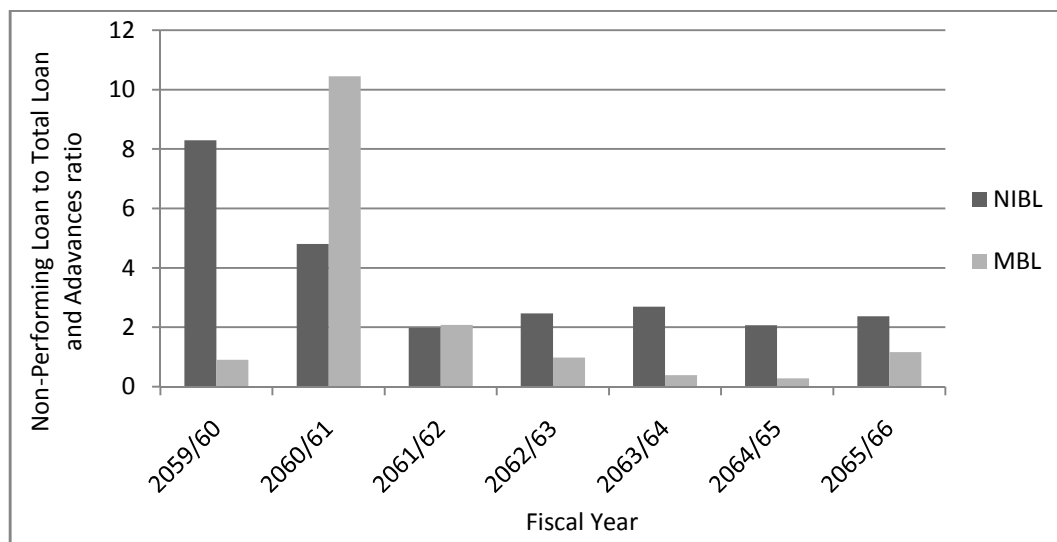
This ratio measures the proportion of non-performing loans in the total loan portfolio. As per NRB Directives, the loan falling under category of substandard, doubtful and loss loan is considered as non-performing loan. Higher the ratio implies that poor quality of banks loan in the form of loans and advances. Hence lower the NPL to total loans and advances implies best quality of assets of the banks, which is desirable.

Table 4.17
NPL to Total Loan and Advances

FY	NIBL	MBL	Average
2059/60	8.29	0.91	4.6
2060/61	4.8	10.45	7.63
2061/62	1.98	2.08	2.03
2062/63	2.47	0.98	1.73
2063/64	2.69	0.39	1.54
2064/65	2.07	0.28	1.18
2065/66	2.37	1.16	1.77
Average	3.52	2.32	2.92

Figure 4.14

Non-Performing Loan to Total Loans and Advances Ratio



From the above table and figure, we can clearly see the difference between non-performing loan to total loans and advances ratio in the sample periods of both banks NIBL and MBL. Non-performing loans to Total Deposit ratio of NIBL and MBL were 8.29% and 0.91% respectively in FY 2059/60, which means that MBL has the lower ratio than NIBL and indicates that MBL has lower non-performing loans comparatively of NIBL. Similarly, in FY 2060/61 the ratio of NIBL and MBL was 4.8% and 10.48% respectively. The ratio of NIBL was decreased but the ratio of MBL was tremendously increased which means non-performing loan of MBL has been increased in that particular FY.

In FY 2061/62 the ratio of non-performing loan to total loans and advances ratio of both banks had been decreased to 1.98% and 2.08% respectively which was the good sign for both of the banks. Comparatively, MBL has higher ratio than NIBL. Similarly, the ratio of NIBL and MBL in FY 2062/63 is 2.47% and 0.98% respectively. In this year the ratio of NIBL had increased slightly but the ratio of MBL had decreased which means that MBL had been successful in that year to convert its non-performing loans to total loans and advances in comparison with NIBL. In the next FY 2063/64 the ratio of NIBL had been slightly increased to 2.69% and the ratio of MBL decreased to 0.39%. But in the next FY 2064/65, the ratio of both banks had been decreased to 2.07% and 0.28% respectively. Comparatively, the ratio of MBL was lower than NIBL which means MBL was more successful to convert the non-performing loans into deposit than NIBL. In recent year 2065/66 the ratio of NIBL and MBL had been slightly increased to 2.37% and 1.16% but still MBL has the lowest ratio in comparison with the ratio of NIBL.

4.6 Adequacy of Loan loss Provisioning

Nepal Rastra Bank has set up directives to be maintaining loan loss provision for different types of loan of the commercial banks. In this way, this analysis

comprises the adequacy of loan loss provision as per NRB directives of NIBL and MBL for the study period. Adequacy is measured by calculating the ratios of loan loss provisioning to loans and advances of different classified loan.

This ratio describes the quality of assets in the form of loan and advances that a bank is holding. Since there is risk inherent in loan and advances, NRB has directed commercial bank to classify its loans into different categories and accordingly to make provision for probable loss. Loan loss provisioning signifies the cushion against future contingency created by the default of the borrower in payment of loans and ensures the continued solvency of the banks. Since high provisioning has to be made for non-performing loan, higher provisioning for loan loss reflects increasing non-performing loan volume of total loans and advances. The low ratio signifies the good quality of assets in the volume of loan and advances. It indicates how efficiently it manages loan and advances and makes efforts to cope with probable loan loss. Higher ratios implies higher portion in the total loan portfolio.

4.6.1 Adequacy of loan Loss Provisioning (LLP) for Pass Loan

Table 4.14 presents the adequacy ratio of loan loss provisioning for pass loan for the sample period of the selected banks for the study. A bank is required to maintain 1% loan loss provisioning for its pass loan as per NRB Directives. This ratio is calculated by dividing the amount of LLP of pass loan by the amount of pass loan.

This ratio determines the proportion of provision held on pass loan to pass loan is covered by the provision maintained for pass loan. Higher ratio signifies that the banks are safeguard against future contingency for loss loan. This ratio also determines that banks have maintained or not the loan loss provision for pass loan as per NRB directives.

Table 4.18
LLP for Pass Loan to Pass Loan (in percentage)

FY	NIBL	MBL	Average
2059/60	0.91	1.0	0.95
2060/61	1.40	1.0	1.2
2061/62	0.98	1.0	0.99
2062/63	0.99	1.0	0.995
2063/64	0.99	0.99	0.99
2064/65	0.99	0.98	0.985
2065/66	1.0	1.77	1.38
Average	1.04	1.12	1.08

From the above table 4.18, it is found that NIBL is not strictly following the directives provided by NRB regarding LLP for pass loan. In FY 2059/60 LLP for pass loan of NIBL is 0.91, which is 0.9 inadequate for pass loan. In FY 2060/61 LLP for pass loan of NIBL is 1.40. This FY, NIBL has maintained 0.4 more than the required LLP for pass loan. In FY 2061/62, 2062/63, 2063/64 and 2064/65. LLP for pass loan are 0.98, 0.99, 0.99 and 0.99 respectively, which are inadequate according to the directives. In FY 2065/66 LLP for pass loan is 1.00, which is according to the directives.

From the table above, it is found that MBL is following the directives provided by NRB regarding LLP for pass loan. In FY 2059/60, 2060/61, 2061/62 and 2062/63 the LLP for pass loan was 1.0, which is according to the directives. The LLP in next two years slightly decreased to 0.99 and 0.989 respectively. In FY 2065/66 the LLP for pass loan is 1.77.

4.6.2 Adequacy of Loan Loss Provisioning (LLP) for Substandard Loan

Table 4.19 presents the adequacy ratio of loan loss provisioning for substandard loan for the sample period of the NIBL and MBL for the study. A bank is required to maintain 25 percentage loan losses provisioning for its substandard loan as per

NRB Directives. This ratio is calculated by dividing the amount of LLP of substandard loan by the amount of substandard loan.

This ratio determines the proportion of provision held on substandard loan of the banks. The measures upto what extend of risk inherent in substandard loan is covered by the provision maintained for substandard loan. Higher ratio signifies that the banks are safeguard against future contingency for loss loan. This ratio also determines that banks have maintained or not the loan loss provision for substandard loan as per NRB Directives.

Table 4.19
LLP for Substandard Loan to Substandard Loan

(in percentage)

FY	NIBL	MBL	Average
2059/60	22.28	24.98	23.63
2060/61	12.13	24.99	18.56
2061/62	11.31	24.99	18.15
2062/63	25.16	25.0	25.08
2063/64	25.78	25.0	25.39
2064/65	25.0	24.99	24.995
2065/66	34.63	34.63	29.99
Average	21.0	26.37	23.69

From table 4.19 it is found that NIBL is not strictly following directives provided by NRB regarding LLP for substandard loan. In FY 2059/60 LLP for pass loan of NIBL is 22.28, which is not sufficient for substandard loan. In FY 2060/61 LLP for substandard loan are only 12.13, which is around half percent inadequate. In FY 2061/62, LLP for substandard loan is only 11.31, which is also very low according to the directives. In FY2062/63, 2063/64 2064/65 and 2065/66 LLP for substandard loan are 25.16, 25.78,25.00 and 25.36 respectively which are sufficient according to the directives.

Form the above table; it is found that MBL is following the directives provided by NRB regarding LLP for substandard loan. In FY 2059/60, 2060/61, 2062/62 the LLP for substandard loan were 24.98, 24.99 and 24.99 respectively. In FY 2062/63 and 2063/64 the LLP for substandard loan were 25.0, which is according to the directives. The LLP in FY 2064/65 was 24.99 and in FY 2065/66 LLP for substandard loan were 34.63, which is too high than the directives provided by NRB.

4.6.3 Adequacy of loan Loss Provisioning (LLP) for Doubtful Loan

Table 4.20 presents the adequacy ratio of loan loss provisioning for doubtful loan for the sample period of the NIBL and MBL of the study. A bank is required to maintain 50 percentage loan losses provisioning for its doubtful loan as per NRB Directives. This ratio is calculated by dividing the amount of LLP of doubtful loan by the amount of doubtful loan. This ratio determines the proportion of provision held on doubtful loan of the banks. This measures upto what extend of risk inherent in doubtful loan is covered by the provision maintained for doubtful loan. Higher ratio signifies that the banks are safeguard against future contingency for doubtful loan. This ratio also determines that banks have maintained or not the loan loss provision for doubtful loan as per NRB directives.

Table 4.20
LLP for Substandard Loan to Doubtful Loan

(in percentage)

FY	NIBL	MBL	Average
2059/60	49.80	50.0	49.9
2060/61	47.36	50.0	48.68
2061/62	12.72	50.0	31.36
2062/63	46.80	50.0	48.4
2063/64	50.12	50.0	50.06
2064/65	50.0	49.99	49.99
2065/66	50.01	61.64	55.83
Average	43.83	51.66	47.75

From the table 4.20, it is found that NIBL is failed to maintain the minimum LLP for doubtful loan according to the directives provided by NRB regarding in first four years. In FY 2059/60, 2060/61, 2062/62 and 2062/63 LLP for doubtful loan of NIBL are 49.80, 47.36, 12.72, and 46.80. In FY 2060/61 LLP for substandard loan are only 12.13, which is around half percent inadequate. In FY 2061/62, LLP for substandard loan is only 11.31, which are also very low according to the directives. In FY 2062/63, 2063/64, 2064/65, and 2065/66 LLP for substandard loan are 25.16, 25.78, 25.0 and 25.36 respectively, which are sufficient according to the directives.

From the table above, it is found that MBL is successfully maintaining the LLP for doubtful loans according to the directives provided by NRB. In FY 2059/60, 2060/61, 2061/62, 2062/63 and 2063/64 the LLP for doubtful loan were 50.0 respectively. In FY 2064/65 the LLP for doubtful loan were 49.99 and in FY 2065/66 LLP for substandard loan were 61.64, which are higher than the directives provided by NRB.

4.6.4 Adequacy of Loan Loss Provisioning (LLP) for Loss Loan

Table 4.21 presents the adequacy ratio of loan loss provisioning for loss loan for the sample period of the NIBL and MBL for the study. A bank is required to maintain 100 percentage loan losses provisioning for its loss loan as per NRB Directives. This ratio is calculated by dividing the amount of LLP of loss loan by the amount of loss loan.

