

CHAPTER - I

INTRODUCTION

1.1 Backgrounds of the Study

Non-performing Assets [NPA] means the amount of loan that the individual Commercial bank had provided and the consumer has not paid it until the time is already matured. Once the distributed loan is not return timely by clients and becomes overdue then, it is known as Non Performing Assets for the bank. Reduction of NPA has always been a significant problem for every commercial banks and proper attention for the management of the NPA now has the top priority. Due to various hurdles on the way of management of NPA, commercial banks are now losing their profitability and struggling for the existence.

NPA may be defined broadly as the bad debt; however, in terms of banking sector consists of those loans and advances, which are not performing well and likely to be turn as bad debt. NPA as per the current directives of Nepal Rastra Bank (NRB), has been categorized as classified loans and advances. NPA has severe impacts on the financial institutions. On the one hand, the investment becomes worthless as expected return cannot be realized and on the other, due to the provision required for the risk mitigation the profitability is directly affected. The existence of the bank can be questioned in this situation. Thus, interest along with principal has to be recovered timely and without any obstacles.

Profitability is a deviation of the term profit, which explains the ability to make the profit. Profit is primary a measuring rod of a success of a business enterprises. Profit is essential for the survival of the business. It is the difference between revenue generated and expenses occurred over the period of time but the term profit has several different interpretations. It is a basic test of the performance of any business concern. Without profit a firm could not attract the outside capital. Moreover, the owners and creditors would become concerned about the company's future and attempt to recover their funds. Owner creditors and management pay close attention for boosting profit due to the great importance placed on earning the market place. Profitability is a technical term, used to compare performances analysis of different

trading systems or different investments within one system. This is computed for each system or investments being compared over the same period long enough to include significant "ups" and "downs". So analysis of the profitability of the business is very essential which can be used to measure the overall efficiency of the business.

Profitability of the business can be analyzed through the financial analysis which refers to the assessment of the viability and stability of the business. Profitability of a company is usually based on the income statement. A properly conducted profitability analysis provides invaluable evidence concerning the earnings potential of a company and the effectiveness of management. While analyzing profitability different profitability ratios are calculated. Profitability ratios provide a definitive evaluation of the overall effectiveness of management based on the returns generated on sales and investment.

Like any other business, success of banking is assessing based on profit and quality of asset it possesses. Even though bank serves social objective through its priority sector lending, mass branch networks and employment generation, maintaining asset quality and profitability is critical for banks survival and growth. A major threat to banking sector is prevalence of Non-Performing Assets (NPAs). NPA represent bad loans, the borrowers of which failed to satisfy their repayment obligations. NPA in loan portfolio affect operational efficiency, which in turn affects profitability, liquidity and solvency position of banks. Noted that in addition to the influence on profitability, liquidity and competitive functioning, NPA also affect the psychology of bankers in respect of their disposition of funds towards credit delivery and credit expansion. NPA generate a vicious effect on banking survival and growth, and if not managed properly leads to banking failures (Michael, 2006).

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

Performing assets are those loans that repay principal and interest to the bank from the cash flow it generates. Loans are risky assets, though a bank interest most of its resources in granting loans and advances. If an individual bank has around 10% non-performing assets or loans, it sounds the death knell of that bank, other things remaining the same. The objectives of loan policy are to maintain the financial health of the banks, which result in safety of depositor's money and increase in the returns to the shareholders. Since the loan is a risky asset there is inherent risk in every loans, however, the bank should not take risk above the certain degree irrespective of the returns prospects.

Nepal has become member of World Trade Organization (WTO) and has committed to open Financial Services Sector (FSS) especially banking services to the foreign banks and financial institutions by 2010. This could be threat as well as opportunities for banking sector of Nepal. The existing level of Non- Performing Assets (NPA) is not that much healthy sign for the smooth growth of banking sector. One should seriously need to re-think proper strategy for managing NPA.

1.2 Statement of the Problem

Commercial Banks play vital role in economic growth of the country. As being a commercial institution, a commercial bank must make profit out of its operation for its survival and fulfillment of its responsibilities. The major activities of the commercial banks include mobilization of resources, which involves cost, and profitable deployment of the resources, generating income. The excess return income over expenses is the main source of profit to the bank. In case the bank fails to generate sufficient returns on the resources deployed, it makes a drain on the company's resources and country's resources as well.

Assets are the most critical factor in determining the strength of any bank. The primary factors that can be considered are the quality of the loan portfolio, mix of risk assets and the credit administration system.

High level of NPA is a matter of great concern for the bank and public alike because bank credit is the catalyst to the economic growth of the nation. Rapid rise in NPA level brings an adverse economic environment to the country. In order to have a permanent presence in the market, bankers must have enough vigilance to control the

NPA within a reasonable limit. The lower NPL ratio indicates better risk assessment and robust credit management system are in place and vice-versa. At the same time, higher loan loss provisions indicate poor credit management; it also indicates adequate reserve for possible loan loss, protecting the balance sheets of respective banks.

Nepalese commercial banking industry is still under the developing stage. They have to follow all the rules and regulations or the directives issued by the Rastra Bank of Nepal, the central bank of the country. The core banking business is mobilizing the deposits and utilizing it for lending to industry. Lending business is generally encouraged because it has the effect of funds being transferred from the system to productive purposes, which results into economic growth. However, lending also carries credit risk, which arises from the failure of borrowers to fulfill its contractual obligation during the course of transaction. It is well known that the bank and financial institutions in Nepal face the problem of swelling non-performing assets and the issue is becoming more and more unmanageable. The total NPA in the banking system is 14.2 percent of total loan in year 2066 B.S. while it was 18.7 percent of total loan in year 2067 B.S.

This study will investigate the effects of Non-Performing Assets of the bank on its total lending policy and its profitability. The investigation will be conduct on a “real work” setting and will use a computer – based task. A sample of three commercial banks among 32 commercial banks is taken. Thus, this study makes a modest attempt to analyze the non-performing assets of the banks. The following are the research question of this study.

- What is the overall impact of the NPA on the profitability of the Commercial Banks under study?
- Is there any relationship between NPA and the profitability of the Commercial Banks?
- What might be the other factors that influence the non-performing assets of the Commercial Banks?
- What are the factors of the individual Commercial Banks in increment of the non-performing assets?

1.3 Objectives of the Study

Increasing NPA has now become the major issue for every commercial bank. Every bank now has put the NPA management under the top priority and is functioning to reduce the major part of it from the assets side of their balance sheet. The main objectives of the study are to access the non-performing assets of the commercial banks under the study. The other specific objectives of the present study are as follows.

- To evaluate the non-performing assets of NABIL, HBL & BOK.
- To access the relationship between the profitability and the non-performing assets of NABIL, HBL & BOK.
- To examine whether the Nepalese commercial banks are following the NRB directives regarding non-performing assets or not.
- To examine the factors that influences the non-performing assets of the NABIL, HBL & BOK.

1.4 Significances of the Study

The proper mobilization and utilization of domestic resource become indispensable for suitable economic development and there is no doubt that commercial banks have pivotal role for the collection of dispersed small savings of Nepalese people and transforming them into meaningful investment. The success and prosperity of the bank relies heavily upon the successful investment of collected resources to the important sectors of economy as well as to generate more profit by investing in the consumer's demand. The main aim of the present study is to find out what sorts of tools and techniques have been used to overcome the problem of conversion of performing assets into the non-performing assets, by the commercial banks in the country.

Loans and advances are the most profitable of all the assets of a bank. These assets constitute primary sources of income to the bank. It means interest earned from such loan and advances occupy major space in income statement of the bank. Since loans and advances are more profitable than any of other assets, the bank is willing to lend as much as its fund as possible. However, it has to be careful about the safety of such loans and advances. It is very important, therefore, to remember that most of the

banks failures in the world are due to the shrinkage on the value of loans and advances.

Hence, loan is known as risky assets. Risk of non-repayment of loan is known as credit risk or default risk. Performing loan/assets has multiple benefits while non-performing loan/ assets erode even existing capital. Therefore, success of any bank does not depend upon how much money a bank is able to lend, but it depends upon the quality of the loan. So success of a bank depends upon the amount of performing assets/ loan. Performing assets are those loans that repay principal and interests to the bank from the cash flow it generates.

It is well known fact that bank and financial institutions in Nepal have been facing the problem of swelling non-performing assets and issues is becoming more and more unmanageable. Unfortunately, nowadays, banks are the victims of high level of NPA, which has been the subject of headache to the banking sector and Nepalese-banking industry is not exception from this truth.

This present study mainly concern with the analysis of level of NPAs in total assets, total deposits and total lending of different commercial banks of Nepal. Therefore, it is significant to find out the level of NPA and to find out whether the banks maintained loan loss provision in accordance to NRB's directives or not. It also examines the effects of NPA in ROE and ROA of the bank and points out the defect inherent in it and provide package of suggestion for its improvement if found any. Apart from above, this study will be a matter of interest for the students, academicians and other professionals.

1.5 Limitation of the Study

Profitability of an organization is cause by many factors but here we study only those factors, which are directly affect by the non-performing assets of the commercial banks. This is not far from several limitations, which weakens the study from the viewpoint of reliability and validity. The following are some limitations of the study.

- The study covers only three commercial banks of the Nepalese banking industry.
- The study is limiting to non-performing assets of commercial banks.

- This study is carried out by using both quantitative and qualitative analysis methods. Mostly, secondary data has been used for analysis, but the discussion and personal interview with the concerned employees of the selected bank is used for qualitative analysis.
- The whole study is mainly based on secondary data.

1.6 Organization of the Study

The whole study is dividing into the following five different chapters.

Chapter – I: Introduction

This chapter includes general background of the study, statements of the problems, objectives of the study, significances of the study, limitations of the study and organization of the study.

Chapter - II: Review of Literature

This chapter deals with review of the different literature in regards to the theoretical analysis and review of books, articles and thesis related to the study field. Therefore, it includes conceptual framework and other related studies.

Chapter – III: Research Methodology

This chapter includes research design, population and sample, sources of the information used, period of the study, financial indicators and the statistical tools used.

Chapter - IV: Presentation and Analysis of Data

This chapter includes presentation of the financial variables and statistical tools used while interpreting the data so collected from the different sources and major findings of the study is also include in this chapter.

Chapter - V: Summery, Conclusions and Recommendation

This chapter briefly represents the summery of the whole study and the conclusions and the recommendations for the effective and smooth running of the concerned commercial banks under the study.

Similarly, at the front part of the study table of contents, list of table and figure and abbreviation are presents and bibliography and appendices are presents at the end of the study.

CHAPTER - II

REVIEW OF LITERATURE

This chapter is concerned with review of literature relevant to the topic ‘Impact of nonperforming assets on profitability of commercial bank. The purpose of reviewing of literature is to develop some expertise in one’s area, to see what new contribution has made and to receive some ideas for developing a research design. Thus, previous studies cannot be ignored as they provide the foundation of the present study. This chapter highlights the literature that is available in concerned subject as to my knowledge, research work, and relevant study on this topic, review of journals and articles and review of thesis work performed previously.

2.1 Conceptual Review

Conceptual review deals with the theoretical aspects of commercial banks, loan & advance, non-performing assets, profit, profitability and other related topic, which are relevant to the subject matter.

2.1.1 Concept of Commercial Bank

Commercial banks are the heart of financial system. They hold the deposits of many persons, government establishment and business units. They make fund available through their lending and investing activities to borrowers, individual, business firms and government establishment units.

Therefore commercial banks are those banks that pool together the saving of community and arrange for their productive use. They supply the financial needs of modern business by various means. Commercial banks are restricted to invest their funds in corporate securities. Their business is confined to financing the short terms needs of trade and industry. They cannot finance in fixed assets. A part from financing, they also lender services like collection of bills and cheque, safe keeping of valuables, financial advising etc to their customers (Vaidya, 2001).

The American institute of Banking has laid down the four major function of Commercial bank such as receiving and handing of deposits, handing payments of its

clients making loans and investments and creating money by extension of credit (Principle of Bank Operation).

Principally, commercial banks accept deposits and provide loans, primarily to business firms, thereby facilitating the transfer of funds on the economy (Albrol and Gupta, 1971).

In the Nepalese context, banking and financial institution act, 2063 defines “A commercial bank as one which exchange money, deposits money, accepts deposits, gratt loans and performs commercial banking functions” (Commercial Bank Act 2063).

A commercial banks can be define as an institution which deals in money in words of the Crowther “ Banks collect money from those who have it to spar or who are saving it out of their income and lend this money out against goods security to those who requires it” (Crowther, 1985).

However, central bank is the main bank of the any nation that directs and controls all the banks whose existence is in the country. In Nepal, Nepal Rastra Bank is the central bank of the country. All the commercial banks perform their functions under rules, regulations and the directives provided by Nepal Rastra Bank.

Under the free enterprise system like U.S.A. the interest of nation as well as those of individuals and stockholders are supposed to be best served by vigorously seeking profit. But the profit cannot be the sole objective of the any enterprise. It should not be evaluated just on the ground of profit earned. Neither the bank nor the community will be best serve if the banker unreasonably scarifies the safety of theirs fund or the liquidity of their bank in an effort to increase income (Vaidya, 1947)

From the above many definition, commercial banks including joint venture banks, they are mainly receiving the money from depositor and invest in different sectors. So that banks are the main source of development of a nation. In the context of Nepal, it is a poor and least developed county having low per capita income and GDP. As a result, many economic problems such as inflation, devaluation of money trade, trade deficit, budget deficit etc arises. For the sake of removing these problems, many

joint ventures are being incorporated in our country by sharing Nepal's and foreign investment towards making more profit by using the funds in profitable sectors. Therefore bank should be invested in different sector which helps in the growth of national economy.

2.1.2 Function of Commercial Banks

Commercial banks are the most important types of financial institution for the nations in terms of aggregate assets. Traditional functions of commercial banks are only concern with accepting deposits and providing loan. Although these banks are truly inspired with the objectives gaining profits. Here commercial banks are also established to accelerate common people's economic welfare and facility. But modern commercial banks work for overall development of trade, commerce, services and agriculture also. The business of banking is very broad in modern business age. The number and variety of services provided by bank will provably expand. Recent innovation in Banking include the introduction of credit cards accounting services of business firms, factoring leasing participating in the Euro-dollar market and lock- box banking. Along with other functions, the main functions of commercial banks are to accept deposits from the people and to lend it to those who are in need of financial aid. The main functions of commercial banks are as follows.

- Accept various types of deposits
- Borrowing raising and taking up of money
- Lending loans as well as services
- Provide guarantee of services
- Provide facility of discounting bills and promissory notes
- Provide Tele banking services
- Provide safe deposit vault
- Provide transit facility of foreign currency
- Provide remittance service
- Provide service of letter of credit (L/C), travelers cheque
- Provide facilities on bill clearing, purchase and collection services

2.1.3 Concept of Loan and Advances

The term 'loan' refers to the amount borrowed by one person from another. The amount is in the nature of loan and refers to the sum paid to the borrower. Thus, from the viewpoint of borrower, it is 'borrowing' and from the viewpoint of bank, it is 'lending'. Loan may be regarded as 'credit' granted where the money is disbursed and its recovery is made on a later date. It is a debt for the borrower. While granting loans, credit is given for a definite purpose and for a predetermined period. Interest is charged on the loan at agreed rate and intervals of payment. 'Advance' on the other hand, is a 'credit facility' granted by the bank. Banks grant advances largely for short-term purposes, such as purchase of goods traded in and meeting other short-term trading liabilities. There is a sense of debt in loan, whereas an advance is a facility being availed of by the borrower. However, like loans, advances are also to be repaid. Thus a credit facility- repayable in installments over a period is termed as loan while a credit facility repayable within one year may be known as advances. However, in the present lesson these two terms are used interchangeably.

A loan is a type of debt. Like all debt instruments, a loan entails the redistribution of financial assets over time, between the lender and the borrower. In a loan, the borrower initially receives or borrows an amount of money, called the principal, from the lender, and is obligated to pay back or repay an equal amount of money to the lender later. Typically, the money is paying back in regular installments, or partial repayments; in an annuity, each installment is the same amount.

The loan is generally providing at a cost, referred to as interest on the debt, which provides an incentive for the lender to engage in the loan. In a legal loan, each of these obligations and restrictions is enforce by contract, which can also place the borrower under additional restrictions known as loan covenants. Although this article focuses on monetary loans, in practice any material object might be lent. Acting as a provider of loans is one of the principal tasks for financial institutions. For other institutions, issuing of debt contracts such as bonds is a typical source of funding.

This is the major assets of a bank commanding higher proportion of total assets of any bank. This is also a primary function of bank. Primarily, banks are there to accept deposit and to advance credit. Legally, a loan is a contractual promise between two parties where one party, the creditor, agrees to provide a sum of money to a debtor,

who promises to return the money to the creditor either in one lump sum or in parts over a fixed period in time. In addition to the principal, the lending institution generally charges the borrower a fee, referred to as interest on the debt, for the privilege of using this newly-created money. This interest is the major source of income for any bank, which covers interest to be paid to deposit holders and other operational costs like staff salary, rent, utility bills, stationeries etc. Where there is lending there always is risk of default. In finance, default occurs when a debtor has not met its legal obligations according to the debt contract, e.g. it has not made a scheduled payment, or has violated a loan covenant (condition) of the debt contract. It is the failure to pay back a loan. Default may occur if the debtor is either unwilling or unable to pay their debt.

2.1.4 Concept of NPA

Non-performing assets are assets, which cease to generate any income for the bank. These have become the major concern of banks in Nepal. NPA's have direct impact on net-profit and on the performance of the banks. The recognition of income norms for banks also posed a serious concern to commercial banks.

NPA including a leased asset becomes non-performing when it ceases to generate income for the bank. A non-performing asset (NPA) is a loan or an advance where;

- Interest and/ or installment of principal remain overdue for a period of more than 90 days in respect of a term loan.
- The account remains 'out of order' in respect of an Overdraft/Cash Credit (OD/CC).
- The bill remains overdue for a period of more than 90 days in the case of bills purchased and discounted.
- The installment of principal or interest thereon remains overdue for two crop seasons for short duration crops.
- The installment of principal or interest thereon remains overdue for one crop season for long duration crops.

Banks should, classify an account as NPA only if the interest charged during any quarter is not serviced fully within 90 days from the end of the quarter. 'Out of Order' status an account should be treated as 'out of order' if the outstanding balance remains

continuously in excess of the sanctioned limit/drawing power. In cases where the outstanding balance in the principal operating account is less than the sanctioned limit/drawing power, but there are no credits continuously for 90 days as on the date of Balance Sheet or credits are not enough to cover the interest debited during the same period, these accounts should be treated as 'out of order'. 'Overdue' any amount due to the bank under any credit facility is 'overdue' if it is not paid on the due date fixed by the bank (Aggrawal, 2011).

Non Performing Assets engender negative impact on banking stability and growth. Issue of NPA and its impact on erosion of profit and quality of asset was not seriously considered in Indian banking prior to 1991. There are many reasons cited for the alarming level of NPA in Indian banking sector. Asset quality was not prime concern in Indian banking sector till 1991, but was mainly focused on performance objectives such as opening wide networks/branches, development of rural areas, priority sector lending, higher employment generation, etc. The accounting treatment also failed to project the problem of NPA, as interest on loan accounts were accounted on accrual basis (Siraj & Pillai, 2012).

2.1.5 Classification of NPA

As per the NRB directives NPA are said as classified loans and this includes sub-standard, doubtful and loss categories as defined by new NRB directives. The circular further says a NPA is a credit facility in respect of which interest has remained unpaid for two quarters. According to the circulars, the loans are classified based on weakness and dependence on collateral securities into four categories and prescribed the provisioning rate as follows.

Table: 2.1
Classification of Loan and Advances

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

(Source: Nepal Rastra Bank, Directives for commercial banks 2069)

a. Pass Loan

All Loans & Advances the principal or interest of which are not past due or past due for a period up to three months are included in this category. (Unified NRB Directives 2069) The banks should make a loan loss provisioning of minimum 1% on outstanding loan for this category of loan. The following loans and advances are categorized under pass loans.

- Loan and advances against Gold and Silver.
- Loan and advances against Fixed Deposit Receipt (FDR).
- Loan and advances against Investment Papers of Government and debentures and bond of Nepal Rastra Bank.

b. Substandard

All loans and advances the principal or interest of which are past due for a period of more than 3 months and up to 6 months are included in this category. (Unified NRB Directives, 2069) The banks should make a loan loss provisioning of minimum 25% on outstanding loan for this category of loan.

c. Doubtful

All loans and advances the principal or interest of which are past due for a period of more than 6 months and up to 12 months (1 year) are included in this category. (Unified NRB Directives, 2069) The banks should make a loan loss provisioning of minimum 50% on outstanding loan for this category of loan.

d. Loss

All loans and advances the principal or interest of which are past due for a period of more than 1 year are included in this category. (Unified NRB Directives 2069) The banks should make a loan loss provisioning of 100% on outstanding loan for this category of loan. Expired TR loans and Credit Card loans should be categorize under Loss category immediate after their expiry.

2.1.6 Loan Rescheduling and Restructuring

When the loan becomes NPA due to factors beyond control of the borrower, the borrower is not a willful defaulter, and the borrower wants to repay loan according to his capacity then the loan can be reschedule or restructure. The term “reschedule” means process of extending repayment period either by increasing the loan tenure with lower installments amount or by extending maturity by providing moratorium period and the term ”restructure” means process of changing the nature or conditions of loan/facility, adding or deleting of conditions and change the limit. (Unified NRB Directives, 2069) The banks should make a loan loss provisioning of minimum 12.5% on outstanding loan for this category of loan.

2.1.7 Causes of NPA

Various reasons can be cited for an account becoming NPA. An asset leads to NPA when the borrower fails to repay the interest and/or principal on agreed terms. The reasons for NPA are classified differently; into systematic and situational causes into overhand component and incremental component into internal and external factors. Aggarwal and Mittal (2012) pointed out that the major reasons for NPA includes improper selection of borrowers activities, weak credit appraisal system, industrial problems, inefficient management, slackness in credit management and monitoring, lack of proper follow-up, recessions and natural calamities and other uncertainties. Ollins N. J and Wanjau, K. (2011) explained a direct relationship between interest rate and NPA. The study noted that interest rate spread affect performing assets in banks as it increases the cost of loans charged on the borrowers, regulations on interest rates have far-reaching effects on assets nonperformance, for such regulations determine the interest rate spread in banks and help mitigate moral hazards incidental to NPAs. Some of the important reasons for NPA, mentioned in various literatures are summarize below (Siraj & Pillai 2012).

- Willful defaults, siphoning of funds, fraud, disputes, management disputes, mismanagement, misappropriation of funds etc.
- Lack of proper pre-appraisal and follow up.
- Improper selection of borrowers/activities.
- Inadequate working capital leading to operational issues.
- Under financing/untimely financing.
- Delay in completing the project.
- Non-compliance of sanction terms and conditions.
- Poor debt management by the borrower, leading to financial crisis.
- Excess capacities created on non-economic costs.
- In-ability of the corporate to raise capital through the issue of equity or other debt instrument from capital markets.
- Business failures.
- Failures to identify problems in advance.
- Diversion of funds for expansion/modernization/setting up new projects/helping or promoting sister concerns.
- Deficiencies on the part of the banks viz. in credit appraisal, monitoring and follow-ups, delay in settlement of payments/ subsidiaries by government bodies etc.
- Time involved in the legal process and realization of securities.

2.1.8 Profit & Profitability

Generally profit is defined as the excess of revenue over cost. In other words, profit is the residual income, which is equal to sale proceeds minus costs. Profit is the resources left to the firm for future growth and explanation or reward to be distributed to the entrepreneurship in the form of dividends etc. In a simple term, profits mean the residual balance of earning expected to be available with the firm that is obtained after deducting entire expenses, costs, charges and provision from total revenue of a period of time.

It is lifeblood of each type of business. Every business organization should earn profits to survive and grow over the long period of time. Obviously, organization will have no future if it is unable to make reasonable profit from its operation. As a matter of fact, the overall efficiency of an organization is reflected in its profits. Profits to the

managements are the test of efficiency and a measurement of control: to the owners, a measure of worth of their investment; to the creditors, the margin of safety to the employees; a source of fringe benefits to the Government, a measure of fixed paying capacity and the basis of legislative action; to customers, a hint to demand for better quality and price cuts; to a bank, less burden some source if finance existence and finally to the country, profit are index of economic progress. Thus, if an organization fails to make profit, capital invested erodes and if this situation prolongs it ultimately cease to exist.

Profit has been universally recognized and accepted as a measure of business efficiency. Thus, the larger the profits, the more efficiency and profitable the business organization is deemed to be. This criterion has the greater advantage that it provides a common standard of measuring the efficiency if different bank. Regarding this, Laxmi Narayan clearly states, “Profit is the simple, convenient and the most popular yardstick of juggling the efficiency of private and public business enterprises. Profit helps in judging the overall efficiency and is easy to calculate. Even through profit maximization, unlike private enterprise, is not objective of public enterprises, yet profit services as a well accepted criterion for the judging the overall efficiency of public enterprises too” (Narayan, 1980).

The profit is the ultimate measure of effectiveness. A profitable company is likely to offer not only security of employment but also promotion prospects, job opportunities and the intense personnel motivation that comes from being associated with success. John Argent observes, “Profit is the barometer of the success of business. It is, indeed, a magic eye that mirrors all aspects of entire business organizations including the quality output” (Argent, 1968).

The term ‘profitability’ is composed of two words profit and ability. It reflects the capacity of a business organization to earn profit. It is also referred to as earning capacity or earning power of the concern investment. Thus, the term profitability may be taken as the ability to earn profit. According to Howard and Upton, “The word profitability may be defined as the ability of a given investment to earn return on its use.”

It may be mentioned that the term 'profitability' is distinguished from the word profit. Profit refers to the absolute quantum of profit whereas profitability alludes to the ability to earn profit. The former is an absolute measure in itself while the latter is a relative one. According to W.M. Harper, the profitability is a relative measure. It indicates the most profitable alternative. The profit, on the other hand is an absolute measure. It indicates the overall amount of profit earned by transaction. As the profitability is the relative measure, it is used to judge the degree of operational efficiency of management. Furthermore, it is essentially employed to measure the relative efficiency of different trading systems or different investments within one system. In the profitability analysis, the profit making ability of an organization is measured in terms of size of investment in it or its sales volume. Such an analysis of profitability reveals how particularly such a position stand as a result of transactions made during the year. It is particularly interesting to the suppliers of funds who can evaluate their investment and take necessary decision thereon.

The state of profitability is a variable thing like the temperature and humidity of a day. The determination of profitability by an accountant or analyst is very much similar to temperature reading and study of humidity by a meteorologist. A meteorologist records the weather on daily basis with an intention to forecast its future prospects. Likewise, an analysis records yearly profit of a bank with a view to make prediction of the future prospects.

The purpose of profitability measurement is to see whether a bank has effectively used its resources to achieve its profitability objectives. The profitability objectives refer not to the maximum profit the business can produce but to the minimum it must produce. The minimum profit is the profit at the minimum rate required for the desired type of investment in the bank. However, there mustn't be enough profit to yield the capital in the market rate of return on money, which is already sunk in business, but also to provide additional capital needed to cover the cost of staying in business.

2.1.9 Profitability of Commercial Banks

Banks today are under great pressure to perform to meet the objectives of their stockholders, employees, depositors, and borrowing customers, while somehow keeping government regulators satisfied that the bank's policies, loans, and

investments are sound.” (Rose, 1991) The majority of the needs of the stakeholders are related with the profitability of the banks. For example, in case the bank earns profits, the investors get dividends, employees get bonus, government gets benefits in forms of taxes etc. Thus, the foremost objective of the banks is the profit maximization. As other types of business entity, commercial banks are also inspired by the profit.

The major source of funds of the bank is the public deposit. Commercial banks invest public deposits on those sectors where they can attain the maximum income or higher rate of return as the bank is liable to pay certain rate of interest to the public in their deposit. Hence the investment or granting of loan and advance by them are highly influenced by profit margin. Generally the profit of commercial bank depends upon the interest rate of the bank, volume of loan provided, time period of loan, and nature of investment in different securities. However, the bank at the same time has to ensure that their investment is safe from default.

Aspiration of profit to commercial banks seem reasonable as the bank has to cover all the expenses as interest to the depositors and other administrative costs, they should make payment in the form of dividend to the shareholders who contributed to build up the banks capital and keep aside for the provision and reserves. For this the bank calculates the cost of fund and likely return, if the spread is enough irrespective of risk involved and absorbs its liquidity obligations, it will go ahead for investment.

A successful bank is one who invests most of its funds in different earning asset standing safely from the problem of liquidity i.e. keeping cash reserve to meet day-to-day requirements of the depositors. After all the commercial bank is simply a business corporation organized for the purpose of maximizing the value of the shareholders wealth invested in the firm at an acceptable level of risk. So bank has to make a crucial decision regarding a mixture of liquidity and profitability cause lower the liquidity higher the profitability and higher the liquidity lower the profitability and both are equally important, banks cannot afford to ignore any of them.

2.1.10 Impact of NPA

The most important business implication of the NPAs is that it leads to the credit risk management assuming priority over other aspects of bank's functioning. The bank's whole machinery would thus be pre-occupied with recovery procedures rather than concentrating on expanding business. Higher NPA engage banking staff on NPA recovery measures that includes filing suits to recover loan amount instead of devoting time for planning to mobilization of funds. Thus, NPA affects the performance and profitability of banks. The most notable impact of NPA is change in banker's sentiments, which may hinder credit expansion to productive purpose. Banks may incline towards more risk-free investments to avoid and reduce riskiness, which is not conducive for the growth of economy.

Sethi & Bhatia (2007), clarified on implications of NPA accounts that Banks cannot credit income to their profit and loss account to the debit of loan account unless recovery thereof takes place. Interest or other charges already debited but not recovered have to be provided for and provision on the amount of gross NPAs also to be made. All the loan accounts of the borrower would be treated as NPA, if one account is NPA. Many Authors emphasized the straddling impact of NPA and stressed its impact on loan growth. A higher NPA force banks to invest in risk-free investments, thus directly affect the flow of funds for productive purpose.

Bloem (2001) remarked that issues relating to NPA affect all sectors (in particular, if parallel issues with defaulting trade credit are also considered). The most serious impact, however, is on the financial institutions, which tend to own large portfolios, indirectly; the customers of these financial intermediaries are also implicated; deposit holders, share holders and so forth. Add to this, NPA is not only affecting the banks and its intermediaries, it is having impact on the development of the nation as well. For a bank, NPA means unsettled loan, for which they have to incur financial losses. The cost for recovering NPA is as well considerable. There are banking failures on account of the mounting NPA since it is affecting the profitability and long run survival of the bank.

NPA results in deleterious impact on the return on assets. It happens in the following ways.

- The interest income of banks will fall and it is to be accounted only on receipt basis.
- Banks profitability is affected adversely because of the provision of doubtful debts and consequent write off as bad debts.
- Return on Investment (ROI) is reducing.
- The capital adequacy ratio is disturbed as NPAS are entering into the calculation.
- The cost of capital will go up.
- The assets and liability mismatch will widen.
- The economic value additions (EVA) by banks get upset because EVA is equal to the net operating profit minus cost of capital.
- It limits recycling of the funds.

2.1.10.1 Profitability Impacts

The resources locked up in NPA are borrowed at a cost and have to earn a minimum returns to service this cost.

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

2.1.10.2 Other Impacts

- Lower ROE and ROA
- Lower image and rating of banks
- Disclosure reduces investor's confidences.
- Increases costs/difficulties in raising capital.
- NPA do not generate income.
- They require provisioning.
- Borrowing cost of resources locked in
- Opportunity loss due to non-recycling of funds.
- 100% risk weight on net NPA for CRR.
- Capital gets blocked in NPA.
- Utilizes capital but does not generate income to sustain the capital that is locked.
- Recapitalization by government comes with string.
- Administration and recovery costs of NPA.
- Effects in employee morale and decision.

2.1.11 Preventing NPAs

1. At the pre-disbursement stage, appraisal techniques of bank need to be sharpened. All technical, economic, commercial, organizational and financial aspects of the project need to be assessed realistically. Bankers should satisfy themselves that the project is technically feasible with reference to technical knowhow, scale of production etc. The project should be commercially feasible in that all background linkages by way of availability of raw materials at competitive rates and that all forward linkages by way of assured market are available. It should be ensured assumptions on which the project report is based are realistic. Some projects are born sick because of unrealistic planning, inadequate appraisal and faulty implementation. As the initiative to sanction or reject the project proposal lies with the banker, he can exercise his judgment judiciously. The banker should at the pre-sanction stage not only appraise the project but also the promoter – his character and his capacity. It is said that it is more prudent to sanction a 'B' class project with

an 'A' class entrepreneur than vice-versa. He has to ensure that the borrower complies with all the terms of sanction before disbursement.