This ratio determines the proportion of provision held on loss loan of the banks. This measures upto what extent of risk inherent in loss loan is covered by the provision maintained for loss loan. Higher ratio signifies that the bank is safeguarded against future contingency for loss loan. This ratio also determines

that banks have maintained or not the loan loss provision for loss loan as per NRB Directives.

Table 4.21
LLP for Loss Loan to Loss Loan

(in percentage)

FY	NIBL	MBL	Average
2059/60	-	-	-
2060/61	99.45	-	49.73
2061/62	97.84	100	98.92
2062/63	98.38	100	99.19
2063/64	91.79	100	95.9
2064/65	99.01	100	99.51
2065/66	99.10	100	99.55
Average	97.6	71.42	

From the table 4.21, it is found that NIBL is not maintaining the minimum LLP for loss loan according to the directives provided by NRB. In FY 2059/60 there is no LLP for loss loan 2060/61, 2062/63, 2063/64, 2064/65 and 2065/66 LLP for loss loan of NIBL are 99.45, 97.84, 98.38, 91.79, 99.01, 99.10 respectively which is not sufficient according to the NRB directives.

From the table above, it is found that MBL had not maintained the LLP for loss loan in FY 2059/60 and 2060/61. But next onwards MBL is successfully maintaining the LLP for loss loans according to the directives provided by NRB. In FY 2061/62, 2062/63, 2064/65, and 2065/66 the LLP for loss loan were 100.0 respectively.

4.7 Analysis of Non-Performing Loan, Loan Loss, Provisioning and Net Profit

There are many factors, which directly and indirectly affect the net profit of the organization. NPL is one of the factors, which directly affect the net profit the banks. With the increase in NPL, the bank has to maintain more provision for loan

loss. Such provision ultimately decreases the net profit of the banks. Therefore, the NPL, Loan loss provisioning and net profit of NIBL and MBL analyzed.

Table 4.22

Non-Performing Loan, Loan loss provisioning and Net Profit of NIBL

(amount in Rs.)

FY	Total Non-Performing Loan	% Change	Loan Loss Provisioning	% Change	Net Profit	% Change
2059/60	201,433,635	-	110,195,810	-	56,408,837	-
2060/61	130,294,717	(35.32)	149,101,389	35.31	57,105,284	1.23
2061/62	117,091,823	(10.13)	149,647,852	0.37	116,817,659	104.57
2062/63	181,435,009	54.95	208,440,985	39.29	152,670,976	30.69
2063/64	280,874,131	54.81	327,108,374	56.93	232,147,098	52.06
2064/65	272,493,041	(2.98)	401,943,787	22.88	350,536,413	51.0
2065/66	421,971,550	54.86	482,672,514	20.08	501,398,853	43.04

Figure 4.15

Non-Performing Loan, Loan Loss Provisioning and Net Profit of NIBL

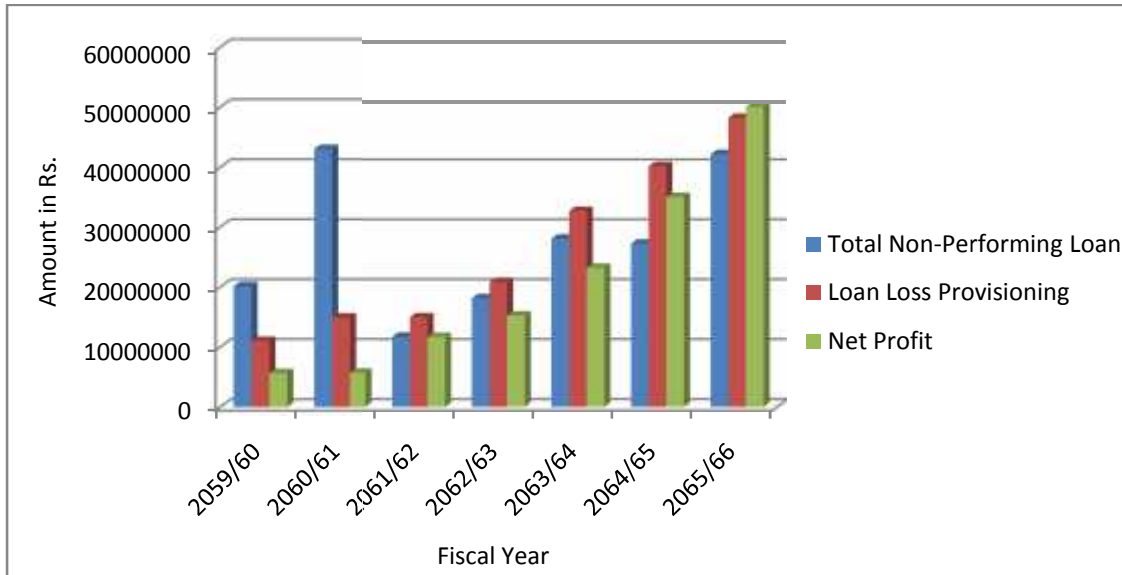


Table 4.23**Non-Performing loan, Loan loss Provisioning and Net Profit of MBL**

(Amount in Rs.)

FY	Total Non-Performing Loan	% Change	Loan Loss Provisioning	% Change	Net Profit	% Change
2059/60	4,536,350	-	5,200,000	-	(15,500,000)	-
2060/61	71,122,847	1467.84	25,233,859	385.27	(42,349,782)	(173.22)
2061/62	31,098,986	(56.27)	31,699,653	25.62	15,307,486	136.15
2062/63	24,983,047	(19.67)	47,680,089	50.41	46,689,945	205.01
2063/64	19,860,891	(20.50)	68,790,307	44.27	84,870,027	81.77
2064/65	16,916,597	(14.82)	78,145,506	13.60	133,996,709	57.88
2065/66	85,168,239	403.46	190,047,722	143.2	74,085,647	(44.71)

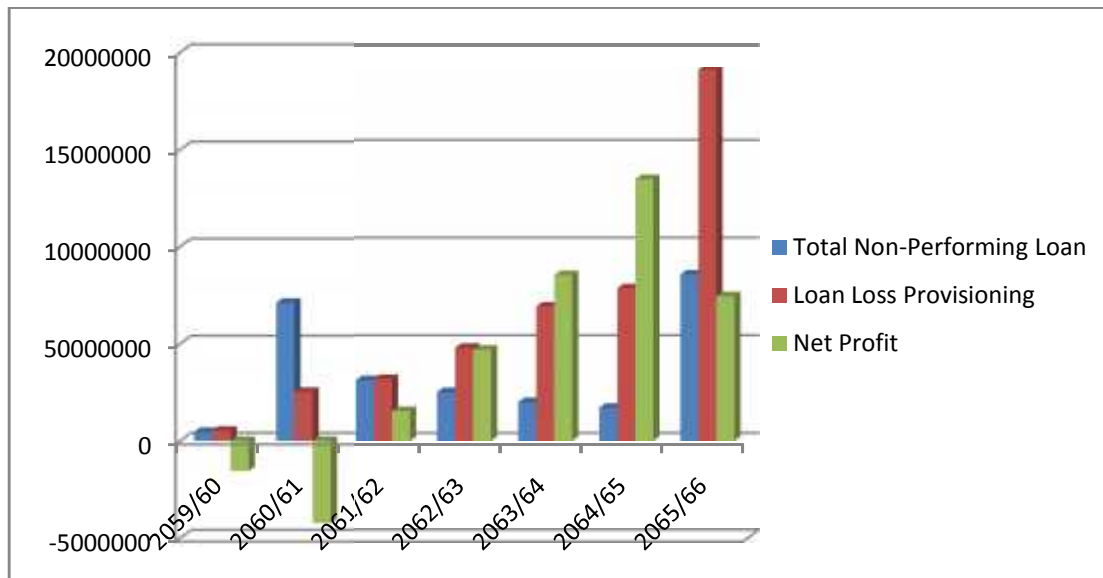
Figure 4.16**Non-Performing Loan, Loan Loss Provisioning and Net Profit of MBL**

Table 4.22 and figure 4.15 indicates the status of NPA, LLP and Net Profit of NIBL. In FY 2059/60 Total NPL was Rs.201,433,635, Total LLP was Rs.110,195,810 and Net Profit was Rs. 56,408,837. In FY 2060/61, total NPL was decreased by 35.32% but adversely 35.31 increased LLP and Net Profit was increased by 1.23% because the bank had increased its LLP, there was low

increment in Net Profit. The level of Total NPL in FY 2062/63, NPL is further decreased by 10.13%. The bank had decreased its LLP by 0.37%; therefore, net profit increased by 104.57%, which means lower the LLP, higher, the net profit. In FY 2062/63 the level of NPL was increased by 54.95%. Similarly bank had increased its provision by 39.29%, which leaded low increment in Net Profit by 30.69%. In FY 2063/64 the level of NPL was further increased by 54.81% and the bank increased the LLP by 56.93%, which lead the Net Profit increment by 52.06%. In FY 2064/65 the level of NPL was slightly decreased by 2.98% and the bank had increased its LLP by 22.88%, which is lower than the previous FY. The level of Net Profit increased by 51.00%. In FY 2064/65 the level of NPL was highly increased by 54.86% and the bank had kept the LLP BY 20.08% which leaded the net profit lower than previous by 43.04%

Table 4.23 and figure. 4.16 indicate the level of total NPL, LLP and Net Profit of MBL. In FY 2059/60 the level of Total NPL was Rs. 4,536,350, Level of LLP was Rs. 5,200,000 and Net Loss was Rs. 15,500,000. In FY 2060/61 the level of NPL was highly increased by 1467.84% so that the bank had increased the provision by 385.27% and there was net loss increased by 173.22%. In FY 2061/62 the level of NPL was decreased by 56.27% and LLP was reduced by 25.62% which leaded in increment in Net Profit by 136.15%. In FY 2062/63 the level of NPL was further decreased by 19.67% but there was increment in LLP by 205.01%. In FY 2063/64 the level of NPL was further decreased by 20.5% and the bank had kept the provision by 44.27% and also the net profit was increased by 81.77%. The level of NPL in FY 2064/65 was further decreased by 14.82% and the bank had reduced the LLP by 13.60% and there was increment in Net profit by 57.88%. In FY 2065/66 the level of NPL was highly increased by 403.46%, which leaded the bank to increase the provision by 143.20%, and ultimately the net profit of the bank was reduced by 44.71% than the previous FY.

From the above table 4.22 and 4.23 it can be concluded that rising and falling of NPL has some impact on loan loss provision and net profit.

4.8 Trend Analysis of Non-Performing Loan

A trend analysis is sequence of observation of variables made at regular points or interval of time and arranged in chronological order. Trend analysis is one quantitative method we use to determine patterns in data collected overtime.

Table 4.24 and 4.25 show the trend values of non-performing loan to total loan and advances ratio, which clearly shows trend of NPL of NIBL and MBL respectively.

Table 4.24
Trend Values of Non-performing Loan to Total Loan and
Advances Ratio of NIBL

(In percentage)

FY	NIBL	
	Actual Value	Trend Value
2059/60	8.29	5.932
2060/61	4.8	5.128
2061/62	1.98	4.324
2062/63	2.47	3.52
2063/64	2.69	2.716
2064/65	2.07	1.912
2065/66	2.37	1.108

From the above table, it is found that the actual value of NPL to Total Loan and Advances ratio of the bank is increasing and decreasing order, fitting the actual value in the trend line, it is found that the value of NPL total loan and advances is gradually decreasing. The same analysis is also shown by the following figure.