2. A major cause for NPA is fixation of unrealistic repayment schedule. Repayment schedule may be fixed taking into account gestation or moratorium period, harvesting season, income generation, surplus available etc. If the repayment schedule is defective both with reference to quantum of installment and period of recovery, assets have a tendency to become NPA.
3. At the post-disbursement stage, bankers should ensure that the advance does not become and NPA by proper follow-up and supervision to ensure both assets creation and asset utilization. Bankers can do either off-site surveillance or on site inspection to detect whether the unit / project is likely to become NPA. Instead of waiting for the mandatory period before classifying an asset as NPA, the banker should look for early warning signals of NPA.
4. The following are the sources from which the banker can detect signals, which need quick remedial action.
 - Scrutiny of accounts and ledger cards – During a scrutiny of these, banker can be on alert if there is persistent regularity in the account, or if there is any default in payment of interest and installment or when there is a downward trend in credit summations and frequent return of cheques or bills,
 - Scrutiny of statements –If the scrutiny of the statements submitted by the borrower reveal a sharp decline in production and sales, rising level of inventories, diversion of funds, the banker should realize that all is not well with the unit.
 - External sources – The banker may know the state of the unit through external sources. Recession in the industry, unsatisfactory market reports, unfavorable changes in government policy and complaints from suppliers of raw material, may indicate that the unit is not working as per schedule.
 - Computerization of loan monitoring – In computerized branches, it is possible to computerize the loan monitoring system so that accounts, which show signs of sickness or weakness can be monitored more closely than other accounts.

5. Personal visit and face-to-face discussion – By inspecting the unit the banker is able to see for him where the problem lays-either production bottlenecks or income leakage or whether it is a case of willful default. During discussion with the borrower, the banker may come to know details relating to breakdown in plant and machinery, labor strike, change in management, death of a key person, reconstitution of the firm, dispute among the partners etc. All these factors have a bearing on the functioning of the unit and on its financial status.
6. ‘Special Mention’ category of accounts –Based on warning signals obtained through both off-site and on-site monitoring, banks may classify accounts with irregularities persisting for more than 30 days under ‘Special Mention’ or ‘Potential NPA category. This will help the bank to initiate proactive remedial measures for early regularization. The measures include timely release of additional funds to borrowers with temporary liquidity problems and restructuring of accounts of sincere and honest borrowers after considering cases on merit.
7. Ongoing classification–Although classification of assets is a yearly exercise, banks would do well to have a system of ongoing classification of assets and quarterly provisioning. This helps in assessing provisioning requirements well in advance. All doubts regarding classification should be settled internally and a system of fixing accountability for failure to comply with the regulatory guidelines should be introduced.
8. Strategy for reducing provision – The extent of provision for doubtful asset is with reference to secured and unsecured portion. Cent percent provision needs to be made for the unsecured portion. If banks can ensure that the loan outstanding is fully secured by realizable security, the quantum of provision to be made would be less. It takes one year for a sub standard asset to slip into doubtful category. Therefore, as soon as an account is classified as substandard, the banker must keep strict vigil over the security during the next one year because in the event of the account being classified as doubtful, the lack of security would be too costly for the bank (Borbora, 2007)

2.1.12 Reducing NPAs

1. **Cash recovery** – Banks, instead of organizing a recovery drive based on over dues, must short list those accounts, the recovery of which would provide impetus to the system in reducing the pressure on profitability by reduced provisioning burden. Vigorous efforts need to be made for recovery of critical amount (overdue interest and installment) that can save an account from NPA classification.
 - In case of a term loan, the banker gets 90 days after the date of default to take appropriate action and to persuade the borrower to pay interest or installment whichever is due.
 - In case of a cash credit account, the banker gets 90 days for ensuring that the irregularity in the account is rectified.
 - In case of direct agricultural loans, the account is classified NPA only after two crop seasons (from sowing to harvesting) from the due date in case of short duration loans and one crop season from the due date in case of long duration loans.
2. **Up gradation of assets** – Once accounts become NPA, then bankers should take steps to upgrade them by recovering the entire over dues. Close follow-up will generally ensure success.
3. **Compromise settlements** – Wherever feasible, in case of chronic NPAs, banks can consider entering into compromise settlements with the borrowers.
4. **Recovery through legal recourse** – Since provision amount progressively increases with increase in time, it is necessary to take steps to recover dues either through persuasion or by legal recourse. A strategy of fixing a dead line for recovery may force the bank to either recover or shed the asset off the balance sheet. Banks may file suits promptly against willful defaulters (Borbora, 2007).

2.2 Review of Legal Provision

Banks and Financial Institutions Regulation Department NRB (Directive No. 2/012) “*Provisions Relating to Classification of Loans/advances and Loan Losses*” having exercised the powers conferred by Section 79 of the Nepal Rastra Bank Act, 2002, the following Directives have been issued with regard to classification of credit/advances and provisions to be made for its possible loss by the institutions obtaining licenses from this Bank to carry out financial transactions.

1. Classification of loans/advances

Entire loans and advances extended by a licensed institution have to be classified as follows based on expiry of the deadline of repayment of the principal and interest of such loans/advances:-

- a. **Pass:** Loans/advances which have not overdue and which are overdue by a period up to three months.
- b. **Sub-standard:** Loans/advances which are overdue by a period from three months to a maximum period of six months.
- c. **Doubtful:** Loans/advances which are overdue by a period from six-months to a maximum period of one year.
- d. **Loss:** Loans/advances which are overdue by a period of more than one year.

The loans which are in pass class and which have been rescheduled/restructured are called as "the performing loan, and the sub-standard, doubtful and loss categories are called non-performing loans.

(Note: Loans/advances also include bills purchased and discounted.)

2. Additional provisions relating to pass loans

The following loans may be included in the pass loan:-

- a. Loans/advances extended against the collateral of gold and silver;
- b. Loans/advances of fixed receipts
- c. Loans/advances of Government of Nepal securities and loans/advances made against the collateral of Nepal Rastra Bank bonds;

Provided that the cases of the loans/advances against the fixed receipts or Government of Nepal securities or Nepal Rastra Bank bond as the additional collateral, such loans and advances shall also have to be classified in accordance with the directive referred to into Point No. 1 above.

The working capital loan having the deadline of up to one year for repayment may be included in the pass loan class. In case the interest to be received from the loans of working capital nature is not regular, such loans have to be classified on the basis of the duration of interest to be due.

3. Additional Provisions Relating to Loss Loans

In case there seems any of the following discrepancies in any of the following loans, whether or not the deadline for repayment of which is expired, such loans and advances has to be categorized as the loss loan:

- a. The market price of the collateral cannot secure the loans;
- b. The debtor is bankrupt or has been declared to be bankrupt;
- c. The debtor disappears or is not identified;
- d. In case non-fund based facilities such as purchased or discounted bills and L/C and guarantee which have been converted into fund-based loan, are not recovered within ninety days from the date of their conversion into loan;
- e. Loan is misused;
- f. Expiry of six months of the date of auction process after the loan could not be recovered or a case is pending at a court under the recovery process;
- g. Providing loan to a debtor who has been enlisted in the black-list of Credit Information Bureau Ltd;
- h. The Project/business is not in a condition to be operated or project or business is not in operation
- i. The credit card loan is not written off within 90 days from the date of expiry of the deadline;
- j. While converting the L/C, guarantee and other possible liabilities into a fund-based loan under the regular process, if the said loan is not recovered within 90 days; and
- k. In case of expiry of the deadline of a trust-receipt loan.

4. Provision to be maintained for loan loss

For the loans and bills purchase classified according to these Directives, the following loan loss provision shall be maintained based on the remaining amount of principal: loan classification Minimum Provision for loan loss.

- a. Pass 1 percent
- b. Sub-standard 25 percent
- c. Doubtful 50 percent
- d. Loss loan/the loan extended to blacklisted 100 percent persons, firms, company or corporate body Provided that in case of the insured loans, it would be required to make provision of only 25 percent of the provision referred to in sub-clause (1)

2.3 Reviews of Journal and Articles

Kunt and Harry (1999) measured on Determinants of Commercial Bank Interest Margins and Profitability: Some International Evidence, says that differences in interest margins and bank profitability reflect a variety of determinants: bank characteristics, macroeconomic conditions, explicit and implicit bank taxation, deposit insurance regulation, overall financial structure, and underlying legal and institutional indicators. A larger ratio of bank assets to gross domestic product and a lower market concentration ratio lead to lower margins and profits, controlling for differences in bank activity, leverage, and the macroeconomic environment. Foreign banks have higher margins and profits than domestic banks in developing countries, while the opposite holds in industrial countries. Also, there is evidence that the corporate tax burden is fully passed onto bank customers, while higher reserve requirements are not, especially in developing countries.

In the report and recommendation of the president of Asian Development Bank to the board of directors on a Proposed loan and technical assistance grant to the Nepal for the corporate and financial governance project published in 2000 A.D. clearly discussed on the financial difficulties of State-Owned Financial Institutions. The report states that all state-owned financial intermediaries face financial difficulties, although the extent of the problems is difficult to assess in the absence of reliable financial information. The poor performance can be attributed to deficiencies in

governance, lack of commercial orientation and managerial skills, as well as inadequate policies. Financial record keeping and auditing are not of international standards. Internal monitoring, evaluation, and supervision are weak, as is the system of appraisal and follow-up on loans. The problems are most acute for the two government-controlled commercial banks, RBB and NBL, which dominate the banking system with about 70 percent of total assets. A recent international audit indicates that both banks suffer serious, critical shortfalls in all key areas, and that both are technically insolvent, with negative worth estimated at up to 7 percent of GDP. Although deposits are presumed to be implicitly guaranteed by the Government, a systemic banking or fiscal crisis could emerge if problems remain unaddressed. World Bank assistance in this area has been requested.

Pradhan (2001) measured on NPA Some suggestion to tackle them expressed that unless the growth of NPA is kept in control, it has the potential to cause systematic crisis. He has mentioned that a dream of globalization led to huge investment which unfortunately could not be utilized properly due to hesitant liberalization policies. Large corporate bodies misused the credits and delayed payments and contributed indirectly for enhancing NPA ratio. He further argues that lack of vision in appraisal of proposal while loan sanctioning, reviewing or enhancing credit limits, absence of risk management policy of financing, concentration of credit in few group of parties and sector, lack of coordination among various financiers, lack of initiatives to take timely action against willful defaulters, indecision on existing out of bad loans for fear of investigating agencies like special policy, CIAA, Public Accounts Committee of the parliament have also contributed in whatsoever measures to the worsening situation of NPA front. He further pointed out that most crucial reason for the increase in the NPA is the shabby and defaulter friendly legal system. Suggesting the remedy of NPA, he adds that administrative system should be strengthened. Legal reforms should be made and Assets Reconstruction Company should be formed. Henderson (2003) CEO of RBB during his interview to New Business Age agrees that the challenging target of RBB turn around in restructuring and collection of NPA.

Pant (2008) mentioned on Prudent Management of NPA's for the past few years we have seen that some banks have not been able to properly manage their level of NPA. As a result, there has been constant pressure in their capital base as well as their

profitability. Any kind of lending involves the following three stages where discretion needs to be exercised.

- Evaluation and assessment of the proposal.
- Timely monitoring and evaluation.
- Proper assessment of exit decision and modality.

Some of the commercial banks exhibit extremes of behaviors at each of the above stages. A rule-based approach precludes reasonable application of mind. Evaluation of project idea and the management is something that most of the banks are least equipped. This has led to the bank acting too liberal on all projects insisting on collaterals without taking into consideration any other competencies of the project and the entrepreneur's capability. Further constant monitoring of major economic indicators that bears direct impact on the business is necessary. Many of these banks have not been able to properly assess the impact of economic indicators on the growth and sustainability of the business. In addition to this, incompetence to properly assess the exit modality as and when necessary resulted in major disasters in terms of lending. These were the internal factors, which resulted in the increase in the level of NPA of these commercial banks. Besides these, some major external factors bear direct impact on the level of NPA of commercial banks. Commercial banks due to the ascendancy of these factors have not been able to pin down the willful defaulters and downsize the level of NPA. These external factors are;

- Legal impediments and time-consuming nature of asset disposal process.
- Manipulation by the debtors using political influence and the weak corporate governance has been a cause for industrial bad debt being so high in case of government owned banks.
- Bankruptcy laws favor borrowers and law courts are not reliable enforcement vehicles.
- Legal mechanisms to dispose bad loans were time consuming and expensive and NPAs remained on the balance sheet.

Murinde & Yaseen (2012) examined on Management of NPA, on management of NPA made it clear that the traditional approaches to bank regulation are not

conducive for management of NPA. These approaches emphasized the view that the existence of capital adequacy regulation plays a crucial role in the long-term financing and solvency position of banks, especially in helping the banks to avoid bankruptcies and their negative externalities on the financial system. In general, capital or net worth serves as a buffer against losses and hence failure. Rather than accommodating measures to combat the NPA issues, the traditional measures tried to protect the interests of deposits through maintaining adequate capital in liquid form. This has affected the availability of funds for productive purpose, since banks were not able to lend it, rather forced to keep as reserves. Strengthening financial systems has been one of the central issues facing emerging markets and developing economies. This is because sound financial systems serve as an important channel for achieving economic growth through the mobilization of financial savings, putting them to productive use and transforming various risks. He emphasized that the essential components of sound NPA management are as follows.

- Quick identification of NPAs,
- Their containment at a minimum level and
- Ensuring minimum impact of NPAs on the financials.

2.4 Review of Previous Dissertations

Ghimire (2007) mentioned on Non- performing Assets of commercial Banks: causes and effects, the main objective of this study was to analyze the cause and effects of nonperforming assets in commercial bank and the other specific objective were to evaluate the impacts of NPA on the profitability of commercial bank and to analyze the level of NPA selected commercial banks.

The researcher found that the non-performing assets and overall profitability of the banks tend to have inverse relationship. Profitability of the bank tends to have inverse relationship. Profitability is affected due to provision requirement. There is some relationship between credit extend and increment on nonperforming assets and it may be significant in case of aggressive credit expansion. Findings showed that Non Banking Assets is credited due to having non-performing Assets.

Paudyal (2009) measured on a study of Non- performing Assets of commercial Banks of Nepal, the main objective of this study was to find out the proportion of

nonperforming loan in the selected commercial banks and the other specific objective were to evaluate the impact of NPA on the profitability of the commercial banks under the study and to analyze the impact of NPA on ROA and ROE of the commercial banks under the study.

The researcher found that, in recent years, NABIL Banks has shown significant decrease in Non Performing Assets, which is the result of banks effective credit management and its efforts in recovering bad debts through establishment of recovery cell. High degree of negative correlation exists between NPA and ROE of NABIL Bank. The bank should reduce their level of NPA to increase ROE and ROA and Profitability. Loan loss provision for Doubtful loan seems to be higher in case of both bank NABIL and SCBNL.

Baral (2010) examined on a study of Non- performing Loans of Nepalese commercial Banks, the main objective of this study was to find out problems of the non-performing loans and its effects in ROA and ROE of the Nepalese commercial banks and to examine whether the Nepalese commercial banks are following the NRB directives regarding loan loss provision for non performing loan or not.

The researcher found that, the return on assets (ROA) and Return on equity (ROE) of the bank somehow depend upon Non Performing Loan. The bank should reduce its NPLs to increase ROA and ROE of the bank. Management inefficiency is one of major cause behind high level of NPA of commercial banks and no banks have been follow NRB directives regarding loan loss provision.

Khadka (2011) measured on Non- performing Assets of Nepalese commercial Banks, the main objective of this study was to analyze the non-performing assets of the commercial Banks. The other specific objectives were to examine the level of NPAs in total assets, total deposits and lending of commercial banks and to examine whether the Nepalese commercial banks are following the NRB directives regarding nonperforming assets or not.

The researcher found that, the level of NPA of Nepal Bangladesh Banks limited seemed greater than all of the other banks under the study. Similarly, Nepal SBI Banks and Bank of Kathmandu stand at second and third position respectively. The

position of NABIL Bank Limited seemed to be quite satisfactory because the bank has been reducing its NPA every year and NPA of Nepal Investment Bank has been reducing it at minimum than that of all the other banks and it is found that none of the banks have been following the directives of NRB regarding the loan loss provision.

2.5 Research Gap

From the review of previous thesis, it has found that increasing Non-performing assets is one of the major challenges faced by Nepalese commercial banks in the present context. Some researchers were done in which matter relating to loan loss provision for Non-performing assets or not. Some researcher was done what is the internal and external factors affect the Non-performing assets to increase from the loan advances. The previous theses covered only up to the fiscal year 2065/66 but this thesis also based on secondary data provided by concerned Nepalese commercial banks up to the fiscal year 2068/069.

The financial and statistical tools used by most of the researchers were ratio analysis, test of hypothesis and regression analysis. This research includes different tools like NPA ratios, standard deviation, correlation, trend analysis and t- test as specific tools. The previous research works were related to only non- performing assets of commercial banks but this research work is try to show the impact of non-performing assets in the profitability of commercial banks.

Hence, this thesis had attempted to fill this research gap by taking the reference of three commercial banks namely NABIL Bank Limited, Himalayan Bank Limited and Bank of Kathmandu Limited. This research will be able to deliver some of the present issue, latest information and data relating to Non-performing assets and profitability of commercial banks.

CHAPTER - III

RESEARCH METHODOLOGY

A systematic study needs to follow a proper methodology to achieve pre determine objective. Research methodology may be defined as “a systematic process that is adopted by the researcher in studying problem with certain objective and view”. In other word, research methodology describes the methods and process applied in the entire aspect of the study focus of data, data gathering instrument and procedure, data tabulating and processing and methods of analysis. It is really a method of critical thinking by defined and redefining the problems, formulating hypothesis or suggested solution and collecting and organizing and evaluating data, making deduction and making conclusions.

Research methodology is a path from which we can solve research dilemma systematically to accomplish the basic objective of the study. It consists of a brief explanation of research design, nature and sources of data, method of data collection and methods of tools used for analyzing data.

3.1 Research Design

A research design is the arrangement of conditions for collection and analysis of data that aim to combine relevance to the research purpose with economy in procedure. Research design is the plan, structure and strategy of investigation conceived to obtain answers to research questions and to objective of this study. To achieve the objective of this study, descriptive and analytical research design has been used.

It is the process, which gives us an appropriate way to reach research goal. It includes definite procedures and techniques, which guide in sufficient way for analyzing and evaluating the study. This study is carried out by using both quantitative and qualitative analysis methods. Mostly, secondary data has been used for analysis, but the discussion and personal interview with the concerned employees of the selected bank is also used for qualitative analysis. Hence, research design of this study is based on descriptive and analytical method.

3.2 Nature & Sources of Data

This study is conducted based on secondary data. The data relating to the NPA and Profitability are obtained from the concerned bank's annual reports, websites, Nepal Rastra Bank, Nepal Stock Exchange and banking and financial statistics report of NRB etc. The supplementary data and information are obtained from the sample banks.

3.3 Population and Sample

The population of the study is the total numbers of commercial banks operating in Nepal that is 32 banks and the samples of three banks are taken from this population on random sampling basis. Because these banks are leading banks in financial sector of Nepal and the profitability of these banks is high, but facing the problem of NPA. The sample size represents almost 9.37% of the total population. The Sample to be selected are as follows.

- NABIL Bank Limited.
- Himalayan Bank Limited.
- Bank of Kathmandu Limited.

3.4 Data Analysis Tools

Various financial and statistical tools to be used in this study. The analysis of data will be done according to pattern of data available. Mainly the analysis will be done by using financial tools and simple statistical analysis.

3.4.1 Financial Tools

Financial analysis is the process of identifying the financial strengths and weaknesses of the organization by properly establishing relationships between the items of the balance sheet and the profit and loss account. Ratio analysis is a powerful tool of financial analysis. A ratio is designed as the indicated quotient of two mathematical expressions and as the relationship between two or more things. In financial analysis, ratio is used as a benchmark for evaluating the financial position and performance of a firm. Several ratios, calculated from the accounting data, can be grouped into various classes according to the financial activity and function to be evaluated.

3.4.1.1 NPA Percentage

This ratio shows the total NPA in the percentage of Gross Loans & Advances. High ratio is increases the banks riskiness and calculated as follows.

$$\text{NPA \%} = \frac{\text{Total NPA}}{\text{Gross Loan \& Advances}} \times 100$$

3.4.1.2 NPA to Total Loan & Advance Ratio (NPA/LA)

Non Performing Assets (NPA) means the amount of loan that the individual commercial banks had provided and the customer has not paid in until the time already matured. The distributed loan is not return timely by clients and becomes overdue then, it is known as Non Performing assets for the banks. Similarly, total loan & advance is the amount of loan given to the different person and institutions for different purpose. This ratio measures the proportion of nonperforming assets on total loan and advance high ratio is bad for the company.

$$\text{NPA to Total loan \& Advance Ratio} = \frac{\text{NPA}}{\text{Total Loan \& Advance}} \times 100$$

3.4.1.3 Return on Total Assets

The return on total assets measures the overall effectiveness of management in generating profit with its available assets. The higher the firm's return on assets the better it is doing in operation and vice versa. It is calculated as follows.

$$\text{Return on Total Assets} = \frac{\text{NPAT}}{\text{Total Assets}} \times 100$$

3.4.2 Statistical Tools

Statistical tools are used to analyze the relationship between two variables and to find how these variables are related. In this study, following statistical tools are used.

3.4.2.1 Summary Measures

The summary measures such as mean \pm standard deviation for summering the data related to NPA & Profitability have been applied. Mena and standard deviation computed as follows.

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

Where,

\bar{X} = Arithmetic Mean

$\sum X$ = Sum of values of all items, and,

N = Number of items

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

Where,

σ = Standard deviation

$\sum(X - \bar{x})^2$ = Sum of squares of the deviations
measured from arithmetic average.

n = Number of items

3.4.2.2 Coefficient of Variation

The coefficient of variation is the ratio of standard deviation to the mean for a given sample used to measure spread. It can also be thought of as the measure of relative risk. The larger the coefficient of variation, the greater the risk relative to the average. Mathematically,

$$CV = \frac{\sigma}{\bar{X}} \times 100$$

Where,

CV = Coefficient of Variation

σ = Standard Deviation

\bar{X} = Arithmetic Mean

3.4.2.3 Coefficient of Correlation

Correlation is a statistical tool design to measure the degree of association between two or more variables. In other word if the changes in one variable affects the changes in other variable, then the variable are said to be co-related when it is used to measure the relationship between two variables, then it is called simple correlation. Among the various methods of finding out coefficient of correlation, Karl Pearson's method is applied in the study because of the simplicity and suitable for the nature of data. The result of coefficient of correlation is always lying between +1 and -1. The formula for the calculation of coefficient of correlation between X and Y is given below.

$$r = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

Where,

r = Correlation coefficient

$\sum x_1$ = $X_1 - \bar{X}_1$

$\sum x_2$ = $X_2 - \bar{X}_2$

3.4.2.4 Least Square Linear Trend Analysis

Trend analysis has been a very useful and commonly applied statistical tool to forecast the future events in quantitative terms. On the basis of tendencies in the dependent variables in the past periods, the future trend is predicted. This analysis takes the historical data as the basis of forecasting. This method of forecasting the future trend is based on the assumptions that the past tendencies of the variable are repeated in the future or the past events affect the future events significantly. The future trend is forecasted by using the following formula.

$$Y = a + bt$$

where,

Y = the dependent variable

a = Y intercept

b = the slope or the rate of change of Y per unit change in t

t = the independent variable

3.4.2.5 Assessment of the Sample Correlation Coefficient

For this study, t-test for significance of an observed and sample correlation coefficient is used.

Set up Hypothesis

Null hypothesis (H_0); $\rho = 0$ i.e. There is no correlation between the considered variables.

Alternative Hypothesis (H_1); $\rho \neq 0$ i.e. There is significant correlation between the considered variables.

Test statistic under H_0 ;

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

Where,

r = Sample correlation between two variables

r^2 = Sample correlation Coefficient

n = No of Pair of observations

Level of significance: Level of significance $\alpha = 5\%$

Critical Value: Tabulated or critical value of t at α % level of significance for $(n - 2)$ degree of freedom obtain from 't' tables.

Decision: If calculated 't' is less than or equal to tabulated value of 't' it falls in the accepted region and the null hypothesis is accepted and if calculated 't' is greater than tabulated 't' null hypothesis is rejected.

2.5 Data Presentation and Analysis

Presentation and the analysis of the available data is the major task of the study. The methods of analysis are applied as simple as possible so that the nonprofessionals and the students can understand it. Every result is tabulated and clear interpretations on it are given simultaneously. Data are presented in tabular, graphical and chart wherever necessary and possible.

CHAPTER - IV

PRESENTATION AND ANALYSIS OF DATA

This chapter will present the data on table & figure. The main objective of the study is to present data and analyze them with the help of various financial and statistical tools. This chapter consists of analysis and presentation of empirical data. The important variables are very sensitive and taken into consideration, so this chapter will present the analysis of components of NPA and profitability.

Nowadays Non-Performing Assets (NPA) have been occupying major space in the total assets and total lending of the bank. Commercial banks have been suffering by high level of NPA, and the efforts of the banks have been diverted to reduce it. Keeping this fact into consideration, a provision has set up by Nepal Rastra Bank in Fiscal year 2057/58 to control the level of NPA of Nepalese commercial banks. According to that provision, every bank has to classify its total loan and advances (including purchased and discounted bills) as pass loan, substandard loan, doubtful loan and bad loan, based on overdue against schedule. Commercial banks are also directed to maintain loan loss provision as stated in section 11 of directives no. 2 of NRB s directives for commercial banks 2059. Main purpose is to find out the level of NPA in Nepalese commercial banks and to take necessary steps to control the level of NPA in future. Here in the study, data of five fiscal year starting from F/Y 2064/65 to 2068/69, have been presented to study and analyze the level of NPA in total assets, total lending and total deposits of the commercial banks. Data are also presented to examine or analyze the efforts to NPA on the profitability of the banks under study.

4.1 Analysis of NPA Percentage

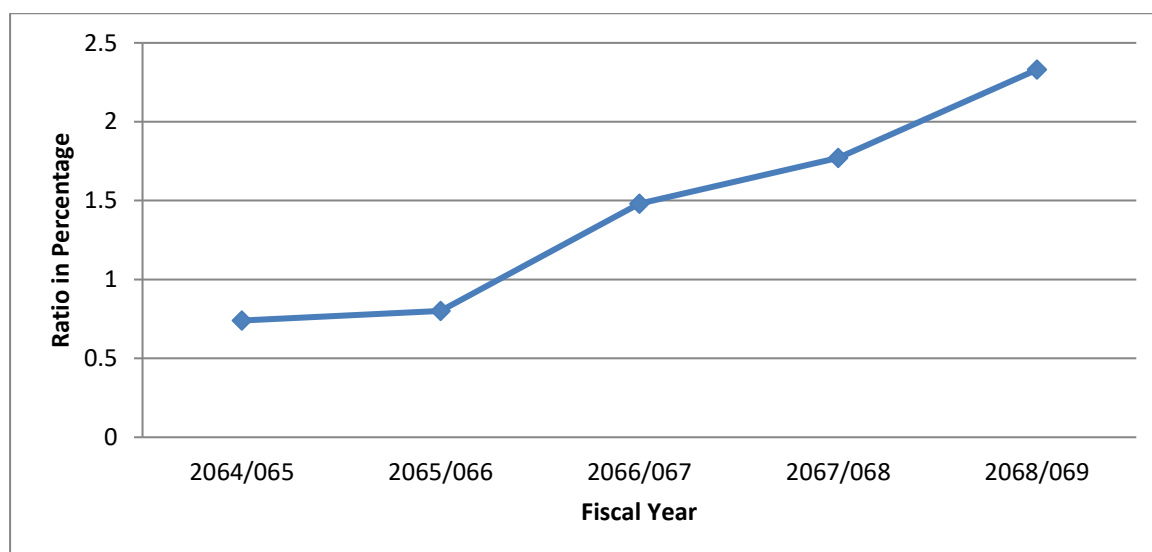
Non Performing Assets means the loan provided by commercial bank and the consumer has not paid it until the time is already matured which has been classified by a bank or financial institution as sub-standard, doubtful or loss loan, in accordance with the directions or guidelines relating to loan classification issued by Nepal Rastra Bank. NPA percentage is the proportion of NPA out of the total loan and advance.

Table: 4.1
NPA Ratio of NABIL Bank

fiscal Year	Performing Assets	Total Loan & Advance	Percentage of Non-Performing Assets
2064/065	161.08	21759.46	0.74
2065/066	224.82	27999.01	0.80
2066/067	487.54	33030.97	1.48
2067/068	689.85	38905.49	1.77
2068/069	1000.05	42867.77	2.33
Average			1.43
SD			0.67
CV			47.12

Source: Annual Reports FY 2064/065 to 2068/069

Figure: 4.1
Trend of NPA Ratio of NABIL Bank



The above table 4.1 and figure 4.1 shows that NPA of NABIL is increasing trend during the study period and total loan & advance is in also increasing trend over the study period. The lowest amounts of NPA and loan & advance are Rs. 161.08 & Rs. 21759.46 millions in the fiscal year 2064/065 and the highest amount is Rs. 1000.05 & 42867.77 millions in the fiscal year 2066/069 respectively.

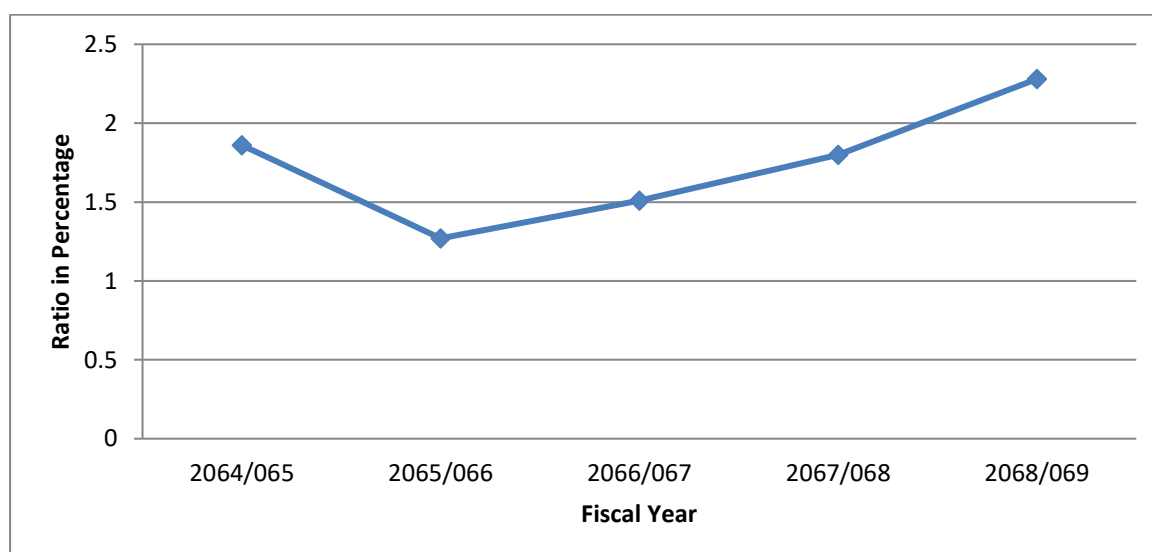
The percentage of NPA ratio is increasing during the study period due to the poor credit policy of the bank. The highest ratio is 2.33% and lowest ratio is 0.74% in the fiscal year 2068/069 and 2064/065 respectively. The average nonperforming assets ratio of the bank is 1.43%, standard deviation is 0.67% and coefficient of variation is 47.12%, which shows the moderate variation in the ratio of respective year.

Table: 4.2
NPA Ratio of BOK

fiscal Year	Performing Assets	Total Loan & Advance	Percentage of Non-Performing Assets
2064/065	236.89	12747.72	1.86
2065/066	190.32	14945.72	1.27
2066/067	257.22	17044.29	1.51
2067/068	322.94	17956.95	1.80
2068/069	440.61	19319.14	2.28
Average			1.74
SD			0.38
CV			21.85

Source: Annual Reports FY 2064/065 to 2068/069

Figure: 4.2
Trend of NPA Ratio of BOK



The above table 4.2 and figure 4.2 shows that NPA of BOK is increasing trend except the fiscal year 2065/066 and total loan & advance is in increasing trend during the study period. The lowest amounts of NPA and loan & advance are Rs. 190.32 & Rs. 12747.2 millions in the fiscal year 2065/066 & 2064/065 respectively and the highest amount is Rs. 440.61 & 19319.14 millions in the fiscal year 2068/069 respectively.