Figure 4.17

Trend Line of Non-Performing Loan to Total Loan and Advances Ratio

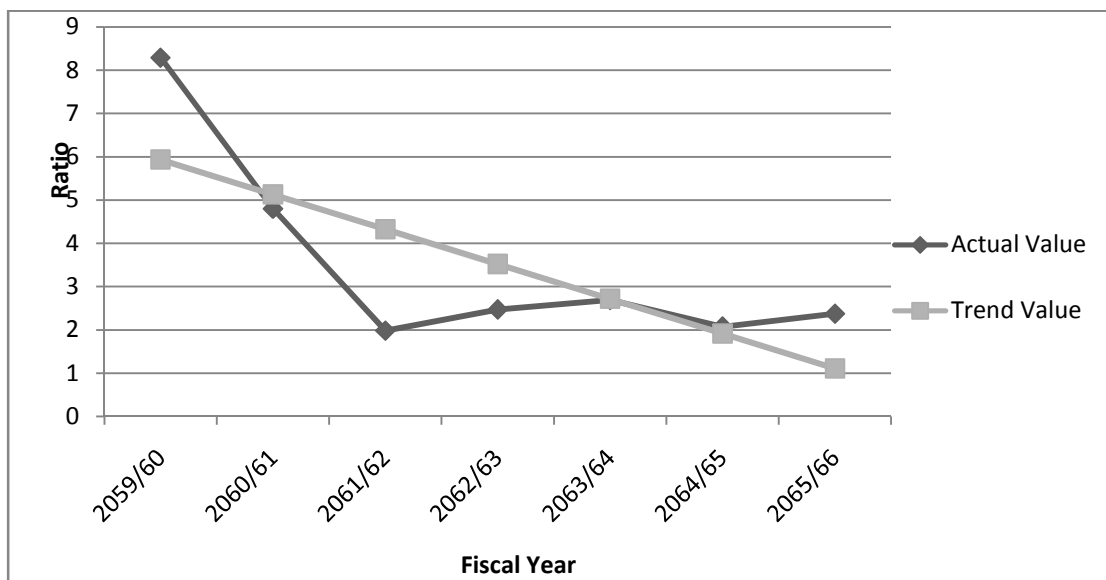


Table 4.25

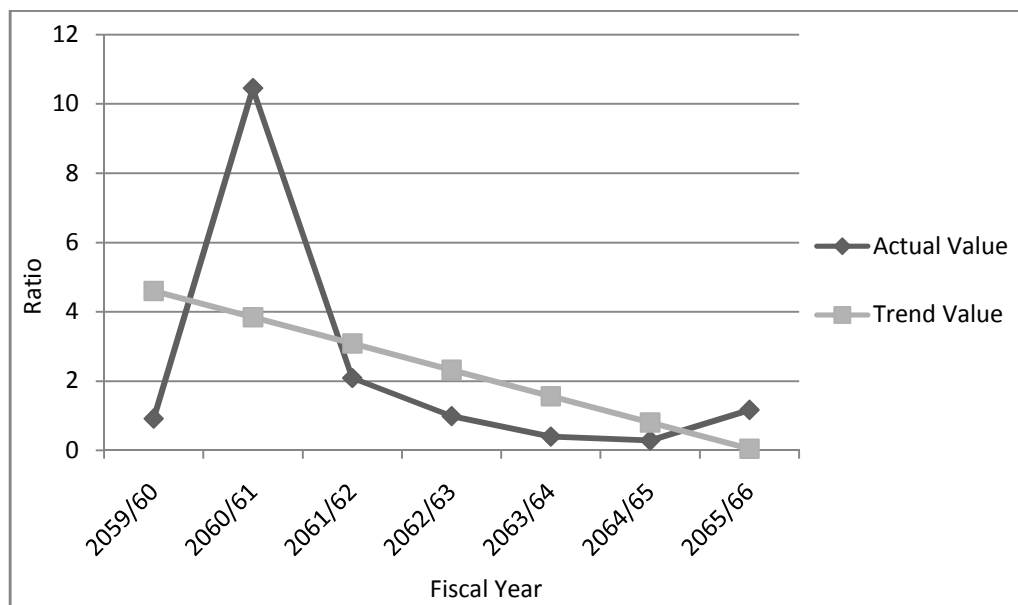
**Trend Values of Non-Performing Loan to Total Loan and
Advances Ratio of MBL**

FY	NIBL	
	Actual Value	Trend Value
2059/60	0.91	4.6
2060/61	10.45	3.84
2061/62	2.08	3.08
2062/63	0.98	2.32
2063/64	0.39	1.56
2064/65	0.28	0.8
2065/66	1.16	0.04

From the above table it is found that the actual value of NPL to total loan and Advances ratio of the bank is higher in FY 2059/60 but in other years it is in decreasing order, and fitting the actual value in the trend line, it is found that the value of NPL to total loan and advances is gradually decreasing. The same analysis is also shown by the following figure.

Figure 4.18

Trend Line of Non-Performing loan to Total Loan and Advances Ratio



Comparative Analysis of level of NPA

From the data above, comparison between the actual NPA to total loan and advances ratio trend NPA to total loan and advances ratio of both banks are compared and presented.

Table 4.26

Comparison between Actual and Trend NPA to Total Loans and Advances Ratio between NIBL and MBL

FY	NIBL		MBL	
	Actual NPA to Total Loans and Advances Ratio	Trend NPA to Total Loans and Advances ratio	Actual NPA to Total Loans and Advances Ratio	Trend NPA to Total Loans and Advances Ratio
2059/60	8.29	5.932	0.91	4.6
2060/61	4.8	5.128	10.45	3.84
2061/62	1.98	4.324	2.08	3.08
2062/63	2.47	3.52	0.98	2.32
2063/64	2.69	2.716	0.39	1.56
2064/65	2.07	1.912	0.28	0.8
2065/66	2.37	1.108	1.16	0.04

In FY 2059/60, 2060/61, 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 the ratio of actual NPA to total loans and Advances of NIBL and MBL were 8.29 and 0.91, 4.8 and 10.45, 1.98 and 2.08, 2.47, 0.98, 2.69 and 0.39, 2.07 and 0.28 and 2.37 and 1.16 respectively. Similarly, FY 2059/60, 2060/61, 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 the trend value of NPA to total loans and advances ratio were 5.932 and 4.6, 5.128, and 3.84, 4.324 and 3.08, 3.52 and 2.32, 2.716 and 1.56, 1.912 and 0.8 and 1.108 and 0.04 respectively. From the data above and figure below it is found that the level of Actual NPA to total loans and advances ratio and trend NPA to total loan and advances ratio of Machhpuchhre bank is lower than Nepal investment Bank which means MBL is more successful to convert its non-performing loans into performing loans.

Figure 4.19

Actual NPA to Total Loans and Advances Ratio

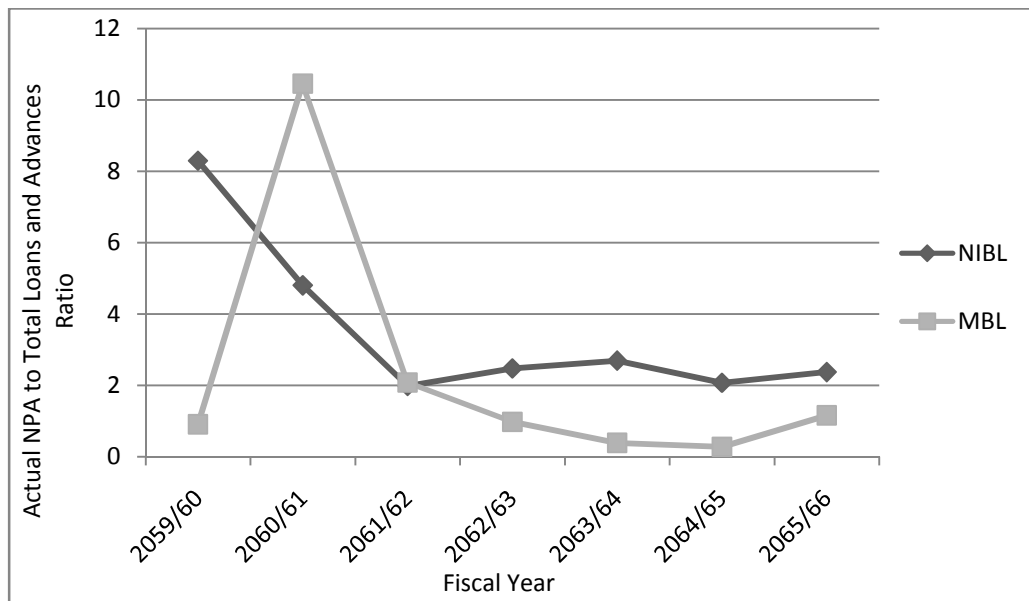
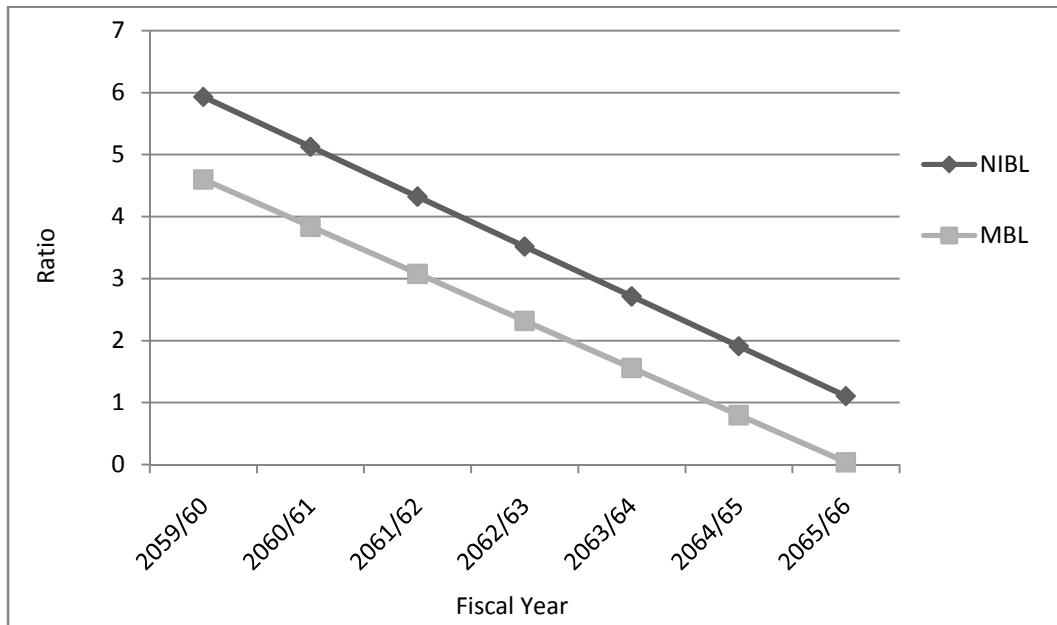


Figure 4.20

Trend NPA to Total Loans and Advances Ratio



4.9 Correlation Analysis

Correlation analysis is defined as the statistical technique, which measures the degree and direction of relationship between/among variables.

4.9.1 Relationship between ROA and NPL

The correlation between ROA and NPL shows the degree of relationship between these two items. Through the measurement of correlation, we can find the affect in the ROA with increment in a unit of NPL. Here ROA is considered as dependent variables and NPL is considered as independent variable.

Table 4.27**Relationship between ROA and NPL**

Banks	Correlation Coefficient	Coefficient of Determination (r^2)	PE	6PE	Significant /Insignificant
NIBL	0.863171	0.74506	0.06499	0.38995	Significant
MBL	-0.288121	0.083014	0.23377	1.402643	Insignificant

From the above table, it is found that in NIBL, NPL and ROA is highly correlated which means increment in a unit of NPL highly increase ROA and decrease in NPL will decrease ROA which is theoretically wrong. There might be some other factors influencing increase or decrease of ROA of NIBL. But in MBL, there is negative relationship between NPL and ROA, which means increment in a unit of NPL, will decrease ROA and decrease in NPL will increase ROA, which proves the theoretical assumption of NPL. Here ROA is considered as dependent variable and NPL is considered as independent variable.

Hypothesis Testing

Bank	t_{cal}	t_{tab}	Decision
NIBL	3.822	2.57	H_0 Rejected i.e. sample correlation is insignificant to population correlation
MBL	0.637	2.57	H_0 Accepted i.e. sample correlation is insignificant to population correlation

From the hypothesis testing, it is found that in NIBL, Null Hypothesis is rejected and Alternative Hypothesis is accepted as t_{cal} . Hence there is significant difference between population correlation and sample correlation which clearly indicates that the calculated correlation coefficient is wrong and there would have been difference correlation coefficient in population or might be exist positive or negative correlation in particular as ROA is not only dependent on NPL. Major factors influencing correlation coefficient is the small size because the sample size was taken just for 7 years because of time constrain, difficulty in collecting data.