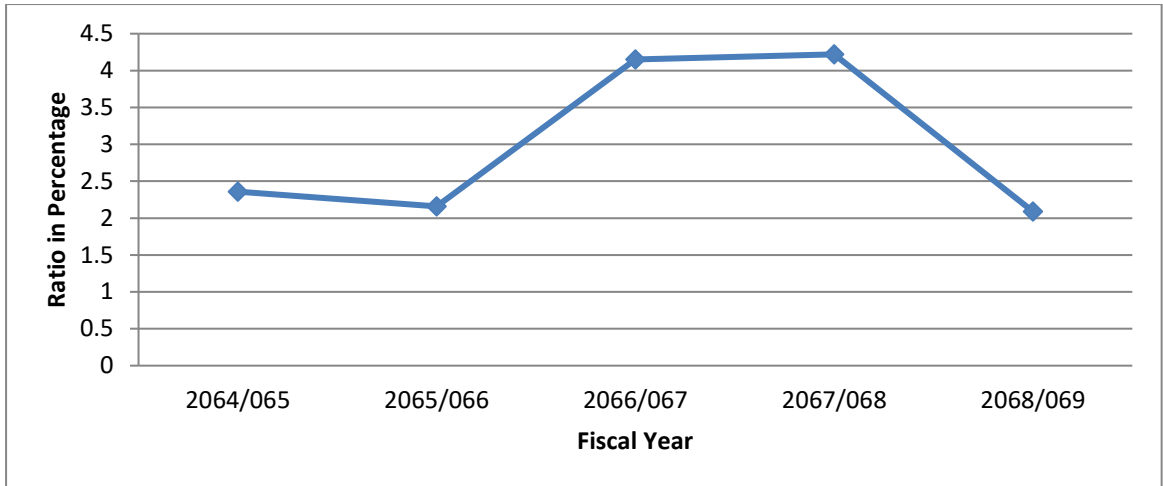
The percentage of NPA ratio is increasing trend except the fiscal year 2065/066 due to the poor credit policy and inefficient credit management of the bank. The highest ratio is 2.28% and lowest ratio is 1.27% in the fiscal year 2068/069 and 2065/066 respectively. The average NPA ratio of the bank is 1.74%, standard deviation is 0.38% and coefficient of variation is 21.85%, which shows the low variation in the ratio of respective year.

Table: 4.3
NPA Ratio of HBL

fiscal Year	Performing Assets	Total Loan & Advance	Percentage of Non-Performing Assets
2064/065	477.23	20179.61	2.36
2065/066	551.31	25519.52	2.16
2066/067	1208.11	29123.75	4.15
2067/068	1391.7	32968.27	4.22
2068/069	751.16	35968.47	2.09
Average			3.00
SD			1.09
CV			36.36

Source: Annual reports FY 2064/065 to 2068/069

Figure: 4.3
Trend of NPA Ratio of HBL



The above table 4.3 and figure 4.3 shows that NPA of HBL is increasing trend except the fiscal year 2068/069 and total loan & advance is in increasing trend during the study period. The lowest amounts of NPA and loan & advance are Rs. 477.23 & Rs. 20179.61 millions in the fiscal year 2064/065 and the highest amount is Rs. 1391.7 & 35968.47 millions in the fiscal year 2067/068 & 2068/069 respectively. The fluctuating trend of NPA may be due to the lack of proper pre-appraisal, follow up, improper selection of borrowers/activities, and delay in completing the project etc.

The percentage of NPA ratio is decreasing in the fiscal year 2065/066 than previous year and increasing in the fiscal year 2066/067 & 2067/068 and finally it is decreasing in the fiscal year 2068/069 than previous year. The highest ratio is 4.22% and lowest ratio is 2.09% in the fiscal year 2067/068 and 2068/069 respectively. The average ratio of the bank is 3.00%, standard deviation is 1.09% and coefficient of variation is 36.36%, which shows the moderate variation in the ratio of respective year.

Table: 4.4
Comparative Statistical Analysis of NPA Ratio of Sample Banks

Factor/Banks	NABIL	BOK	HBL
Average	1.43	1.74	3.00
SD	0.67	0.38	1.09
CV	47.12	21.85	36.36

Source: Table 1, 2 & 3

Comparing to HBL & BOK with the average NPA ratio of 3% & 1.74% the NABIL is better with the average value of 1.43%. The Standard Deviations of NABIL, BOK and

HBL are 0.67%, 0.38% & 1.09% respectively, it means HBL has more variability in compare to NABIL & BOK. The CV of NPA ratio of NABIL, BOK & HBL are 47.12%, 21.85% and 36.36% respectively which indicate that NABIL is more variable than BOK & HBL.

4.2 Analysis of Composition of Non-Performing Assets (NPA)

Composition of NPA means the breakdown of NPA figures into Substandard, Doubtful and Loss. Some banks deliberately hide their NPA showing it in rescheduled/restructured heading. Though these figures do not formally fall in NPA, they are past NPAs and have tendency to fall back in NPA so considering the figures may be helpful to see clear picture of NPA.

Table: 4.5

Composition of NPA & Rescheduled/Restructured Loans of NABIL

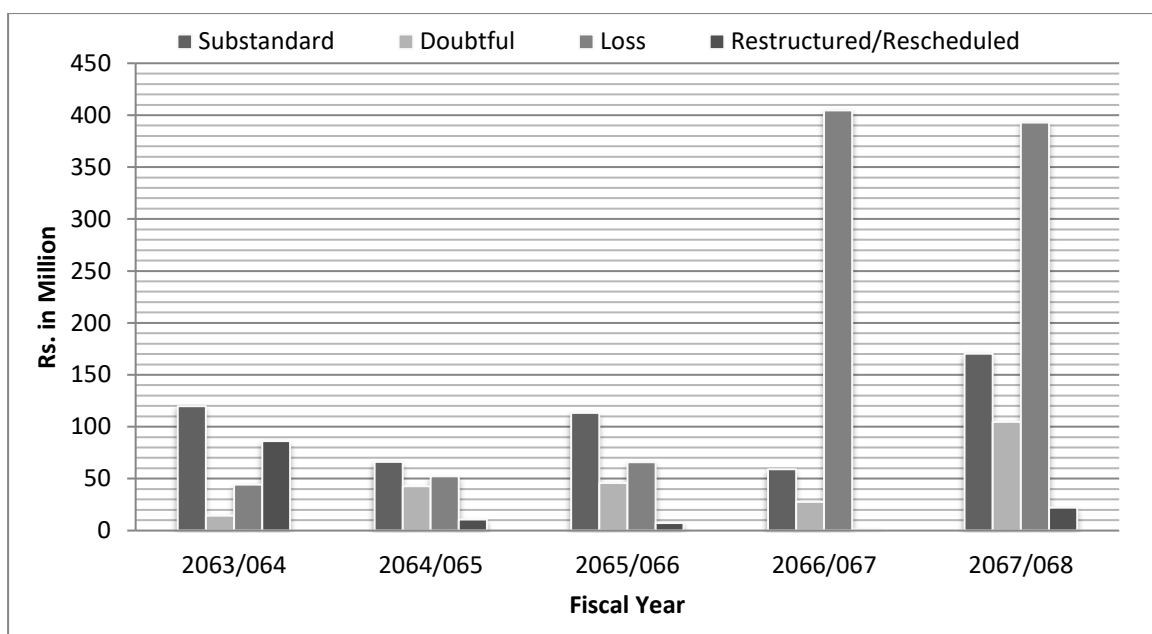
(Rs. In millions)

Fiscal Year	Substandard	Doubtful	Loss	Restructured/Rescheduled
2064/065	66.22	42.58	52.29	10.63
2065/066	113.31	45.76	65.76	7.19
2066/067	59.02	27.73	404.53	1.20
2067/068	170.21	104.66	392.84	22.14
2068/069	162.44	36.78	783.63	17.20

Source: Annual reports FY 2064/065 to 2068/069

Figure: 4.4

Composition of NPA & Rescheduled/Restructured Loans of NABIL



Above table 4.5 shows the composition of NPA of NABIL. NPA consists the three types of loan substandard, doubtful and loss. Substandard loan is fluctuating trend during the study period the highest value of substandard loan is Rs. 170.21 and that of lowest is Rs. 59.02 million in the fiscal year 2067/068 & 2066/067 respectively. Doubtful loan is in fluctuating trend it is increasing in 2065/066, 2066/068 and decreasing in 2064/065 & 2068/069 than previous year the highest value of doubtful loan is Rs. 104.66 and that of lowest is Rs. 27.73 million is the fiscal year 2067/068 & 2066.067 respectively. Similarly, loss loan is increasing trend except the year 2067/068. The highest amount consists by loss loan is Rs. 783.63 & and that of lowest is Rs. 52.29 million in the fiscal year 2068.069 & 2065/066 respectively. The restructured of loan is decreasing up to 2066/067 after that it is increases in 2067/068 and finally decreases in 2068/069. The highest value of restructured loan is Rs. 22.14 & that of lowest is Rs. 1.20 million in the fiscal year 2067/068 & 2066/067 respectively.

Table: 4.6

Composition of NPA & Rescheduled/Restructured Loans of BOK

(Rs. In millions)

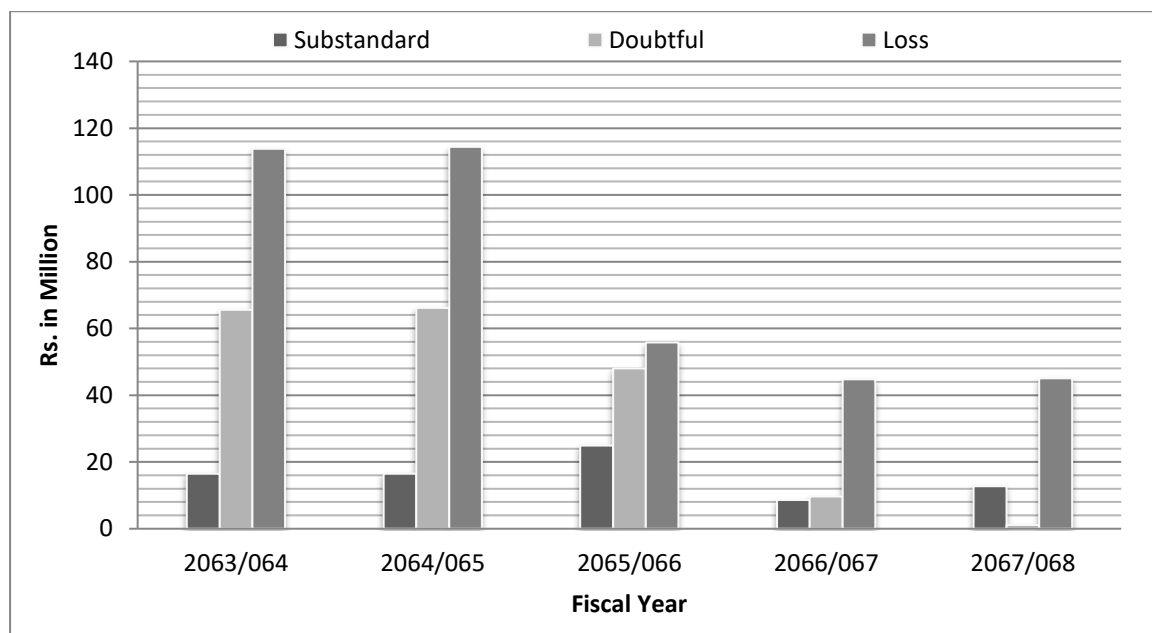
Fiscal Year	Substandard	Doubtful	Loss	Restructured/Rescheduled
2064/065	100.17	19.25	117.47	75.59
2065/066	36.91	21.09	132.32	8.58
2066/067	11.46	70.85	174.91	2.31

2067/068	12.67	6.22	304.05	3.39
2068/069	95.05	106.55	239.03	2.77

Source: Annual reports FY 2064/065 to 2068/069

Figure: 4.5

Composition of NPA & Rescheduled/Restructured Loans of BOK



Above table 4.6 shows the composition of NPA of BOK. NPA consists the three types of loan substandard, doubtful and loss. Substandard loan is decreasing up to 2066/067 after that it is increasing the highest value of substandard loan is Rs. 100.17 and that of lowest is Rs. 11.46 million in the fiscal year 2064/065 & 2066/067 respectively. Doubtful loan is in increasing except the fiscal year 2067/068 the highest value of doubtful loan is Rs. 106.55 and that of lowest is Rs. 6.22 million is the fiscal year 2068/069 & 2067/068 respectively. Similarly, loss loan is increasing trend except the year 2068/069. The highest amount consists by loss loan is Rs. 304.5 & and that of lowest is Rs. 117.47 million in the fiscal year 2067/068 & 2064/065 respectively. The restructured of loan is decreasing up to 2066/067 after that it is increases in 2067/068 and finally decreases in 2068/069. The highest value of restructured loan is Rs. 75.59 & that of lowest is Rs. 2.31 million in the fiscal year 2064/065 & 2066/067 respectively.

Table: 4.7

Composition of NPA & Rescheduled/Restructured Loans of HBL

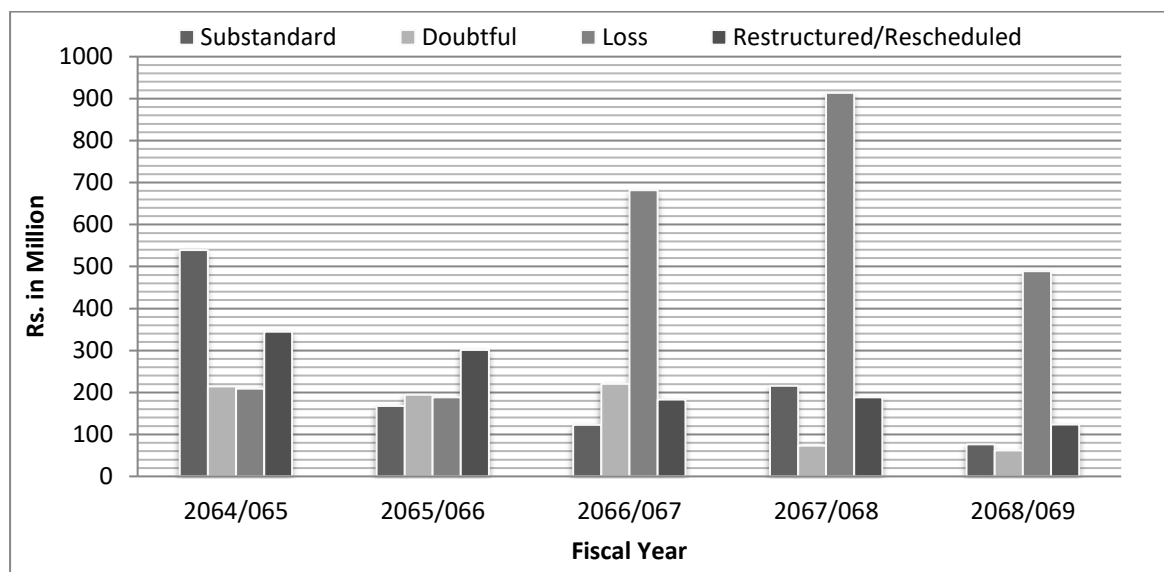
(Rs. In millions)

Fiscal Year	Substandard	Doubtful	Loss	Restructured/Rescheduled
2064/065	539.19	214.48	208.83	344.78
2065/066	167.83	194.69	188.78	301.57
2066/067	122.76	220.52	681.55	183.28
2067/068	216.05	73.45	913.78	188.46
2068/069	76.41	62.07	488.90	123.79

Source: Annual reports FY 2063/064 to 2067/068

Figure: 4.6

Composition of NPA & Rescheduled/Restructured Loans of HBL



Above table 4.7 shows the composition of NPA of HBL. NPA consists the three types of loan substandard, doubtful and loss. Substandard loan is decreasing up to 2066/067 after that it is increasing in the fiscal year 2067/068 and finally decreases in the fiscal year 2068/069 the highest value of substandard loan is Rs. 539.19 and that of lowest is Rs. 76.41 million in the fiscal year 2064/065 & 2068/069 respectively. Doubtful loan is in fluctuating trend during the study period the highest value of doubtful loan is Rs. 220.52 and that of lowest is Rs. 62.07 million is the fiscal year 2066/067 & 2068/069 respectively. Similarly, loss loan is fluctuating during the study period the highest amount consists by loss loan is Rs. 913.78 & that of lowest is Rs. 188.78 million in the fiscal year 2067/068 & 2065/066 respectively. The restructured of loan is decreasing up to 2066/067 after that it is increases in 2067/068 and finally

decreases in 2068/069. The highest value of restructured loan is Rs. 344.78 & that of lowest is Rs. 123.79 million in the fiscal year 2064/065 & 2068/069 respectively.

4.3 Profitability Analysis

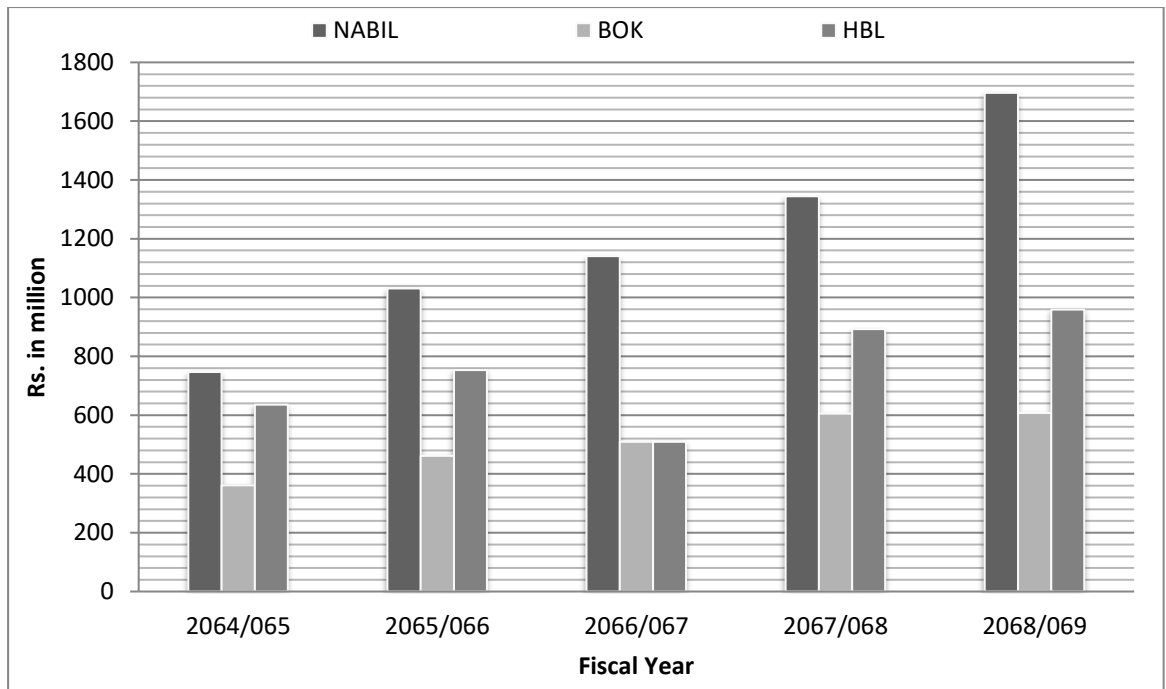
The term ‘profitability’ is composed of two words profit and ability. It reflects the capacity of a business organization to earn profit. It is also referred to as earning capacity or earning power of the concern investment. Thus, the term profitability may be taken as the ability to earn profit. According to Howard and Upton, “The word profitability may be defined as the ability of a given investment to earn return on its use”

Table: 4.8
NPAT of sample Banks

Fiscal Year	NABIL	BOK	HBL
2064/065	746.47	361.49	635.89
2065/066	1031.05	461.73	752.83
2066/067	1140.52	509.26	508.79
2067/068	1344.18	605.15	893.12
2068/069	1696.28	607.66	958.64
Average	1191.70	509.06	749.85
SD	355.14	103.65	183.86
CV	29.80	20.36	24.52

Source: Annual Reports of Sample Banks from 2064/066 to 2068/06

Figure: 4.7
NPAT Position of Sample Banks



The above table & figure shows the NPAT of sample banks with in the five-year study period. The NPAT of NABIL & BOK is in increasing every year but the net profit of HBL is decreasing in the fiscal year 2066/067 than previous year. The profitability of sample banks is going to increase each year due to the increase in business volume, increase in deposit, increase in investment and loan & advance.

Comparing to HBL & BOK with the average value of Rs. 749.85 & Rs. 509.06 million the NABIL is better with the average value of Rs.1191.70 million. The Standard Deviations of NABIL, BOK and HBL are Rs. 355.14, 103.65 & 183.86 million respectively, it means NABIL has more variability in compare to HBL & BOK. The CV of NPAT of NABIL, BOK & HBL are 29.80%, 20.36% and 24.52% respectively which indicate that NABIL is more variable than BOK & HBL.

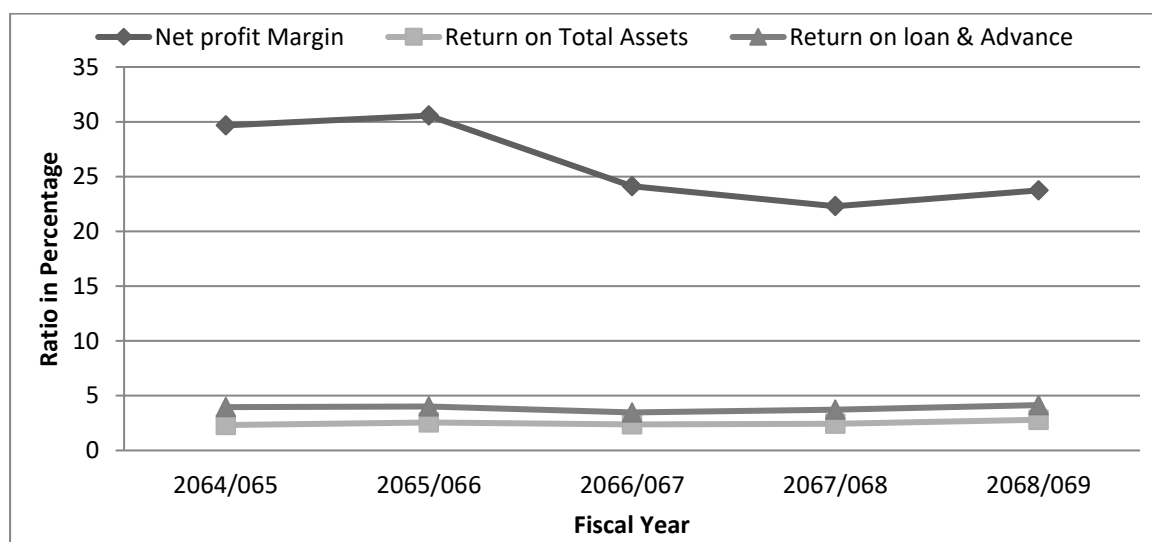
Table: 4.9
Major Profitability Indicator of NABIL

Fiscal Year	Net profit Margin (NPM)	Return on Total Assets (ROTA)	Return on loan & Advance (ROLA)
2064/065	29.68	2.32	3.96
2065/066	30.56	2.55	4.02
2066/067	24.11	2.37	3.47
2067/068	22.29	2.43	3.73
2068/069	23.74	2.80	4.14
Average	26.08	2.49	3.86
SD	3.77	0.19	0.27
CV	14.44	7.67	6.88

Source: Annual Report 2068/069, NABIL Bank Ltd, Schedule 31

Table: 4.8

Trend of Profitability Indicator of NABIL



The above table and figure shows that the net profit margin of NABIL is decreasing except the fiscal year 2065/066 the highest ratio is 30.56% and the lowest ratio is 22.29% in the fiscal year 2065/066 & 2067/068 respectively. The ROTA ratio is increasing than previous year except the fiscal year 2066/067 it is highest in the fiscal year 2068/069 i.e. 2.80% and lowest in the fiscal year 2064/065 i. e. 2.32%. Similarly, the ROLA ratio is also fluctuating trend during the study period the highest ratio and lowest ratio are 4.14% & 3.37% in the fiscal year 2068/069 & 2067/068 respectively.

An average Net Profit Margin is Rs. 23.74%, standard deviation is 3.77% and coefficient of variation is 14.44%, which shows the low variation in the ratios of the respective years. The average return on total assets ratio is 2.49%, standard deviation is 0.19% & coefficient of variation is 7.67%. Similarly, the average return on loan and advance ratio is 3.86%, standard deviation is 0.27 & coefficient of variation is 6.88% it shows the less variation in the ratio of respective year.

Table: 4.10

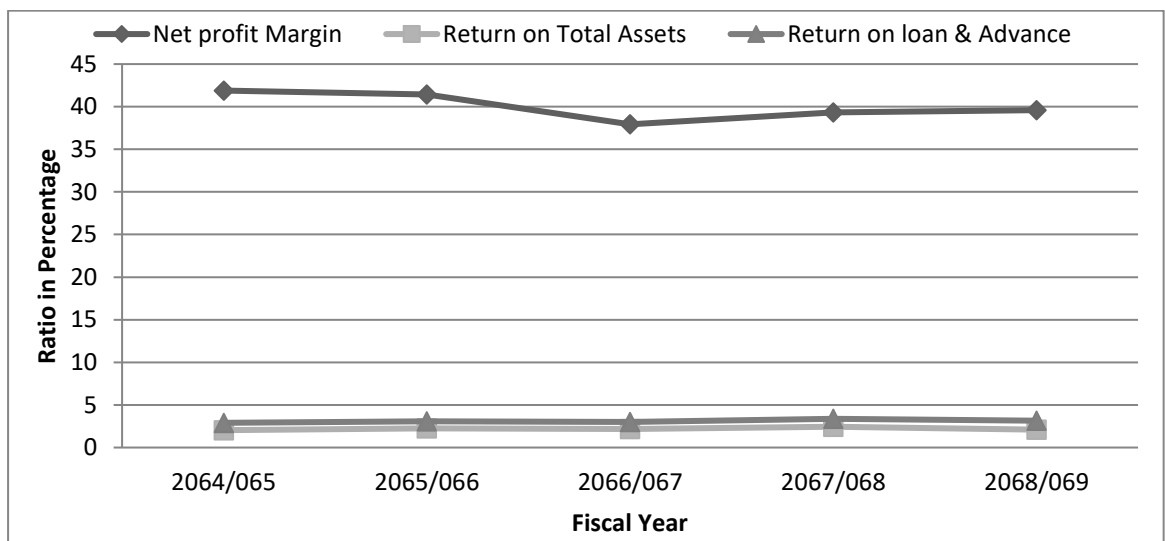
Major Profitability Indicator of BOK

Fiscal Year	Net profit Margin (NPM)	Return on Total Assets (ROTA)	Return on loan & Advance (ROLA)
2064/065	41.89	2.04	2.90
2065/066	41.42	2.25	3.09
2066/067	37.93	2.18	2.99
2067/068	39.34	2.44	3.37
2068/069	39.58	2.10	3.15
Average	40.03	2.20	3.10
SD	1.62	0.15	0.18
CV	4.04	7.04	5.76

Source: Annual Report 2067/068 BOK, Schedule 31

Table: 4.9

Trend of Profitability Indicator of BOK



The above table and figure shows that the net profit margin of BOK is decreasing up to 2066/067 after that it is increasing the highest ratio is 41.89% and the lowest ratio is 37.93% in the fiscal year 2064/065 & 2066/067 respectively. The ROTA ratio is fluctuating trend during the study period it is highest in the fiscal year 2067/068 i.e. 2.44% and lowest in the fiscal year 2064/065 i. e. 2.04%. Similarly, the ROLA ratio is also fluctuating trend during the study period the highest ratio and lowest ratio are 3.37% & 2.90% in the fiscal year 2067/068 & 2064/065 respectively.

An average Net Profit Margin of BOK is 40.03%, standard deviation is 1.62% and coefficient of variation is 4.04%, which shows the low variation in the ratios of the respective years. The average return on total assets ratio is 2.20%, standard deviation is 0.15% & coefficient of variation is 7.04%. Similarly, the average return on loan and advance ratio is 3.10%, standard deviation is 0.18 & coefficient of variation is 5.76% it shows the less variation in the ratio of respective year.

Table: 4.11

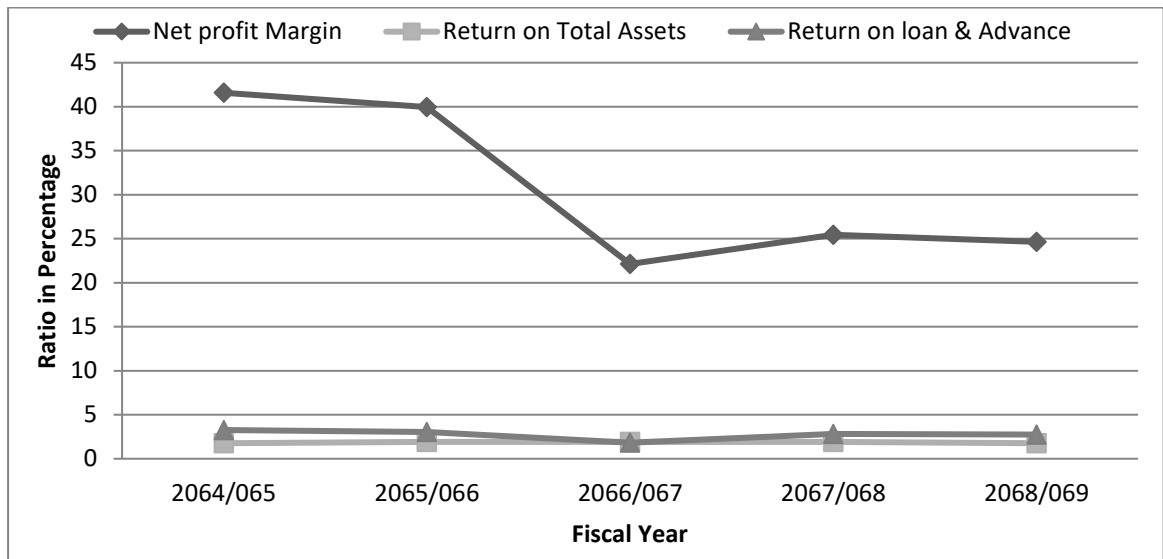
Major Profitability Indicator of HBL

Fiscal Year	Net profit Margin (NPM)	Return on Total Assets (ROTA)	Return on loan & Advance (ROLA)
2064/065	41.58	1.76	3.26
2065/066	39.96	1.91	3.04
2066/067	22.13	1.91	1.82
2067/068	25.46	1.91	2.83
2068/069	24.65	1.76	2.74
Average	30.76	1.85	2.74
SD	9.24	0.08	0.55
CV	30.05	4.44	20.13

Source: Annual Report 2067/068, HBL, Schedule 31

Table: 4.10

Trend of Profitability Indicator of HBL



The above table and figure shows that the net profit margin of HBL is decreasing than previous year during the study period except the fiscal year 2067/068 the highest ratio is 41.58% and the lowest ratio is 22.13% in the fiscal year 2064/065 & 2066/067 respectively. The ROTA ratio is increasing trend during the study period it is highest in the fiscal year 2067/068 i.e. 1.91% and lowest in the fiscal year 2064/065 i. e. 1.76%. Similarly, the ROLA ratio is also fluctuating trend during the study period the highest ratio and lowest ratio are 3.26% & 1.82% in the fiscal year 2064/065 & 2066/067 respectively.

An average Net Profit Margin of HBL is 30.76%, standard deviation is 9.24% and coefficient of variation is 30.05%, which shows the moderate variation in the ratios of the respective years. The average return on total assets ratio is 1.85%, standard deviation is 0.08% & coefficient of variation is 4.44%. Similarly, the average return on loan and advance ratio is 2.74%, standard deviation is 0.55 & coefficient of variation is 20.13% it shows the moderate variation in the ratio of respective year.

Table: 4.12

Comparative Statistical Analysis of NPM of Sample Banks

Factor/Banks	NABIL	BOK	HBL
Average	26.08	40.04	30.76
SD	3.77	1.62	9.24
CV	14.44	4.04	30.05

Source: Table 9, 10 & 11

Comparing to NABIL & HBL with the average net profit margin ratio of 26.08% & 30.76% the HBL is better with the average value of 40.04%. The Standard Deviations of NABIL, BOK and HBL are 3.77%, 1.62% & 9.24% respectively, it means HBL has more variability in compare to NABIL & BOK. The CV of NPM of NABIL, BOK & HBL are 14.44%, 4.04% and 30.05% respectively which indicate that HBL is more variable than NABIL & BOK.

Table: 4.13

Comparative Statistical Analysis of ROTA of Sample Banks

Factor/Banks	NABIL	BOK	HBL
Average	2.49	2.20	1.85
SD	0.19	0.15	0.08
CV	7.67	7.04	4.44

Source: Table 9, 10 & 11

The mean value of return on total assets ratio of NABIL has 2.49%, BOK has 2.20% and HBL has 1.85%. It means NABIL bank has maintained higher ratio than BOK & HBL have. The Standard Deviations of NABIL, BOK and HBL are 0.19%, 0.15% & 0.08% respectively, it means NABIL has more variability in compare to BOK & HBL. The CV of ROTA of NABIL bank is 7.76%, BOK is 7.04% and the CV of HBL is 4.44. Thus, the ROTA ratio of NABIL is more variable than BOK & HBL.