There are some other factors such as highly increasing assets ratio, highly increasing deposits ratio, shareholders fund, earning per share, highly increasing net profit ratio, etc influences to have considerable effect on ROA. Also sample size of the presented study was very small which might have influenced the result to show false interpretation.

4.9.2 Relationship between NPL and ROE

The correlation between NPL and ROE depicts the relationship between these two items. Return on Equity is dependent variable and NPL is independent variable through the measurement of this correlation, we can find the affect in the ROE with increment in a unit of NPL.

Table 4.28
Relationship between NPL and ROE

Banks	Correlation Coefficient	Coefficient of Determination (r^2)	PE	6PE	Significant/ Insignificant
NIBL	0.073176	0.0053355	0.25357	1.52143	Insignificant
MBL	-0.54862	0.300984	0.19248	1.1549	Insignificant

From the above table, it is found that in NIBL, the relationship between NPL and ROE is positive but very poor or there is almost no relationship between them increase in NPL will increase ROE but in very less and decrease in NPL will decrease ROE but in very less. But in MBL, these two parameters are negatively correlated which means increase in NPL will decrease ROE and decrease in NPL will increase ROE which proves the theoretical assumption of NPL. Return on Equity is dependent variable and NPL is independent variable.

Hypothesis Testing

Bank	t_{cal}	t_{tab}	Decision
NIBL	0.164	2.57	H_0 Accepted i.e. sample correlation is insignificant to population correlation
MBL	1.4672	2.57	H_0 Accepted i.e. sample correlation is insignificant to population correlation

From the hypothesis testing, in NIBL, Null Hypothesis is accepted, as t_{tab} is greater than t_{cal} . Hence, there is no significant difference between population correlation and sample correlation NPL and ROE. If population correlation coefficient between NPL and ROE If population correlation between NPL and ROE, there may exist positive or negative correlation in particular as ROE is not only dependent on NPL and other several factors such as highly increasing assets ratio, highly increasing deposits ratio, highly increasing market value of share, highly increase in shareholder's fund, earning per share, highly increasing net profits ratio, etc influenced to have considerable effect on ROE. Also, sample size of the present study was very small which might have influenced the result to show false interpretation.

Similarly, in MBL, Null Hypothesis is accepted as t_{cal} is lesser than t_{tab} . Hence there is no significant difference between population correlation and sample correlation which clearly indicates that calculated correlation is correct and there would not have been difference correlation coefficient in population correlation in particular as ROE is highly dependent on NPL.

4.9.3 Relationship between Loan and Advances and NPL

The correlation between loan and advances and NPL shows the degree of relationship between these two items. How a unit increment in loan and advances affect in the unit of non-performing loan is measured by this correlation.

Table 4.29
Relationship between Loan and Advances and NPL

Banks	Correlation Coefficient	Coefficient of Determination (r^2)	PE	6PE	Significant/ Insignificant
NIBL	0.8895	0.79122	0.05323	0.31935	Significant
MBL	0.2543	0.06467	0.23845	1.4307	Significant

From the table above, it is found that, in NIBL these two parameters are highly correlated which means increment in NPL positively increasing total loans and advances and decreases in NPL will decrease total loans and advances. In MBL, these two parameters are positively correlated but the relationship between them is poor than NIBL. Increase in NPL will increase total loans and advances and decrease in NPL will decrease total loans and advances but in less.

Hypothesis Testing

Bank	t_{cal}	t_{tab}	Decision
NIBL	4.33	2.57	H_0 Rejected i.e. sample correlation is insignificant to population correlation
MBL	0.5879	2.57	H_0 Accepted i.e. sample correlation is insignificant to population correlation

From the testing of hypothesis, it is found that in NIBL, Null Hypothesis is rejected and Alternative Hypothesis is accepted, as t_{cal} is higher than t_{tab} . Hence there is significant difference between population correlation and sample correlation which means calculated correlation is wrong and there would have been different correlation coefficient in population correlation or might be exist positive or negative correlation in particular as Total Loans and Advances is not only dependent on NPL. There are some other factors such as highly increasing assets ratio, highly increasing deposit ratio, highly increasing net profit ratio, etc

influence to have considerable effect on Total Loans and Advances. Also sample size of the presented study was very small which might have influenced the result to show false interpretation.

4.9.4 Relationship between NPL and Net Profit

The correlation between NPL and Net Profit depicts the relationship between these two items. Net Profit is dependent variable and NPL is independent variable. Through the measurement of this correlation, we can find the affect in the Net Profit with increment in a unit of NPL.

Table 4.30
Relationship between NPL and Net Profit

Banks	Correlation Coefficient	Coefficient of Determination (r^2)	PE	6PE	Significant/ Insignificant
NIBL	0.9146	0.83649	0.04168	0.25	Significant
MBL	-0.17633	0.03109	0.24701	1.48206	Insignificant

From the table above, it is found that in NIBL, NPL and Net Profit is highly correlated which means increment in a unit of NPL highly increase Net Profit and decrease in NPL will decrease Net Profit which is theoretically wrong. There might be some other factors influencing increase or decrease of Net Profit of NIBL. But in MBL, there is negative relationship between NPL and Net Profit, which means increment in a unit of NPL, will decrease Net Profit and decrease in NPL will increase Net Profit, which proves the theoretical assumption of NPL.net Profit is dependent variable and NPL is independent variable.

Hypothesis Testing

Bank	t_{cal}	t_{tab}	Decision
NIBL	5.056	2.57	H_0 Rejected i.e. sample correlation is insignificant to population correlation
MBL	0.4005	2.57	H_0 Accepted i.e. sample correlation is insignificant to population correlation

From the testing of Hypothesis, it is found that in NIBL, Null Hypothesis is rejected and Alternative Hypothesis is accepted as t_{cal} is higher than t_{tab} . Hence there is significant difference between population correlation is wrong and there would have been different correlation coefficient in population correlation or might be exist positive or negative correlation in particular as Net Profit is not only dependent on NPL. There are some factors such as highly increasing assets ratio, highly increase in shareholder's fund, earning per share, highly increasing net profit ratio, etc influenced to have considerable effect on Net Profit. Also sample size of the presented study was very small which might have influenced the result to show false interpretation.

In, MBL, Null Hypothesis is accepted as t_{cal} is lesser than t_{tab} . Hence there is no significant difference between population correlation and sample correlation which clearly indicated that calculated correlation is correct and there would not have been difference correlation coefficient in population correlation in particular as Net Profit is highly dependent on NPL.

4.10 Major Finding of the Study

From the analysis of data, following major finding have been obtained:

1. The average performing loan to total assets ratio of MBL remained 66.51%, which was highest than NIBL which 57.22%. In FY 2059/60, 2060/61, 2061/62, 2062/63, 2063/64 2064/65 and 2065/66 the ratios of NIBL and

MBL were 44.4% and 62.79%, 51.93% and 55.16% 64.39% and 61.0% 53.99% and 72.95%, 62.51% and 79.15%, 60.50%, 67.58% and 62.87% 66.94% respectively. The figure it is clearly understood that ratios of MBL were higher than ratio of NIBL except in the FY 2060/61 which means MBL was more successful than NIBL to convert the performing loans into assets.

2. The average performing loan to total deposit ratio of NIBL remained 65.71%, which is lower than the average performing loan to total deposit ratio of MBL, which is 78.71%. In FY 2056/60, 2060/61, 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 the ratio of NIBL and MBL were 52.34% and 70.56%, 61.88%, 61.23%, 73.26% and 82.35% 62.10% and 91.33%, 71.36% and 91.47%, 68.19%, 77.66%, 70.84% and 76.35% respectively. From the data it is found that the ratio of MBL were higher than NIBL except in the FY 2060/61 which means the performance of MBL is better than NIBL.
3. The average performing loan to total loan and advances ratio of NIBL remain 96.48% and MBL was 97.685, which was higher than NIBL. In FY 2059/60, 2060/61, 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 the ratio of NIBL and MBL were 91.71%, 99.09%, 95.02%, 89.55%, 98.02%, 97.92%, 97.53%, and 99.02%, 97.31%, 99.61%, 97.93%, 99.72%, 998.84% respectively. From the data above, it is found that the ratio of MBL is higher than NIBL in some fiscal years and vice versa.
4. The average non-performing loan to total assets ratio of NIBL remained 1.98%, which was higher than MBL (1.47%). In FY 2059/60, 2060/61, 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 the ratios of NIBL and MBL were 4.01%, 0.58%, 2.62%, 6.445, 1.30%, 1.295, 1.37% and 0.72%, 1.73%, 0.31%, 1.28%, 0.19%, 1.53%, 0.79% respectively. From the above

data it is found that the ratios of MBL were comparatively lower than the ratios of NIBL except in FY 2060/61. Lower the ratio means better the performance and it is found that MBL was quite successful than NIBL to convert the non-performance loan into assets

5. The average non-performing loan total deposit ratio of NIBL remained 2.29%, which was higher than MBL (1.7%). In FY 2059/60, 2060/61, 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 the ratios of NIBL and MBL were 8.29%, 0.91%, 4.80%, 10.45%, 1.98%, 2.08%, 2.74% and 0.98%, 2.69%, 0.39%, 2.07%, 0.28%, 2.37%, and 1.16% respectively. From the data above it is clearly known that the ratios of MBL were lower than the ratios of NIBL except in the FY 2060/61 and 2061/62. Lower the ratio means better the performance and it is found that MBL was quite successful than NIBL to convert the non-performing loans.
6. The average non-performing loan to total loan and advances ratio of NIBL remained 3.52%, which was higher than MBL (2.32%). In FY 2059/60, 2060/61, 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 the ratios of NIBL and MBL were 8.29%, 0.91%, 4.80%, 10.45%, 1.98%, 2.08%, 2.47% and 0.98%, 2.6%, 0.39%, 2.07%, 0.28%, 0.285, 2.37%, 2.16 respectively. From the data above it is clearly known that the ratio of MBL were lower than the ratio of NIBL except in the FY 2060/61 and 2061/62. Lower the ratio means better the performance and it is found that MBL was quite successful than NIBL to convert the non-performing loans.
7. As per latest NRB's directives, loan and advances are classified into four categories namely pass, substandard, doubtful and loss loan with respective provisioning 1%, 25%, 50%, and 100% on the basis of past dues. Besides this, in case of insured priority and deprived sector loan, provisioning this, in

case of insured priority and deprived sector loan, provisioning requirement non-fourth of that of normal loan loss provision requirement. Hence respective provision requirement for pass, substandard, doubtful and loan are 0.25%, 6.25%, 12.5%, and 25% of outstanding loan. In case of reschedule or swapped loan, if such loan falls under pass category, minimum provisioning requirement is 12% and if this is the case of priority sector loan, 3.125% provisioning should be provided for probable loss. Further, if the loan is granted only against personal guarantee, the provisioning requirement for pass, substandard and doubtful is 21%, 45%, and 70% respectively.

8. From the analysis, it is found that MBL has almost successful to maintain loan loss provision directed by NRB but NIBL has not strictly following the directives of NRB regarding loan loss provision.
9. From the analysis it is found that both banks have maintained sufficient core capital of total risk weighted assets. Regarding the total capital fund ratio in FY 2059/60 NIBL has maintained sufficient total capital fund but MBL has failed to maintain the minimum total capital fund. In FY 2060/61 both banks have maintained the sufficient core capital but in FY 2061/62 NIBL have failed to maintain the minimum total capital fund to total risk weighted assets but MBL has maintained sufficient fund. In FY 2062/63 both banks have maintained total capital but in next FY 2063/64 both bank have failed to maintain minimum total capital to total risk weighted assets. In FY 2064/65 NIBL has failed to maintained total capital fund. In FY 2065/66 NIBL has maintained total capital fund but MBL has failed to maintained total capital to total risk-weighted assets.
10. The actual values of both banks are in increasing and decreasing order. Fitting the trend value, the figure shows that the level of NPL is gradually

decreasing which is good for the financial health of both banks. Though the value of NPL in terms of Rupees is increasing the ratio of Non Performing loan is decreasing and the ratio of performing loan is increasing.