Table: 4.14

Comparative Statistical Analysis of ROLA of Sample Banks

Factor/Banks	NABIL	BOK	HBL
Average	3.86	3.10	2.74
SD	0.27	0.18	0.55
CV	6.88	5.76	20.13

Table: Appendix 9, 10 & 11

The average return on loan and advance ratio of NABIL bank has 3.86%, BOK has 3.10 and HBL has maintained 2.74% mean ratio. Thus, the NABIL bank has managed its profit level to its highest against BOK & HBL. The Standard Deviations of NABIL, BOK and HBL are 0.27%, 0.18% & 0.55% respectively, it means HBL has more variability in compare to NABIL & BOK. The CV of NABIL bank is 6.88, BOK is 5.76% and the CV of HBL is 20.13%. Thus, a return on loan & advance ratio of BOK is more consistent and stable than NABIL & HBL.

4.4 Correlation Analysis

Correlation is a statistical tool design to measure the degree of association between two or more variables. In other word if the changes in one variable affects the changes in other variable, then the variable are said to be co-related when it is used to measure the relationship between two variables, then it is called simple correlation. The coefficient of correlation measures the degree of relationship between two sets of figures. One of the very convenient and useful way of interpreting the value of coefficient of correlation (r) between the two variables is coefficient of determination, which is denoted by r^2 . It explains the total variation in dependent variable is explained by independent variable.

The significant of coefficient of correlation (r) is tested with the help of 't' test. If calculated 't' is less than or equal to tabulated value of 't' it falls in the accepted region and null hypothesis is accepted or 'r' is not significant of correlation in the population and if calculated 't' is greater than tabulated 't' null hypothesis is rejected or 'r' is significant of correlation in the population.

4.4.1 Relationship between Non-Performing Assets (NPA) & Net Profit after Tax (NPAT)

Coefficient of correlation measures the degree of relationship between two variables, NPA & NPAT. NPA is independent variable (X_1) and NPAT is dependent variable (X_2). The purpose of computing is to find out the relationship between NPA and NPAT is going to same direction or opposite direction

Table 4.15
Correlation between NPA and NPAT of NABIL

Correlation (r)	Coefficient of Determination (r^2)	Calculated 't' Value	Tabulated 't' Value	Remarks
0.9734	0.9474	10.33	2.201	Significant

Source: Appendix-I

Above table describes the relationship between NPA and NPAT during the study period. The coefficient of correlation (r) between NPA and NPAT of NABIL is 0.9734. This figure shows the positive association between NPA and NPAT. It means NPA and NPAT both move towards same direction. The coefficient of determination (r^2) is 0.9474 it shows that 94.74% of the variation in the dependent variable (i.e. NPAT) has been explained by the independent variable (i.e. NPA). The calculated 't' value of NABIL is more than the tabulated value i.e. $10.337 > 2.201$, therefore it reveals that the relationship between NPA and NPAT is significant.

Table 4.16
Correlation between NPA and NPAT of BOK

Correlation (r)	Coefficient of Determination (r^2)	Calculated 't' Value	Tabulated 't' Value	Remarks
0.7604	0.5782	2.03	2.201	insignificant

Source: Appendix-II

The coefficient of correlation (r) between NPA and NPAT of BOK is 0.7604. This figure shows the positive association between NPA and NPAT. It means NPA and NPAT both move towards same direction. The coefficient of determination (r^2) is 0.5782 it shows that 57.82% of the variation in the dependent variable (i.e. NPAT) has been explained by the independent variable (i.e. NPA). The calculated 't' value of

BOK is less than the tabulated value i.e. $2.03 < 2.201$, therefore it reveals that the relationship between NPA and NPAT is insignificant.

Table 4.17
Correlation between NPA and NPAT of HBL

Correlation (r)	Coefficient of Determination (r²)	Calculated 't' Value	Tabulated 't' Value	Remarks
0.0411	0.0017	1.32	2.201	insignificant

Source: Appendix-III

The coefficient of correlation (r) between NPA and NPAT of HBL is 0.0411. This figure shows the low degree of positive association between NPA and NPAT. It means NPA and NPAT both move towards same direction. The coefficient of determination (r²) is 0.0017, it shows that only 0.017% of the variation in the dependent variable (i.e. NPAT) has been explained by the independent variable (i.e. NPA). The calculated 't' value of HBL is less than the tabulated value i.e. $1.32 < 2.201$, therefore it reveals that the relationship between NPA and NPAT is insignificant.

4.5 Trend Analysis

Trend analysis has been a very useful and commonly applied statistical tool to forecast the future events in quantitative terms. On the basis of tendencies in the dependent variables in the past periods, the future trend is predicted. This analysis takes the historical data as the basis of forecasting. This method of forecasting the future trend is based on the assumptions that the past tendencies of the variable are repeated in the future or the past events affect the future events significantly. The future trend is forecasted by using the following formula.

$$Y = a + bx$$

where,

Y = the dependent variable

a = Y intercept

b = the slope or the rate of change of Y per unit change in x

x = the independent variable

Under this topic, trend analysis of loan loss provisions is studied during the period. The objective of this topic is to forecast the NPA for the next two years. The projections are based on the following assumptions.

- The bank will run in the present style.
- Nepal Rastra Bank and the Government of Nepal will not make any amendments in the guidelines for the operation of commercial banks.
- Other all the things also remain constant.

The following table describes the actual and trend values of NPA of sampled banks for seven years.

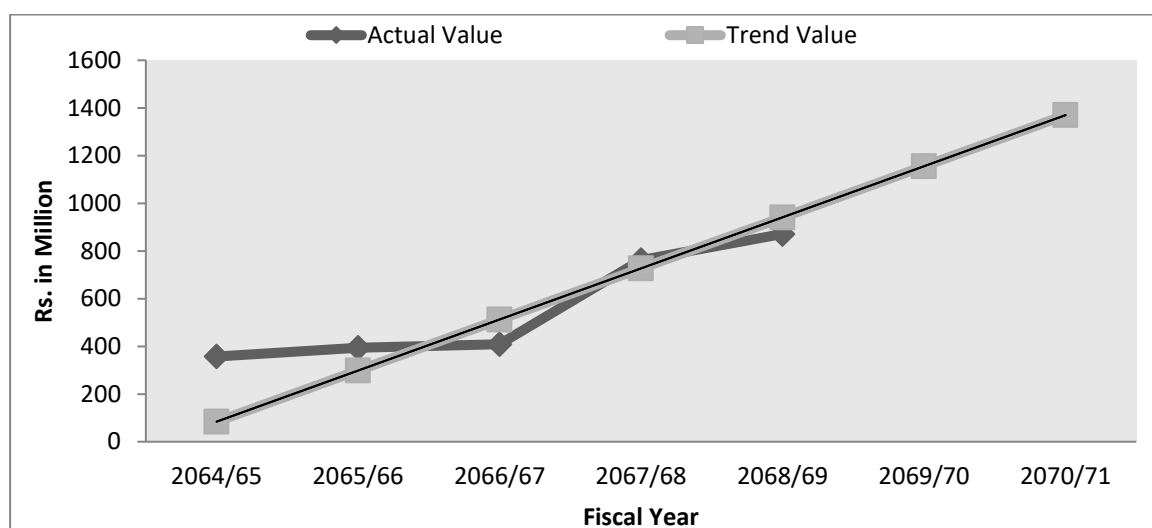
Table: 4.18
Actual value & Trend Value of NPA of NABIL

		Rs. In million
Fiscal Year	Actual Value	Trend Value
2064/65	357.25	84.09
2065/66	394.41	298.38
2066/67	409.07	512.67
2067/68	762.09	726.92
2068/69	871.39	941.25
2069/70	-	1155.54
2070/71	-	1369.83
Mean (a)	512.67	
Intercept (b)	214.29	
Trend Line (Y)	$Y = 512.67 + 214.29X$	

Source: Appendix V

Figure: 4.11

Actual & Trend Line of NPA of NABIL



The above table 4.18 and figure 4.11 show the increasing trend of NPA of NABIL. Since, the calculated value of 'b' is positive; it is found that the bank's NPA is increasing with time. It shows that the NPA increasing by Rs. 214.29 million every year. Based on this calculation, it can be forecasted that the bank's NPA will be Rs. 1155.54 million in the year 2069/70 and it will be Rs. 1369.86 million in the year 2070/71.

Table: 4.19

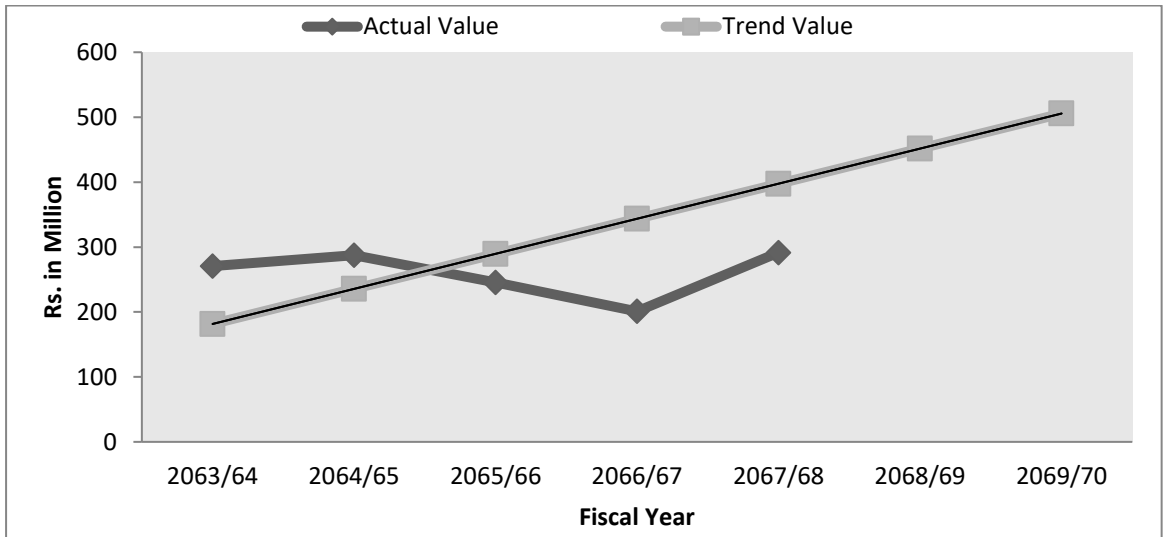
Actual value & Trend Value of NPA of BOK

Rs. In million		
Fiscal Year	Actual Value	Trend Value
2064/065	270.86	181.58
2065/066	287.51	235.59
2066/067	245.39	289.6
2067/068	200.95	343.61
2068/069	291.63	397.62
2069/070	-	451.63
2070/071	-	505.64
Mean (a)	875.9	
Intercept (b)	138.82	
Trend Line (Y)	$Y = 289.60 + 54.01X$	

Source: Appendix V

Figure: 4.12

Actual & Trend Line of NPA of BOK



The above table 4.19 and figure 4.12 show the increasing trend of NPA of BOK. Since, the calculated value of ‘b’ is positive; it is found that the bank’s NPA is increasing with time. It shows that the NPA increasing by Rs. 138.82 million every year. Based on this calculation, it can be forecasted that the bank’s NPA will be Rs. 451.63 million in the year 2069/70 and it will be Rs. 505.64 million in the year 2070/071.

Table: 4.20

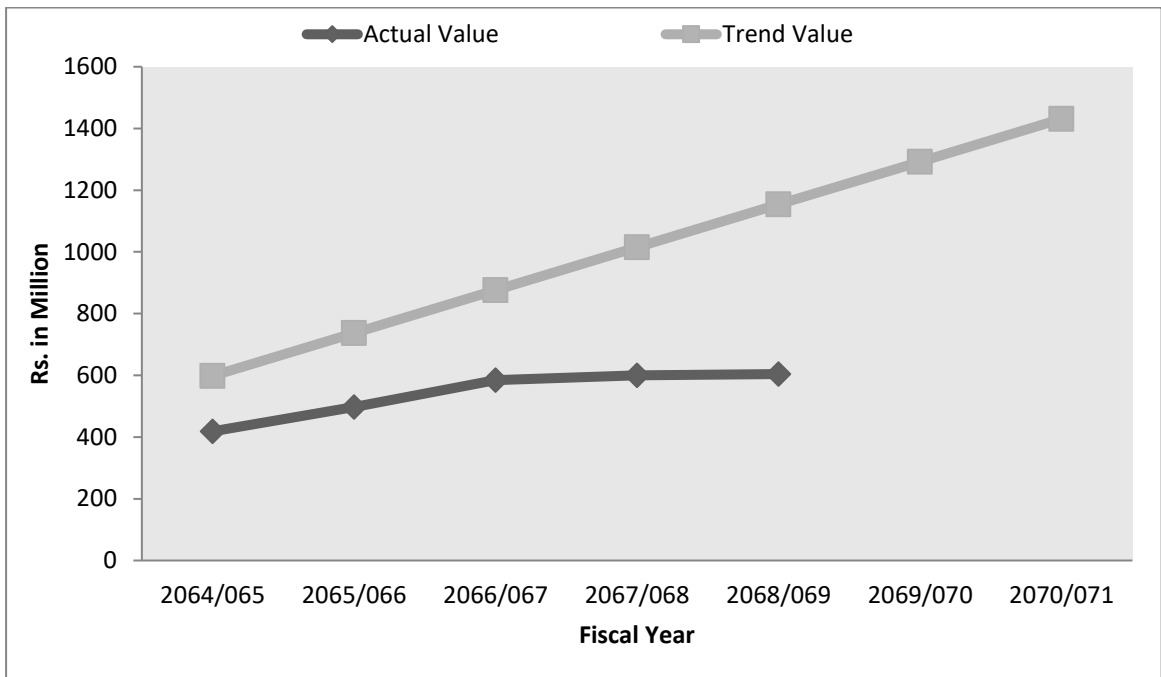
Actual value & Trend Value of NPA of HBL

Fiscal Year	Actual Value	Trend Value
2064/065	418.6	598.26
2065/066	497.35	737.08
2066/067	584.88	875.9
2067/068	600.04	1014.72
2068/069	604.15	1153.54
2069/070	-	1292.36
2070/071	-	1431.18
Mean (a)	875.9	
Intercept (b)	138.82	
Trend Line (Y)	$Y = 875.9 + 138.82X$	

Source: Appendix V

Figure: 4.13

Actual & Trend Line of NPA of HBL



Above table and figure show the increasing trend of NPA of HBL. Since, the calculated value of ‘b’ is positive; it is found that the bank’s NPA is increasing with time. It shows that the NPA increasing by Rs. 138.82 million every year. Based on this calculation, it can be forecast that the bank’s NPA will be Rs. 1292.36 million in the year 2069/70 and it will be Rs. 1431.18 million in the year 2070/071 respectively.

4.6 Major Finding

- The percentage of NPA ratio of NABIL is increasing during the study period. The average nonperforming assets ratio of the bank is 1.43%, standard deviation is 0.67% and coefficient of variation is 47.12%.
- The percentage of NPA ratio of BOK is increasing trend except the fiscal year 2065/066. The average NPA ratio of the bank is 1.74%, standard deviation is 0.38% and coefficient of variation is 21.85%.
- The percentage of NPA ratio of HBL is fluctuating during the study period. average NPA ratio of HBL is 3.00%, standard deviation is 1.09% and coefficient of variation is 36.36%.

- Comparing to HBL & BOK with the average value of Rs. 749.85 & Rs. 509.06 million the NABIL is better with the average value of Rs.1191.70 million.
- NABIL has more variability in compare to HBL & BOK. The CV of NPAT of NABIL, BOK & HBL are 29.80%, 20.36% and 24.52% respectively which indicate that NABIL is more variable than BOK & HBL.
- Comparing to NABIL & HBL with the average net profit margin ratio of 26.08% & 30.76% the HBL is better with the average value of 40.04%.
- The CV of NPM of NABIL, BOK & HBL are 14.44%, 4.04% and 30.05% respectively which indicate that HBL is more variable than NABIL & BOK.
- The mean value of return on total assets ratio of NABIL has 2.49%, BOK has 2.20% and HBL has 1.85%. It means NABIL bank has maintained higher ratio than BOK & HBL have.
- The Standard Deviations of NABIL, BOK and HBL are 0.19%, 0.15% & 0.08% respectively, it means NABIL has more variability in compare to BOK & HBL.
- The average return on loan and advance ratio of NABIL bank has 3.86%, BOK has 3.10 and HBL has maintained 2.74% mean ratio. Thus, the NABIL bank has managed its profit level to its highest against BOK & HBL.
- The CV of NABIL bank is 6.88, BOK is 5.76% and the CV of HBL is 20.13%. Thus, a return on loan & advance ratio of BOK is more consistent and stable than NABIL & HBL.
- The coefficient of correlation (r) between NPA and NPAT of NABIL is 0.9734. This figure shows the positive association between NPA and NPAT. The calculated 't' value of NABIL is more than the tabulated value i.e. $10.337 > 2.201$, therefore it reveals that the relationship between NPA and NPAT is significant.
- The coefficient of correlation (r) between NPA and NPAT of BOK is 0.7604. The calculated 't' value of BOK is less than the tabulated value i.e. $2.03 < 2.201$, therefore it reveals that the relationship between NPA and NPAT is insignificant.
- The coefficient of correlation (r) between NPA and NPAT of HBL is 0.0411. The calculated 't' value of HBL is less than the tabulated value i.e. $1.32 <$

2.201, therefore it reveals that the relationship between NPA and NPAT is insignificant.

- The NPA of NABIL is increasing by Rs. 214.29 million every year, it can be forecasted that the bank's NPA will be Rs. 1155.54 million in the year 2069/70 and it will be Rs. 1369.86 million in the year 2070/071.
- The NPA of BOK is increasing by Rs. 138.82 million every year, it can be forecasted that the bank's NPA will be Rs. 451.63 million in the year 2069/70 and it will be Rs. 505.64 million in the year 2070/071.
- The NPA of HBL is increasing by Rs. 138.82 million every year, it can be forecast that the bank's NPA will be Rs. 1292.36 million in the year 2069/70 and it will be Rs. 1431.18 million in the year 2070/071 respectively.

CHAPTER - V

SUMMARY CONCLUSION AND RECOMMENDATION

This Chapter includes the conclusion derived from the analysis of the study. Summary of the study has been mentioned the First section. The Second section has been designed for the finding and conclusion drawn from the study. The recommendation to eliminate the weakness, drawbacks of the common stock investment observed on the basis of finding have been labeled in the Third section.

5.1 Summary

A commercial bank means the bank, which deals with exchanging currency, accepting deposits, giving loans doing other various commercial transactions. Therefore, the major function of commercial bank is to accept deposits and provide loans. There is not so long history of commercial bank in Nepal. Nepal Bank Limited established in 1994 B. S. was the first commercial bank of the Nepal. Now there are thirty-two commercial banks all over the country and they have been expanding their services by establishing branches in every corner of the country.

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

aging schedule. If the dues in the form of principal and the interest are not paid, by borrower within a maturity period, that amount of principal and interest is called non performing loan or assets. It means NPA could wreak branch profitability both through loss of interest income and need to write off the principal loan amount. Performing assets have multiple benefits to the company as well as to the society while non-performing assets erode even existing capital of the bank. Escalating level of NPAs has been becoming great problem in banking business in the world. In this context, Nepal cannot be run off from this situation. The level of NPA in Nepalese banking system is very alarming. It is well known fact that the bank and financial institution in Nepal have been facing the problem of swelling nonperforming assets and the issue of becoming more and more unmanageable day by day. It is well known from different financial reports, newspapers and news that the total NPA in Nepalese banking system is about 16 Billion while it is very worse in case of two largest commercial banks RBB and NBL. (Nepal Rastra Bank, Banking and financial statistics, 2010: 06)

Therefore, this study is concerned to find out the level of NPA and its effects on the profitability of the Nepalese commercial bank. This study especially focuses on three commercial banks of Nepal, viz. HBL, NABIL, & BOK only, out of the 32 commercial banks operating in the banking industry of Nepal. To fulfill the research objectives this study is divided into five main chapters. The first chapter includes general background of the study, statements of the problems, objectives of the study, significances of the study, limitations of the study and organization of the study. The second chapter deals with review of the different literature in regards to the theoretical analysis and review of books, articles and thesis related to the study field. The third chapter includes research design, population and sample, sources of the information used, period of the study, financial indicators and the statistical tools used. Similarly, the fourth chapter includes presentation of the financial variables and statistical tools used while interpreting the data so collected from the different sources and major findings of the study is also include in this chapter and the last chapter briefly represents the summery of the whole study and the conclusions and the recommendations for the effective and smooth running of the concerned commercial banks under the study.

5.2 Conclusion

NPA affect all sectors (in particular, if parallel issues with defaulting trade credit is also considered). The most serious impact, however, is on the financial institutions, which tend to own large portfolios, indirectly; the customers of these financial intermediaries are also implicated; deposit holders, share holders and so forth. Add to this, NPA is not only affecting the banks and its intermediaries, it is having impact on the development of the nation as well. For a bank, NPA means unsettled loan, for which they have to incur financial losses. The cost for recovering NPA is as well considerable. There are banking failures because of the mounting NPA since it is affecting the profitability and long run survival of the bank.

Non-performing assets of bank affect the profitability of Nepalese commercial bank. The performance of the NABIL is found to be satisfactory as the average level of NPA is gradually low and net profit is gradually increasing over the years covered by this study period, followed by BOK and HBL respectively. Theoretically, when the level of non-performing assets is increasing then the profit of the bank is decreasing and vice versa. However, the NPA and profitability of the sample bans have positive correlation it means when NPA increasing the profit of banks also increasing. In case of profitability, the performance of the all sample banks is found to be satisfactory as the level of NPAT is gradually increasing but in case of NPA is increasing in current days. Every commercial bank is trying to exactly meet the NRB's directives regarding nonperforming assets.

5.3 Recommendations

High level of nonperforming assets not only decreases the profitability of the banks but also entire financial as well as operational health of the country. If the NPA were not control immediately, it would be proved as a curse for the banks in near future. Therefore, following are some of the recommendations, which will help to reduce the level of NPA of the Nepalese commercial banks.

- Corporate structure of bank plays key role in the effective loan management. Being loan a risky asset, efforts should be made to have proper control in every steps of loan management. The banks should establish separate department for credit appraisal, documentation, disbursement, inspection and

recovery of loan, which have possibility of finding mistakes of one department by the others, so that the effectiveness can be achieved.

- Loan must be given if the banker is satisfied that the borrower can repay money from the cash flow generated from operating activities. However, the banks want to ensure that their loan is repaid even in case of failure of business. To prevent banks from such happenings, the bank take collateral is disposed for the recovery of loan. Therefore the bank should take proper valuation of collateral so that the bank at least will be able to recover its principal and interest amount in case of failure of the borrower to repay the loan.
- Lack of proper financial analysis of the borrower by the banks, is one of the major cause behind increasing NPA of Nepalese commercial banks. Therefore, proper financial analysis should be performed before giving loan to the borrower.
- Those banks, which have high level of NPA, should take necessary action towards recovering their bad loan as possible. In case of doubtful to repay the loan by the borrower, the bank should dispose of the collateral taken from them and recover the principal and the interest amount thereof.
- Diversification of the loan should be managed by the individual banks. In the context of Nepal, it is provided to the borrower so often go to the bank not in the new sector. Default by older borrower can be found, which should be avoided.
- Control mechanism of the bank should be managed properly. Black listed customers should not be given the new loan, as it would lead to the same situation to the bank.
- Political influences in the loan disbursement should be avoided as it may lead to worse condition to the bank as it may increase the non-performing loan of the bank.

- Every commercial bank should maintain loan loss provision as per NRBs directives regarding nonperforming assets.
- Further studies can be conducted by using others organization as sample, by using other sophisticated tools and techniques, by using other aspects as well.

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Appendix I
Calculation for Mean Value & Correlation Between
NPA & NPAT of NABIL

Fiscal Year	LA (X ₁)	NPA (X ₂)	x ₁ =X ₁ - \bar{X}_1	x ₂ =X ₂ - \bar{X}_2	x ₁ · x ₂	x ₁ ²	x ₂ ²
2064/065	746.47	161.08	-445.23	-351.59	156537.53	198229.75	123614.12
2065/066	1031.05	224.82	-160.65	-287.85	46242.78	25808.42	82856.47
2066/067	1140.52	487.54	-51.18	-25.13	1286.05	2619.39	631.42
2067/068	1344.18	689.85	152.48	177.18	27016.71	23250.15	31393.46
2068/069	1696.28	1000.05	504.58	487.38	245923.21	254600.98	237541.21
N ₁ = 5 N ₂ = 5	$\sum X_1$ =5958.50	$\sum X_2$ 2563.34	-	-	$\sum x_1 \cdot x_2$ 477006.28	$\sum x_1^2$ 504508.69	$\sum x_2^2$ 476036.68

For NPA,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{5958.50}{5} = 1191.70$$

For NPAT,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{2563.34}{5} = 2563.34$$

Correlation between NPA & NPAT,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{477006.28}{\sqrt{504508.69 \times 476036.68}} = 0.9734$$

$$r^2 = 0.9734^2 = 0.9474 \text{ or, } 94.74\%$$

T-value,

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

$$= \frac{0.9734}{\sqrt{1-0.9734^2}} \times \sqrt{5-2} = 10.3374$$

Appendix II
Calculation for Mean Value & Correlation Between
NPA & NPAT of BOK

Fiscal Year	LA (X ₁)	NPA (X ₂)	x ₁ =X ₁ - \bar{X}_1	x ₂ =X ₂ - \bar{X}_2	x ₁ · x ₂	x ₁ ²	x ₂ ²
2064/065	361.49	236.89	-147.57	-52.71	7777.72	21776.31	2777.92
2065/066	461.73	190.32	-47.33	-99.28	4698.53	2239.94	9855.72
2066/067	509.26	257.22	0.20	-32.38	-6.54	0.04	1048.21
2067/068	605.15	322.94	96.09	33.34	3204.09	9233.67	1111.82
2068/069	607.66	440.61	98.60	151.01	14890.28	9722.35	22805.23
N ₁ = 5 N ₂ = 5	$\sum X_1$ =2545.29	$\sum X_2$ 1447.98	-	-	$\sum x_1 \cdot x_2$ 30564.09	$\sum x_1^2$ 42972.39	$\sum x_2^2$ 37598.90

For NPA,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{2545.29}{5} = 509.6$$

For NPAT,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{1447.98}{5} = 289.60$$

Correlation between NPA & NPAT,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{30564.09}{\sqrt{42972.32 \times 37598.90}} = 0.7604$$

$$r^2 = 0.7604^2 = 0.5782 \text{ or, } 57.82\%$$

T-value,

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

$$= \frac{0.7604}{\sqrt{1-0.7604^2}} \times \sqrt{5-2} = 2.03$$

Appendix II
Calculation for Mean Value & Correlation Between
NPA & NPAT of HBL

Fiscal Year	LA (X ₁)	NPA (X ₂)	x ₁ =X ₁ - \bar{X}_1	x ₂ =X ₂ - \bar{X}_2	x ₁ · x ₂	x ₁ ²	x ₂ ²
2064/065	635.89	477.23	-113.96	-398.67	45434.26	12987.79	158939.36
2065/066	752.83	551.31	2.98	-324.59	-965.99	8.86	105359.97
2066/067	508.79	1208.11	-241.06	332.21	-80083.39	58111.85	110362.16
2067/068	893.12	1391.7	143.27	515.80	73896.32	20525.15	266047.58
2068/069	958.64	751.16	208.79	-124.74	-26044.38	43591.59	15560.57
N ₁ = 5 N ₂ = 5	$\sum X_1$ =3749.27	$\sum X_2$ 4379.51	-	-	$\sum x_1 \cdot x_2$ 12236.81	$\sum x_1^2$ 135225.24	$\sum x_2^2$ 656269.63

For NPA,

$$\text{Mean } (\bar{X}) = \frac{\sum X_1}{N_1} = \frac{3749.27}{5} = 749.85$$

For NPAT,

$$\text{Mean } (\bar{X}) = \frac{\sum X_2}{N_2} = \frac{4379.51}{5} = 875.90$$

Correlation between NPA & NPAT,

$$(r_{12}) = \frac{\sum x_1 x_2}{\sqrt{\sum x_1^2 \sum x_2^2}}$$

$$= \frac{12236.81}{\sqrt{135225.24 \times 656269.63}} = 0.0411$$

$$r^2 = 0.0411^2 = 0.0017 \text{ or, } 0.017\%$$

T-value,

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

$$= \frac{0.7604}{\sqrt{1-0.0411^2}} \times \sqrt{5-2} = 1.32$$

Appendix IV

Calculation of Trend Value of LLP of NABIL, BOK & HBL

Fiscal Year	t	X=t-3	x ²	NABIL		BOK		HBL	
				Y ₁	XY ₁	Y ₂	XY ₂	Y ₃	XY ₃
2064/065	1	-2	4	161.08	-322.16	236.89	-473.78	477.23	-954.46
2065/066	2	-1	1	224.82	-224.82	190.32	-190.32	551.31	-551.31
2066/067	3	0	0	487.54	0	257.22	0	1208.11	0
2067/068	4	1	1	689.85	689.85	322.94	322.94	1391.7	1391.7
2068/069	5	2	4	1000.05	2000.1	440.61	881.22	751.16	1502.32
Total	N=5	10	10	2563.34	2142.97	1447.98	540.06	4379.51	1388.25

Calculation of intercept of 'y' when t = 0

$$a_1 = \frac{Y_1}{N_1} = \frac{2563.34}{5} = 512.67$$

$$a_2 = \frac{Y_2}{N_2} = \frac{1447.98}{5} = 289.60$$

$$a_3 = \frac{Y_3}{N_3} = \frac{4379.51}{5} = 875.9$$

Calculation of Slope of Trend Line

$$b_1 = \frac{XY_1}{x^2} = \frac{2142.97}{10} = 214.29$$

$$b_2 = \frac{XY_2}{x^2} = \frac{540.06}{10} = 54.01$$

$$b_3 = \frac{XY_3}{N_3} = \frac{1388.25}{10} = 138.82$$

Therefore the trend line equations are:

$$Y_1 = a_1 + b_1 x$$

$$Y_2 = a_2 + b_2 x$$

$$Y_3 = a_3 + b_3$$

Appendix V
Forecasted Value

Rs. In million

Fiscal Year	X	NABIL		Actual Value	BOK
		Actual Value	Trend Value		
2064/065	-2	357.25	$512.67 + 214.29 \times (-2) = 84.09$	270.86	$289.60 + 54.01 \times (-2) = 181.58$
2065/066	-1	394.41	$512.67 + 214.29 \times (-1) = 298.38$	287.51	$289.60 + 54.01 \times (-1) = 235.59$
2066/067	0	409.07	$512.67 + 214.29 \times 0 = 512.67$	245.39	$289.60 + 54.01 \times 0 = 289.6$
2067/068	1	762.09	$512.67 + 214.29 \times 1 = 726.92$	200.95	$289.60 + 54.01 \times 1 = 343.61$
2068/069	2	871.39	$512.67 + 214.29 \times 2 = 941.25$	291.63	$289.60 + 54.01 \times 2 = 397.62$
2069/070	3	-	$512.67 + 214.29 \times 3 = 1155.54$	-	$289.60 + 54.01 \times 3 = 451.63$
2070/071	4	-	$512.67 + 214.29 \times 4 = 1369.83$	-	$289.60 + 54.01 \times 4 = 505.64$
Mean (a)		512.67		875.9	
Intercept (b)		214.29		138.82	
Y = a + bX		Y = 512.67 + 214.29X		Y = 289.60 + 54.01X	

Appendix VI
Forecasted Value

Rs. In million

Fiscal Year	X	HBL	
		Actual Value	Trend Value
2064/065	-2	418.6	$875.9 + 138.82 \times (-2) = 598.26$
2065/066	-1	497.35	$875.9 + 138.82 \times (-1) = 737.08$
2066/067	0	584.88	$875.9 + 138.82 \times 0 = 875.9$
2067/068	1	600.04	$875.9 + 138.82 \times 1 = 1014.72$
2068/069	2	604.15	$875.9 + 138.82 \times 2 = 1153.54$
2069/070	3	-	$875.9 + 138.82 \times 3 = 1292.36$
2070/071	4	-	$875.9 + 138.82 \times 4 = 1431.18$
Mean (a)		875.9	
Intercept (b)		138.82	
Y = a + bX		Y = 875.9 + 138.82X	