11. Correlation Coefficient between NPL and loan and advances, NPL and Return and assets (ROA), NPL and Return on Equity (ROE) and NPL and Net profit were calculated to find out the relationship between NPL and the parameters. Form the analysis it is found that there is positive correlation between NPL and loan and advances of NIBL and MBL which means increment in loan and advances leads to increase NPL. The calculation shows that there is significant correlation between NPL and loan and advances of NIBL but we can't say there is significant correlation between NPL and loan and advances of MBL but there is only positive correlation between them.

By the calculation of correlation coefficient between NPL and ROE of NIBL, it is found that there is positive relation but the relation of the parameters is very poor or there is no relationship between them. In MBL the relationship between NPL and ROE is negative, which indicates that increase in NPL decreases ROE and decrease in NPL, increase ROE.

By the calculation of correlation coefficient between NPL and Net Profit of NIBL, it is found that there is highly positive relation between NPL and Net Profit, which mean, increment in NPL will increase the Net Profit, which is theoretically wrong. But it is found in MBL, there is negative relationship between NPL and Net Profit, which means increase in NPL, will decrease Net Profit and decrease in NPL will increase Net Profit of Bank.

12. To prove the significance of the relationship between the parameters analyzed from correlation coefficient, hypothesis testing has been done. In

this analysis of hypothesis testing of NIBL, NPL with other parameters are tested. From the hypothesis testing, it is found that there is significant difference between population correlation and calculated correlation of NPL with ROA, Total Loan and Advances and Net Profit. The reasons for such conclusion might be low sample size and there would be not only NPL but also some other factors also influencing in the change of ROA, Total Loan and Advances and Net Profit. But NPL with ROE there is no significant difference between population correlation and sample correlation.

From the testing of significance of Machhapuchhre Bank, it is found that there is no significant difference between population correlation and sample correlation of NPL with all parameter, which means the calculated correlations are correct even if we take all the samples.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Nepalese commercial banking sector is very competitive. The commercial banks are competing mainly in service in order to put in competitive position, majority of the branches of commercial banks have been adapting differentiation strategy. The response shows that different branches of the similar bank have adapted different strategy and few of the banks have followed more than one strategy at the same time.

This research has aimed at studying the problem of non-performing loan in Nepalese commercial banking sector and recommending the reasonable solution to manage the non-performing loans. It also studies the different aspects of the implementation of NRB Directives by commercial banks. This study was based on the assumption that non-performing loan is such factor which directly affects the net profit of banks. The increment of non-performing loan results in the increment in the volume of loan loss provision of the banks, which ultimately results in decline of net profit of banks.

For the purpose of the study, descriptive as well as analytical research design had been adopted. Out of the total 28 commercial banks, two banks were taken as sample using judgment-sampling method. Sample was selected considering the level of NPL. Nepal Investment Bank Ltd. and Machhapuchhre Bank were taken as sample for the study. Various research techniques were used such as calculation of standard deviation, calculation of coefficient of variance, time series analysis, calculation of correlation, hypothesis testing etc. Most of the data in the study

were secondary data collected from various annual reports of the selected banks and their respective web sites.

The average performing loan to total assets ratio of MBL remained 66.51%, which was highest than NIBL which 57.22%. It is found that the ratios of MBL were higher than the ratios of NIBL except in the FY 2060/61 which means MBL was more successful than NIBL to convert the performing loans into assets.

The average performing loan to total deposit ratio of NIBL remained 65.71%, which is lower than the average performing loan to total deposit ratio of MBL, which is 78.71%. From the data it is found that the ratio of MBL were higher than NIBL except in the FY 2060/61 which means the performance of MBL is better than NIBL.

The average non-performing loan to total loan and advances ratio of NIBL remain 96.48% and MBL was 97.68%, which was greater than the NIBL. From the data above, it is found that the ratio of MBL is higher than NIBL in some fiscal years and vice versa.

The average non-performing loan to total deposit ratio of NIBL remained 2.29%, which was higher than MBL (1.7%). From the above data it is found that the ratio of MBL were comparatively lower than the ratios of NIBL except in FY 2060/61. Lower the ratio means better the performance and it is found that MBL was quite successful than NIBL to convert the non-performing loans.

The average non-performing loan to total loan and advances ratio of NIBL remained 3.52%, which was higher than MBL (2.32%). From the data above it is clearly known that the ratio of MBL were lower than the ratios of NIBL except in the FY 2060/61 and 2061/62. Lower the ratio means better the performance and it

is found that MBL was quite successful than NIBL to convert the non-performing loans.

From the analysis, it is found that MBL has almost successful to maintain the minimum loan loss provision directed by NRB but NIBL has not strictly following the directives of NRB regarding loan loss provision.

From the analysis, both banks have maintained sufficient core capital of total risk weighted assets.

From the trend analysis, the actual value of both banks increasing and decreasing order. Fitting the trend value, the figure shows that the level of NPL is gradually decreasing which is good for the financial health of both banks. Though the value of NPL in terms of Rupees is increasing the ratio of Non-Performing Loan is decreasing and the ratio of Performing Loan is increasing. From the study it is found that the levels of NPA in both banks are not in alarming condition. It is quite satisfactory.

Correlation Coefficient between NPL and other parameters like Return and assets (ROA), Return on Equity (ROE), Total Loans and Advances and Net Profit were calculated to find out the relationship between NPL and these parameters. From the analysis their relationship and their significance were tested and verifies by the hypothesis testing.

From the testing of significance of Machhapuchhre Bank, it is found that there is no significant difference between population correlation and sample correlation of NPL with all parameter, which means the calculated correlation are correct even if we take all the samples but in NIBL it is found that except correlation of NPL and

ROE, other correlation of NPL with other parameters have significant difference between population correlation and sample correlation.

5.2 Conclusion

The condition of Non Performing Loan in Nepal Investment Bank and Machhapuchhre Bank are very fluctuating. From the study it is found that in some FYs NPA is low and in some years the level of NPA in both banks is not in alarming condition. They are very satisfactory condition.

The level of NPA in NIBL in FY 2059/60, 2060/61, 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 were Rs. 201,433,635, Rs. 130,294,717, Rs. 117,091,823, Rs. 181,435,009, Rs. 280,874,131, Rs. 272,493,041 and Rs. 421,971,550 respectively.

The level of NPA in MBL in FY 2059/60, 2060/61, 2061/62, 2062/63, 2063/64, 2064/65 and 2065/66 were Rs. 4,536,350, Rs. 71,122,847, Rs. 31,098,986, Rs. 24,983,047, Rs. 19,860,891, Rs. 16,916,597, and Rs. 85,168,239 respectively.

According to the trend analysis of NPA, it is found that the level of NPA in both banks is gradually decreasing. From the study, it is found that the level of NPA In NIBL is higher than the level of NPA in MBL. Machhapuchhre Bank is successfully converting its NPA into profit.

Regarding the Capital Adequacy Position, NIBL has maintained adequate Capital Adequacy Ratio for Core Capital to Total Risk Weighted Assets and Capital Adequacy Ratio for Total Capital Funds to Total Risk Weighted Assets. Machhapuchhre Bank Ltd. has maintained more than enough Capital Adequacy for both Core Capital and Total Capital Fund.

From the study, it can be concluded that there is a relationship between NPL and other factors for example ROA, ROE, Total Assets, Total Deposits, Total Loans and Advances, Loan loss Provision.

From the study, it is found that there are some impacts of NPA on ROA, ROE, Total Assets, Total Deposits, Total Loans and Advances, but the impacts are not significant.

The primary guiding factor for recognition of non-performing assets will be the interest income Recognition and Assets Classification (IRAC) norms prescribed by NRB. According to the prudential banking and accounting norms, any loans and advances against which either interest nor principal amount has been settled for a certain period of time known as NPA. Any interest amount on behalf of any loan amount could not be considered as interest suspense account. The portion of interest suspense increases with the increase of non-performing loans. In the context of the Nepali Banking system and Environment, they are classified as external factor and internal factor.

External factors are those factors, which are not in the control of banks, they consist of various unexpected changes in the social, political, economic and other areas of the country. Following are the main external factors, which are responsible for the conversion of good loans into bad loans.

-) Overall non conducive industrial environment/insecurity
-) Integrity of the borrowers
-) NRB's guidelines and blacklisting procedures
-) Weak loan recovery law and procedures.
-) Unstable government policies and weak government stand on international policies.

Internal factors are those factors, which are in the control of bank. Following are the main internal factor, which are responsible for the conversion of good loans into bad loans.

-) Credit policy of the bank
-) Management inefficiency and weakness
-) Financial indiscipline and inadequacy
-) Lack of quality appraisal of loan proposals
-) Lack of quality marketing

A multiplicity of factor is responsible forever increasing size of NPAs in banks. A few prominent reasons for assets becoming NPAs are as under:

-) Poor credit appraisal system
-) Lack of proper monitoring
-) Reckless advances to achieve the budgetary targets.
-) There is no or lack of corporate culture in the Bank. In adequate legal provisions on foreclosure and bankruptcy.
-) Change in economic policies/environment
-) No transparent accounting policy and poor auditing practices.
-) Lack of coordination between banks.
-) Directed lending to certain sectors
-) Failure on the part of the promoters to bring their portion of equity from their own source or public issue due to market turning lukewarm

Lending is the major function of any commercial bank and it is the most income generating function of any commercial bank, but there is risk inherent in lending portfolio, banks have to make loan loss provision by categorizing the loans into different category as per the NRB directives. Increasing non-performing loan is the serious problem of the banking sector in Nepal. Non-Performing loan reduce

the income flow of the bank while claiming additional resource in the form of provisioning and hinder further gainful investment.

Non-performing loan sampled commercial banks has been decreasing gradually. Machhapuchhre bank has good performance in lending its resource and it has very little volume of non-performing loan. Nepal Investing bank has also decreasing non-performing figure but in comparison with Machhapuchhre bank, Nepal Investment Bank has higher volume of non-performing loan, which should be taken in, consider by the authority persons of the bank.

Last decade long country's political situation due to Maoist insurgency had a great impact in the overall economic situation. Impacts on industry, banking and financial sectors, hotels and tourism, foreign trade and balance of payment, development sectors, agriculture and other lots of business houses had been observed which ultimately affected the National GDP and overall economic condition. In that period most of the hotel and tourism business were shut down. By such situation, the business companies couldn't pay their loans and interest. The loans and advances flowed by banks became default because people started to possess their money. Therefore, the level of NPA of commercial banks had been increased.

The present political development is likely to create a conducive environment for restoring peace and bringing new opportunities for development activities. Immediately after the declaration of ceasefire, the increase in hotel booking indicates the improvement in tourism activities. Similarly, donor countries have shown their commitments of the physical reconstruction of infrastructures in the country. It is also estimated that due to political stability, foreign investment will increase and the domestic industry and trade activities will flourish. This will help promote both imports and exports. It is believed and hoped that the recent political

change in Nepal and the peace development in coming days and the impact of this will certainly help the commercial banks to convert its non-performing assets into performing assets.

In conclusion, the economic slowdown and recession overvaluation of properties provided as collateral, faulty credit analysis and decision, negative attitude of borrowers are the major causes of NPL in Nepalese commercial banking sector. Similarly, lack of periodic supervision and monitoring, political pressure in lending, over finance and under finance, misuse of multiple banking by big borrowers has been also playing role to increase the level of NPL. Loan classification and provisioning enables banks to monitor the quality of their lending and to take the remedial action to counter deterioration in the quality of their loan and advances. Likewise, tactful and aggressive follow up of borrowers, accurate valuation of securities and insurance coverage, effective credit analysis of project, strong management team are the measures to resolve the problem of NPL.

Finally, it is concluded that the level of NPL in both commercial banks is not in alarming condition. The situation is quite satisfactory. If the increasing trend remained in coming days, the situation will be unmanageable and alarming. The commercial banks could not give full attention towards supervision their lending and recovering their bad loans perfectly.

5.3 Recommendations

NPA is the emerging challenges for Nepalese commercial banks today and in the future also. It is required to cope the challenge in time and the commercial banks should try to minimize such kind of challenges because NPA reduces the net profit and also it has great impact on capital adequacy, return on assets, return on equity, and other field too which ultimately affects the performance of a bank. Therefore, the management team of a bank should identify the reason behind increasing NPA

and they should try to minimize the increasing NPA. Lower the NPA means higher the profitability and ultimately better the performance of a bank.

Generally, it is assumed that NPA reduces profitability, ROA, ROE of the commercial banks. But from the data analysis in chapter 4 has shown that there is no significant impact of NPA to other parameters. It is found that there is increment in assets, deposits, net profits as well as there is increment in NPA also. Definitely NPA has more or less impact on the profitability and using some mechanism if the commercial banks had been able to reduced NPA, the profitability would be higher than the profitability achieved in the fiscal years.

Here are some suggestion and recommendation provided for both of the banks and for overall banking system to reduce the level of NPA.

Common Recommendation for Nepal Investment Bank Ltd. and Machhapuchhre Bank Ltd.

-) There should be developed information department, which will get all the information about the market situation and help to analyze the problems occurring around the commercial banks.
-) There should be established proposal appraisal committee, which will review the loan proposals thoroughly and suggest the management whether to provide loan or not.
-) Transparency should be maintained while sanctioning loan and advances
-) Management team should monitor and control the corruption occurred while sanctioning and providing the loan.
-) Sufficient and adequate collateral against loan should accept
-) There should be a team, which will review and evaluate the collateral deposited against the loan.

-) Sound credit policy or loan lending policy should be developed.
-) The directives provided by the NRB should follow strictly.
-) Regular monitoring to loan holders should be organized.
-) Lower the interest rates according to the market competition so that the loan holder's can repay the interest as well as principal.
-) Schemes should be launched to encourage the loan holders to repay the loan and interest within time period.
-) Skilled human resource e should be developed in terms of loans lending and their monitoring providing them training and other opportunities.
-) Suggest the government to make stable economic policy.

Recommendation for Overall Banking System

-) There must be coordination among commercial banks to flow the information regarding the loan defaulters developing the information department inside or outside the bank.
-) Commercial banks should not attempt unhealthy competition to attract customers towards their banks providing cheap banking facilities.
-) Commercial banks should not try to do faulty steps to meet the budgetary targets.
-) There must be creating some banking mechanism of corporate culture.
-) Commercial banks should have the information about the changing political and economic scenario of the country, which will help them to step forward and cope the challenges, which will occur in the future.
-) Faulty defaulters should be identified in time and should adopt precaution measures before the loan goes default.
-) If the collateral given to banks can be marketed easily, if the borrowers will defaulter, then it would be better to seek legal treatment. Collateral should be auctioned as soon as possible.

-) Following the directives of NRB and acting upon it also reduce many of the credit risk. Besides there are penalty implication on non-compliance of the directives.
-) The regulation regarding loan classification and provisioning is stringent and tighter than previous. Hence NRB should not only impose directives, but also create supportive environment for the commercial banks.
-) NRB is recommended to strengthen Credit Information Bureau (CIB) so that commercial banks can get required credit information about borrowers on time.
-) It is often said, “Prevention is better than cure”. Hence, it is recommended for all commercial banks and overall banking systems to take recommended to have an information system to gather the possible information and activities about its borrowers so that necessary precautions can be taken in time.

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Annex 1: Profile of Nepal Investment Bank Ltd.

Nepal Investment Bank Ltd. (NIBL), previously Nepal Indosue Bank Ltd. was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one of the largest banking group in the world.

With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialist and businessman, has acquired on April 2002 the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd.

The name of the bank has been changed to Nepal Investment Bank Ltd. upon approval of bank's Annual General Meeting, Nepal Rastra Bank and Company Registrar's office with the following shareholding structure.

- A group of companies holding 50% of the capital
- Rastirya Baniya Bank holding 15% of the capital
- Rastirya Beema Sansthan holding the same percentage
- The remaining 20% being held by the General Public (which means that NIBL is a company listed on the Nepal Stock Exchange)

Financial Details

(in Rs.000)

Particular	FY 2009/10	FY 2008/09	FY 2007/08
F) Net Worth	1,878,124	1,415,440	1,180,173
G) Deposits	24,488,856	18,927,306	14,254,574
H) Loans, Deposits, Overdraft	17,769,100	13,178,152	10,453,164
I) Operating Profit	857,229	648,118	473,976
J) Net Profit	501,398	350,536	232,147
K) Capital Adequacy Ratio	12.17%	11.97%	11.60%

UNAUDITED FINANCIAL RESULTS (Quarterly)
As at second Quarter of fiscal year 2009/2010

Figs In NPR (000)

S.no	Particulars	This Quarter Ending	Previous Quarter Ending	Corresponding Previous Year Quarter Ending
1	Total Capital and Liabilities (1.1 to 1.7)	33,541,928	31,337,987	24,688,098
1.1	Paid Up Capital	1,002,634	801,352	801,352
1.2	Reserve and Surplus	1,178,847	1,220,857	840,653
1.3	Debenture and Bond	800,000	800,000	550,000
1.4	Borrowing	150,000	-	-
1.5	Deposit (a+b)	29,243,476	27,260,475	21,591,427
	a. Domestic Currency	25,278,236	23,654,245	18,123,231
	b. Foreign Currency	3,965,240	3,606,230	3,468,196
1.6	Income Tax Liability	25,901	58,092	31,884
1.7	Other Liabilities	1,114,070	1,197,211	872,782
2	Total Assets (2.1 to 2.7)	33,514,928	31,337,987	24,688,098
2.1	Cash and Bank Balance	1,884,782	2,741,475	1,776,054
2.3	Investment	7,990,617	6,242,805	5,809,458
2.4	Loans and Advances	22,175,607	20,233,556	16,160,945
2.5	Fixed Assets	779,585	760,007	365,453
2.6	Non Banking Assets (Net)	1,125	1,125	-
2.7	Other Assets	383,212	389,019	374,063
3	L) Profit & Loss Account	Up to this Quarter	Up to Previous Quarter	Up to Corresponding Previous year Quarter
3.1	Interest Income	957,440	451,065	739,846
3.2	Interest Expense	(438,868)	(213,114)	(328,644)
	A. Net Interest Income (3.1-3.2)	518,572	237,951	411,202
3.3	Fees, Commission and Discount	90,058	44,694	75,095
3.4	Other Operating Income	33,342	15,673	21,123
3.5	Foreign Exchange Gain/Loss	85,034	44,694	73,853
	B. Total Operating Income (A+3.3+3.4+3.5)	772,006	342,906	581,273
3.6	Staff Expenses	(92,852)	(37,719)	(71,130)
3.7	Other Operating Expenses	(148,416)	(74,889)	(112,047)
	C. Operating Profit Before Provision (B-3.6-3.7)	485,738	230,299	398,096
3.8	Provision for Possible Losses	(93,331)	(48,976)	(63,459)
	D. Operating Profit (C-3.8)	392,407	181,323	334,637
3.9	Non Operating Income/Expenses	2,147	-	934

3.10	Write Back of Provision for Possible Loss	81,769	40,748	21,661
	E. Profit from Regular Activities (D+3.9+3.1)			
3.11	Extra-ordinary Income/Expenses	476,323	222,071	357,232
	F. Profit before Bonus and Taxes (E+3.11)	-	-	-
3.12	Provision for Staff Bonus	(43,302)	(20,188)	(32,476)
3.13	Provision for Tax	(130,606)	(57,797)	(102,298)
	G. Net Profit/Loss (F-3.12-3.13)	302,415	144,086	222,458
4	Ratios	At the end of this quarter	At the end of previous quarter	At the end of corresponding previous year quarter ending
4.1	Capital Fund to RWA	11.1%	11.28%	11.27%
4.2	Non Performing Loan (NPL) To Total Loan	1.8%	2.18%	1.88%
4.3	Total Loan Loss Provision to Total NPL	128.7%	115.04%	144.90%

Annex 2: Profile of Machhapuchhre Bank LTd.

Machhapuchhre Bank Limited was registered in 1998 as the first regional commercial bank to start banking business from the western region of Nepal with its head office in Pokhara. Today, with a paid up capital of above 820 capital rupees, it is one of the full-fledged commercial bank operating in Nepal, and it ranks in the topmost among the private commercial banks.

Machhapuchhre Bank Limited is striving to facilitate its customer needs by delivering the best of services in combination with the state of the art technologies and the best international practices.

Machhapuchhre Bank Limited is the pioneer in introducing the latest technology in the banking industry in the country. It is the first bank to introduce centralized banking software named GLOBUS BANKING SOFTWARE developed by Temenos NV, Switzerland. The bank provides modern banking facilities such as Any Branch Banking, Internet Banking and Mobile Banking to its valued customers.

The bank in the last few years have really opened up with branches spread all around the country. At the stage, it has its Corporate Office in Kathmandu and branch offices in other parts in Kathmandu, Damauli, Bhairahawa, Birgunj, Banepa and different parts of Pokhara in addition to the Head Office in Naya Bazar, Pokhara. A full-fledged banking branch is in operation in Jomsom located high up in the mountains too. The bank aims to serve the people of both the urban and rural areas. The bank intends to open many more branches in the coming years and have already envisaged the opening of 8 branches during the year 2007/08.

UNAUDITED FINANCIAL RESULTS (Quarterly)

As at second Quarter of fiscal year 2009/2010

Figs In NPR (000)

S.no	Particulars	This Quarter Ending	Previous Quarter Ending	Corresponding Previous Year Quarter Ending
1	Total Capital and Liabilities (1.1 to 1.7)	11,101,906	10,937,862	10,025,978
1.1	Paid Up Capital	821,651	821,651	715,000
1.2	Reserve and Surplus	325,919	195,673	241,404
1.3	Debenture and Bond	-	-	-
1.4	Borrowing	407,165	176,238	319,332
1.5	Deposit (a+b)	9,327,304	9,531,879	8,653,029
	a. Domestic Currency	8,896,930	9,147,616	8,309,193
	b. Foreign Currency	430,373	384,263	343,836
1.6	Income Tax Liability	-	-	-
1.7	Other Liabilities	219,867	212,421	97,212
2	Total Assets (2.1 to 2.7)	11,101,906	10,937,862	10,025,978
2.1	Cash and Bank Balance	873,402	1,717,192	906,663
2.3	Investment	953,230	1,167,673	1,070,218
2.4	Loans and Advances	8,008,051	7,467,357	7,153,557
2.5	Fixed Assets	288,813	269,352	213,597
2.6	Non Banking Assets (Net)	3,393	3,393	12,533
2.7	Other Assets	325,018	312,895	189,568
3	M) Profit & Loss Account	Up to this Quarter	Up to Previous Quarter	Up to Corresponding Previous year Quarter
3.1	Interest Income	358,734	158,282	313,971
3.2	Interest Expense	196,235	100,564	189,930
	A. Net Interest Income (3.1-3.2)	162,499	57,719	124,041
3.3	Fees, Commission and Discount	14,762	8,318	16,788
3.4	Other Operating Income	14,940	7,699	12,919
3.5	Foreign Exchange Gain/Loss	17,952	10,052	11,873
	B. Total Operating Income (A+3.3+3.4+3.5)	210,153	83,788	165,622
3.6	Staff Expenses	32,901	17,378	24,552
3.7	Other Operating Expenses	53,546	26,738	34,281
	C. Operating Profit Before Provision (B-3.6-3.7)	123,706	39,672	106,788
3.8	Provision for Possible Losses	18,013	52,880	66,161
	D. Operating Profit (C-3.8)	105,693	-13208	40,627
3.9	Non Operating Income/Expenses	-	-	-
3.10	Write Back of Provision for Possible Loss	30,043	-	-

	E. Profit from Regular Activities (Ad+3.9+3.1)	135,737	-13,208	40,627
3.11	Extra-ordinary Income/Expenses	-	-	-
	F. Profit before Bonus and Taxes (E+3.11)	135,737	-13,208	40,649
3.12	Provision for Staff Bonus	12,340	-1,201	3,695
3.13	Provision for Tax	38,870	-3,782	11,640
	G. Net Profit/Loss (F-3.12-3.13)	84,527	-8,225	25,313
4	Ratios	At the end of this quarter	At the end of previous quarter	At the end of corresponding previous year quarter ending
4.1	Capital Fund to RWA	11.78%	11.61%	11.79%
4.2	Non Performing Loan (NPL) To Total Loan	1.64	3.52	0.62
4.3	Total Loan Loss Provision to Total NPL	132.93	102.94	321.05

Annex 3: Calculation of S.D. and C.V.

N) S.D. and C.V. of Total Assets

(In million)

FY	O) NIBL			MBL		
	Amount (X)	$d_1 \times X \times Z \bar{X}$	d_1^2	Amount (Y)	$d_2 \times Y \times Z \bar{Y}$	d_2^2
2059/60	501.72	-891	793000.43	78.67	-408	166540.95
2060/61	497.39	-895	800730.96	110.44	-376	141619.97
2061/62	901.42	-491	240890.25	239.99	-247	60897.55
2062/63	1,325.55	-67	4445.65	344.86	-142	20136.83
2063/64	1,627.41	235	55311.65	645.65	159	25244.67
2064/65	2,133.01	741	548761.36	906.98	420	176581.25
2065/66	2,759.08	1367	1868290.64	1,080.76	594	352830.91
N=7	ΣX 9745.58	$d_1 \times \Sigma X$ 0	$d_1^2 \times \Sigma X$ 4311430.93	ΣY 3407.35	$d_2 \times \Sigma Y$ 0	$d_2^2 \times \Sigma Y$ 943852.11

$$\text{Mean}_{\text{NIBL}} (\bar{X}) = \frac{\Sigma X}{n} = \frac{9745.58}{7} = 1392$$

$$\text{Mean}_{\text{MBL}} (\bar{Y}) = \frac{\Sigma Y}{n} = \frac{3407.35}{7} = 486.76$$

Standard Deviation

$$\text{S.D.}_{\text{NIBL}} (d_1) = \sqrt{\frac{fd_1^2}{N} - \frac{fd_1^2}{N}} = \sqrt{\frac{4311430.93}{7} - \frac{0}{7}} = 784.80$$

$$\text{S.D.}_{\text{MBL}} (d_2) = \sqrt{\frac{fd_2^2}{N} - \frac{fd_2^2}{N}} = \sqrt{\frac{943852.11}{7} - \frac{0}{7}} = 367.20$$

Coefficient of Variance

$$\text{P) C.V. of NIBL} = \frac{d_1}{\bar{X}} \times 100 = \frac{784.80}{1392} \times 100 = 56.37\%$$

$$\text{C.V. of MBL} = \frac{d_2}{\bar{Y}} \times 100 = \frac{367.2}{486.76} \times 100 = 75.44\%$$

From the calculation of Standard Deviation and Coefficient of Variance it is found that

NIBL has more consistent Assets than MBL.

Q) S.D. and C.V. of Total Deposits

(In million)

FY	R) NIBL			MBL		
	Amount (X)	$d_1 \sum X \sum \bar{X}$	d_1^2	Amount (Y)	$d_2 \sum Y \sum \bar{Y}$	d_2^2
2059/60	425.62	-797	634430.46	70.01	-214	45846.15
2060/61	417.47	-805	647480.01	99.48	-223	49629.66
2061/62	792.28	-430	184772.25	177.88	-193	37367.65
2062/63	1,152.47	-70	4852.71	275.46	-115	13203.65
2063/64	1,425.46	203	41342.51	558.68	-17	300.23
2064/65	1,892.73	671	449702.44	789.33	266	70699.01
2065/66	2,448.89	1227	1504936.59	947.54	497	246554.81
N=7	$\sum X$ 8554.92	$\sum d_1$ 0	$\sum d_1^2$ 3467516.98	$\sum Y$ 2049.51	$\sum d_2$ 0	$\sum d_2^2$ 463601.16

$$\text{Mean}_{\text{NIBL}} (\bar{X}) = \frac{\sum X}{n} = \frac{8554.92}{7} = 1222$$

$$\text{Mean}_{\text{MBL}} (\bar{Y}) = \frac{\sum Y}{n} = \frac{2049.51}{7} = 292.79$$

Standard Deviation

$$\text{S.D.}_{\text{NIBL}} (d_1) = \sqrt{\frac{\sum fd_1^2}{N} - \frac{(\sum fd_1)^2}{N^2}} = \sqrt{\frac{3467516.98}{7} - \frac{0^2}{7^2}} = 703.82$$

$$\text{S.D.}_{\text{MBL}} (d_2) = \sqrt{\frac{\sum fd_2^2}{N} - \frac{(\sum fd_2)^2}{N^2}} = \sqrt{\frac{463601.16}{7} - \frac{0^2}{7^2}} = 257.35$$

Coefficient of Variance

$$\text{S) C.V. of NIBL} = \frac{\frac{d_1}{\bar{X}}}{\frac{\sum d_1}{\bar{X}}} \times 100 = \frac{703.82}{1222} \times 100 = 57.59\%$$

$$\text{C.V. of MBL} = \frac{\frac{d_2}{\bar{Y}}}{\frac{\sum d_2}{\bar{Y}}} \times 100 = \frac{257.35}{292.79} \times 100 = 87.90\%$$

From the calculation of Standard Deviation and Coefficient of Variance it is found that NIBL has more consistent Deposits than MBL.

S.D. and C.V. of Total Loans And Advances

(In million)

FY	T) NIBL			MBL		
	Amount (X)	$d_1 \times X \times \bar{X}$	d_1^2	Amount (Y)	$d_2 \times Y \times \bar{Y}$	d_2^2
2059/60	242.9	-611	373850.14	49.85	-290	84288.19
2060/61	271.35	-583	339869.01	68.03	-272	74062.51
2061/62	733.86	-262	68724.12	149.59	-191	36322.37
2062/63	733.86	-120	14513.71	254.08	-86	7412.23
2063/64	1,045.32	191	36476.09	513.02	173	29875.64
2064/65	1,317.081	463	214811.06	914.66	274	75342.41
2065/66	1,776.91	923	851148.58	731.99	392	153519.55
N=7	ΣX 5980.33	$\Sigma d_1 \times X$ 0	Σd_1^2 1899392.72	ΣY 2381.22	$\Sigma d_2 \times Y$ 0	Σd_2^2 460822.90

$$\text{Mean}_{\text{NIBL}} (\bar{X}) = \frac{\Sigma X}{n} = \frac{5980.33}{7} = 854$$

$$\text{Mean}_{\text{MBL}} (\bar{Y}) = \frac{\Sigma Y}{n} = \frac{2381.22}{7} = 340.17$$

Standard Deviation

$$\text{S.D.}_{\text{NIBL}} (d_1) = \sqrt{\frac{\Sigma fd_1^2}{N} - \frac{(\Sigma fd_1)^2}{N^2}} = \sqrt{\frac{1899392.72}{7} - \frac{0^2}{7^2}} = 520.90$$

$$\text{S.D.}_{\text{MBL}} (d_2) = \sqrt{\frac{\Sigma fd_2^2}{N} - \frac{(\Sigma fd_2)^2}{N^2}} = \sqrt{\frac{460822.90}{7} - \frac{0^2}{7^2}} = 256.58$$

Coefficient of Variance

$$\text{U) C.V. of NIBL} = \frac{d_1}{\bar{X}} \times 100 = \frac{520.90}{854} \times 100 = 60.97\%$$

$$\text{C.V. of MBL} = \frac{d_2}{\bar{Y}} \times 100 = \frac{256.58}{340.17} \times 100 = 75.43\%$$

From the calculation of Standard Deviation and Coefficient of Variance it is found that NIBL has more consistent flow of Loan and Advances than MBL.

S.D. and C.V. of Total Performing Loan

(In million)

FY	V) NIBL			MBL		
	Amount (X)	$d_1 \times X - Z\bar{X}$	d_1^2	Amount (Y)	$d_2 \times Y - Z\bar{Y}$	d_2^2
2059/60	222.76	-609	370435.69	49.39	-287	82460.87
2060/61	258.32	-573	328414.14	60.92	-276	75971.90
2061/62	580.47	-251	62963.00	146.48	-190	36126.60
2062/63	715.71	-116	13382.85	251.58	-85	7219.90
2063/64	1,017.23	186	34534.91	511.04	174	30446.76
2064/65	1,290.56	459	210833.15	612.96	276	76402.49
2065/66	1,734.71	903	815979.29	723.48	387	149714.82
N=7	$\Sigma X = 5819.76$	$\Sigma d_1 = 0$	$\Sigma d_1^2 = 1836543.03$	$\Sigma Y = 2355.85$	$\Sigma d_2 = 0$	$\Sigma d_2^2 = 458343.89$

$$\text{Mean}_{\text{NIBL}} (\bar{X}) = \frac{\Sigma X}{n} = \frac{5819.76}{7} = 831.39$$

$$\text{Mean}_{\text{MBL}} (\bar{Y}) = \frac{\Sigma Y}{n} = \frac{2355.85}{7} = 336.55$$

Standard Deviation

$$\text{S.D.}_{\text{NIBL}} (d_1) = \sqrt{\frac{\Sigma fd_1^2}{N} - \frac{(\Sigma fd_1)^2}{N^2}} = \sqrt{\frac{1836543.03}{7} - \frac{0^2}{7^2}} = 512.21$$

$$\text{S.D.}_{\text{MBL}} (d_2) = \sqrt{\frac{\Sigma fd_2^2}{N} - \frac{(\Sigma fd_2)^2}{N^2}} = \sqrt{\frac{458343.89}{7} - \frac{0^2}{7^2}} = 255.89$$

Coefficient of Variance

$$\text{W) C.V. of NIBL} = \frac{d_1}{\bar{X}} \times 100 = \frac{512.21}{831.39} \times 100 = 61.61\%$$

$$\text{C.V. of MBL} = \frac{d_2}{\bar{Y}} \times 100 = \frac{255.89}{336.55} \times 100 = 76.03\%$$

From the calculation of Standard Deviation and Coefficient of Variance it is found that NIBL has more consistent Performing Loan than MBL.

S.D. and C.V. of Total Non-Performing Loan

(In million)

FY	X) NIBL			MBL		
	Amount (X)	$d_1 \times X \times \bar{X}$	d_1^2	Amount (Y)	$d_2 \times Y \times \bar{Y}$	d_2^2
2059/60	20.14	-3	7.83	0.45	-3	10.09
2060/61	13.03	-10	98.18	7.11	3	12.14
2061/62	11.71	-11	126.08	3.11	-1	0.27
2062/63	18.15	-5	22.93	2.50	-1	1.27
2063/64	28.09	5	26.54	1.99	-2	2.68
2064/65	27.25	4	18.59	1.70	-2	3.71
2065/66	42.20	19	371.00	8.52	5	23.95
N=7	$\Sigma X = 160.57$	$\Sigma d_1 \times X = 0$	$\Sigma d_1^2 = 671.15$	$\Sigma Y = 25.38$	$\Sigma d_2 \times Y = 0$	$\Sigma d_2^2 = 54.10$

$$\text{Mean}_{\text{NIBL}} (\bar{X}) = \frac{\Sigma X}{n} = \frac{160.57}{7} = 22.94$$

$$\text{Mean}_{\text{MBL}} (\bar{Y}) = \frac{\Sigma Y}{n} = \frac{25.38}{7} = 3.63$$

Standard Deviation

$$\text{S.D.}_{\text{NIBL}} (d_1) = \sqrt{\frac{\Sigma fd_1^2}{N} - \frac{(\Sigma fd_1)^2}{N^2}} = \sqrt{\frac{1671.15}{7} - \frac{0^2}{7^2}} = 9.79$$

$$\text{S.D.}_{\text{MBL}} (d_2) = \sqrt{\frac{\Sigma fd_2^2}{N} - \frac{(\Sigma fd_2)^2}{N^2}} = \sqrt{\frac{54.10}{7} - \frac{0^2}{7^2}} = 2.78$$

Coefficient of Variance

$$\text{Y) C.V. of NIBL} = \frac{d_1}{\bar{X}} \times 100 = \frac{9.79}{22.94} \times 100 = 42.69\%$$

$$\text{C.V. of MBL} = \frac{d_2}{\bar{Y}} \times 100 = \frac{2.78}{3.63} \times 100 = 76.67\%$$

From the calculation of Standard Deviation and Coefficient of Variance it is found that NIBL has more consistent Non-Performing Loan than MBL.

S.D. and C.V. of Total Net Profit

(In million)

FY	Z) NIBL			MBL		
	Amount (X)	$d_1 \times X \times Z \bar{X}$	d_1^2	Amount (Y)	$d_2 \times Y \times Z \bar{Y}$	d_2^2
2059/60	5.64	-15.32	234.61	(1.55)	-5.80	33.59
2060/61	5.71	-15.25	232.48	(4.23)	-8.48	71.84
2061/62	11.68	-9.28	86.07	1.53	-2.72	7.38
2062/63	15.27	-5.69	32.34	4.67	0.42	0.18
2063/64	23.21	2.25	5.08	8.49	4.24	18.01
2064/65	35.05	14.09	198.61	13.40	9.15	83.80
2065/66	50.14	29.18	851.64	7.41	3.16	10.01
N=7	ΣX 146.70	$d_1 \Sigma X$ 0	$d_1^2 \Sigma X$ 1640.82	ΣY 29.72	$d_2 \Sigma Y$ 0	$d_2^2 \Sigma Y$ 224.81

$$\text{Mean}_{\text{NIBL}} (\bar{X}) = \frac{\Sigma X}{n} = \frac{146.70}{7} = 20.96$$

$$\text{Mean}_{\text{MBL}} (\bar{Y}) = \frac{\Sigma Y}{n} = \frac{29.72}{7} = 4.25$$

Standard Deviation

$$\text{S.D.}_{\text{NIBL}} (d_1) = \sqrt{\frac{fd_1^2}{N} - \frac{(\Sigma fd_1)^2}{N^2}} = \sqrt{\frac{1640.82}{7} - \frac{0^2}{7^2}} = 15.31$$

$$\text{S.D.}_{\text{MBL}} (d_2) = \sqrt{\frac{fd_2^2}{N} - \frac{(\Sigma fd_2)^2}{N^2}} = \sqrt{\frac{224.81}{7} - \frac{0^2}{7^2}} = 5.67$$

Coefficient of Variance

$$\text{AA) C.V. of NIBL} = \frac{d_1}{\bar{X}} \times 100 = \frac{15.31}{20.96} \times 100 = 73.05\%$$

$$\text{C.V. of MBL} = \frac{d_2}{\bar{Y}} \times 100 = \frac{5.67}{4.25} \times 100 = 133.48\%$$

From the calculation of Standard Deviation and Coefficient of Variance it is found that NIBL has more consistent Profit generation than MBL.

Annex 4: Calculation of Trend Values

Trend Analysis of Total Non-Performing Loan to Total Loan and Advances ratio

Nepal Investment Bank Ltd.

Year (X)	NPL to Total Loan and Advances Ratio (Y)	$\sum X$	$\sum X^2$	$\sum xy$	Trend Value Y_c
2059/60(1)	8.29	-3	9	-24.87	5.932
2060/61(2)	4.8	-2	4	-9.6	5.128
2061/62(3)	1.98	-1	1	-1.98	4.324
2062/63(4)	2.47	0	0	0	3.52
2063/64(5)	2.69	1	1	2.69	2.716
2064/65(6)	2.07	2	4	4.14	1.912
2065/66(7)	2.37	3	9	7.11	1.108
	$\sum y = 24.67$	$\sum x = 0$	$\sum x^2 = 28$	$\sum xy = 22.51$	

Calculation:

The equation of Trend value analysis is

$$Y_c = a + bx$$

Where,

Y_c = Trend Values

A = Y intercept or the computed figures of the Y variables, when $x = 0$

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

X = Variables that represent time i.e. time variables.

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

$$a = \frac{\sum Y}{n} \quad \text{Where } n = \text{no of observation period}$$

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

By the equation, substituting the values

$$a \times \frac{24.67}{7} = 3.52$$

$$b \times \frac{22.51}{7} = -0.804$$

Fitting the values of a and b in the trend equations, we will get the trend values of the respective years. Here are:

$$Y_c = a + bx$$

$$Y_{2059/60} = 3.52 + (-0.84.) \times (-3) = 5.932$$

$$Y_{2060/61} = 3.52 + (-0.84.) \times (-2) = 5.128$$

$$Y_{2061/62} = 3.52 + (-0.84.) \times (-1) = 4.324$$

$$Y_{2062/63} = 3.52 + (-0.84.) \times 0 = 3.52$$

$$Y_{2063/64} = 3.52 + (-0.84.) \times 1 = 2.716$$

$$Y_{2064/65} = 3.52 + (-0.84.) \times 2 = 1.912$$

$$Y_{2065/66} = 3.52 + (-0.84.) \times 3 = 1.108$$

Machhapuchhre Bank Ltd.

Year (X)	NPL to Total Loan and Advances Ratio (Y)	$\sum X$	$\sum X^2$	$\sum XY$	Trend Value Y_c
2059/60(1)	0.91	-3	9	-2.73	4.6
2060/61(2)	10.45	-2	4	-20.9	3.84
2061/62(3)	2.08	-1	1	-2.08	3.08
2062/63(4)	0.98	0	0	0	2.32
2063/64(5)	0.39	1	1	0.39	1.56
2064/65(6)	0.28	2	4	0.56	0.8
2065/66(7)	1.16	3	9	3.48	0.04
	$\sum Y = 16.25$	$\sum X = 0$	$\sum X^2 = 28$	$\sum XY = 12.8$	

Calculation:

The equation of Trend value analysis is

$$Y_c = a + bx$$

Where,

Y_c = Trend Values

A = Y intercept or the computed figures of the Y variables, when $x = 0$

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

X = Variables that represent time i.e. time variables.

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

$$a \sum \frac{y}{n} \quad \text{Where } n = \text{no of observation period}$$

$$b \sum \frac{xy}{x^2}$$

By the equation, substituting the values

$$a \sum \frac{16.25}{7} = 2.32$$

$$b \times \frac{Z21.28}{7} = -0.76$$

Fitting the values of a and b in the trend equations, we will get the trend values of the respective years. Here are:

$$Y_c = a + bx$$

$$Y_{2059/60} = 2.32 + (-0.84.) * (-3) = 4.56$$

$$Y_{2060/61} = 2.32 + (-0.84.) * (-2) = 3.84$$

$$Y_{2061/62} = 2.32 + (-0.84.) * (-1) = 3.08$$

$$Y_{2062/63} = 2.32 + (-0.84.) * 0 = 2.32$$

$$Y_{2063/64} = 2.32 + (-0.84.) * 1 = 1.56$$

$$Y_{2064/65} = 2.32 + (-0.84.) * 2 = 0.8$$

$$Y_{2065/66} = 2.32 + (-0.84.) * 3 = 0.04$$

Annex 5: Calculation of Correlation Coefficient

Machhapuchhre Bank Ltd.

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NPL and ROE

NPL and ROE

NPL and ROE

NPL and ROE

NPL ROE

NPL

71,122,847 -0.532

ROE
201,433,635 0.9106

31,098,987 0.03051

130,294,717 0.1091

24,983,046 0.0842

117,091,823 0.1829

19,860,891 0.1331

181,535,009 0.2093

16,916,597 0.1439

280,874,131 0.1967

85,168,239 0.0741

421,971,550 0.2477

Column 1
Column 2

Column 2

Column 1

Column 1 1
Column 2 -0.548615905
1

1

Column 1 1
Column 2 0.073176232

NPL and ROA

NPL and ROA

NPL ROA
4,536,350 -0.0197
0.01124
71,122,847 -0.0383
0.01148
31,098,987 0.0064
0.01296
24,983,046 0.01354
0.01152
19,860,891 0.01317
0.01426

NPL ROA
201,433,635
130,294,717
117,091,823
181,535,009
280,874,131

16,916,597	0.0148	272,493,041
0.01643		
85,168,239	0.00685	421,971,550
0.01817		

Column 1 Column 2		Column 2	Column 1	
Column 1	1		Column 1	1
Column 2	-0.288120977	1	Column 2	0.863170724
1				

NPL and Total Loan and Advances Advances

NPL Advances	Total Loan and Advances
4,536,350	498,500,000
71,122,847	680,295,079
31,098,987	1,495,865,109
24,983,046	2,540,788,021
19,860,891	5,130,223,362
10,453,163,997	
16,916,597	6,146,572,956
13,178,151,824	
85,168,239	7,319,939,264
17,769,099,903	

NPL and Total Loan and

NPL	Total Loan and
201,433,635	2,429,025,821
130,294,717	2,713,524,871
117,091,823	5,921,788,103
181,535,009	7,338,566,487
280,874,131	
272,493,041	
421,971,550	

Column 1 Column 2		Column 2	Column 1	
Column 1	1		Column 1	1
Column 2	0.254258278	1	Column 2	
0.889505443	1			

NPL and Net Profit

NPL	Net Profit
4,536,350	-15500000
71,122,847	-422349782
31,098,987	15307486
24,983,046	46689945
19,860,891	84870027
16,916,597	133996709
85,168,239	74085647

NPL and Net Profit

NPL	Net Profit
201,433,635	56,408,837
130,294,717	57,105,284
117,091,823	116,817,659
181,535,009	152,670,976
280,874,131	232,147,098
272,493,041	350,536,413
421,971,550	501,398,853

Column 1

Column 2

Column 1

Column 2

Column 1	1		Column 1	1	
Column 2	-.176332457	1	Column 2	0.91460049	1

Annex 6: Testing of Hypothesis

Null Hypothesis H_0 : There is no significant difference between population correlation and sample correlation

Alternative Hypothesis H_1 : There is significant difference between population correlation and sample correlation

When sample size is less than 30, t-test is generally carried out t-test can be test significance of observed correlation in the population

Formula of t-test:

$$t = \frac{r\sqrt{n}}{\sqrt{1-r^2}}$$

Where, t is the t-test

r = observed correlation of NPL with another parameter

n = no. of observation

Calculation

Nepal Investment Bank

$$\text{NPL with ROA} = \frac{0.863171\sqrt{7}}{\sqrt{1-0.74506}} = \frac{1.9301}{0.50491} = 3.822$$

$$\text{NPL with ROE} = \frac{0.073176\sqrt{7}}{\sqrt{1-0.005355}} = \frac{0.163626}{0.9973} = 0.164$$

$$\text{NPL with Total Loan and Advances} = \frac{0.8895\sqrt{7}}{\sqrt{1-0.79122}} = \frac{1.9778}{0.4569} = 4.33$$

$$\text{NPL with Net Profit} = \frac{0.9146\sqrt{7}}{\sqrt{1-0.83649}} = \frac{2.0451}{0.40436} = 5.056$$

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$$\text{NPL with ROA} = \frac{\text{Z}0.288121\sqrt{7\text{ Z}2}}{\sqrt{1\text{ Z}0.083014}} = \frac{\text{Z}0.64426}{0.9576} = -0.673$$

$$\text{NPL with ROE} = \frac{\text{Z}0.54862\sqrt{7\text{ Z}2}}{\sqrt{1\text{ Z}0.300984}} = \frac{\text{Z}1.22675}{0.83607} = -1.4672$$

$$\text{NPL with Total Loan and Advances} = \frac{0.2543\sqrt{7\text{ Z}2}}{\sqrt{1\text{ Z}0.06467}} = \frac{0.5686}{0.96712} = 0.5879$$

$$\text{NPL with Net Profit} = \frac{\text{Z}0.17633\sqrt{7\text{ Z}2}}{\sqrt{1\text{ Z}0.03109}} = \frac{\text{Z}0.39428}{0.98433} = -0.4005$$