CHAPTER – I

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The Commercial banks are the backbone for the economic mobility of the country. Commercial banks are like financial department stores that provide a number of services to the people. The services provided by commercial banks are accepting deposit, providing financial securities, granting loan, money exchanges, financial consultancy, fund transfer, etc. Commercial banks work as intermediaries between the two sectors of the economy: the surplus sector and the deficit sector.

The commercial bank collects money in small amount from the surplus sector and gives to the deficit sector. While collecting money from surplus sector bank gives the guarantee of repayment of money as well as certain amount as interest. On the other hand while giving money to the deficit sector as a loan, it will charge certain percent as interest which is greater than the paid to saver.

The mushrooming growth of the banks has led them towards cutthroat competition. On the other hand economic condition of the country is not growing. The less opportunity for getting avenues for loan flotation has compelled the banks to finance without being choosy. Quality of the loans and advances could not be maintained to the desirable level if there is no choice whether to finance or not once the loan is given it is supposed that the repayment of interest or principal shall have to be served without any hindrance. The resources could not be considered utilized properly when the loans provided to the clients not be regular and if there is cumulative overdue outstanding. There may be various reasons behind the loans that turn irregular from regular one. The main reason may economic situation of the country which has global and far reaching impact. The smooth operation of the commercial banks is possible only when the economy of the country functions well. Satisfactory level of return on investment is the prerequisite for the financial sector to be groomed. The other contributing factors that turn the good loan into bad are attitude of the borrower, types and quality of security taken and legal hurdles created by the borrower when the recovery action is started. Once the distributed loan is not returned timely by clients and becomes overdue than it is known as NPA for the banks. Reduction of NPA has always been a significant problem for every commercial banks and proper attention for the management of the NPA under top priority. Due to various hurdles on way of management of NPA, commercial banks are now losing their profitability and struggling for their existence.

Operation of the banking institution has been regulated by the international norms, relevant acts, regulation, Memorandum of Association (MOA), Article of Association (AOA), institution given at the time of getting intent and Directives issued by Central Bank from time to time. Likewise the expectation of the stakeholder should also be taken into consideration. All banking institutions are supposed to confine their activities within that periphery.

1.1.1 PROFILE OF COMMERCIAL BANKS

In this study, five commercial banks are selected. Brief profile of those banks is presented below.

Nabil Bank Ltd.

Nabil bank is a first foreign joint venture bank and it is one of the most successful banks in Nepal. It was established in 1984 in joint venture with United Arab Emirates Bank. Its current share capital is Rs.491, 654,400 and Total Assets Rs 27,253,393,008. It has 28 branches currently in operation throughout Nepal.

Himalayan Bank Ltd.

Himalayan Bank Ltd was established in 1983 in joint venture with Habib Bank Ltd of Pakistan. It is very aggressive in lending. Among private banks operating in Nepal, Himalayan bank Limited has the highest loan portfolio. Its current share capital is Rs.810,810,000 and Total Assets is Rs. 33,519,141,111. It is currently supplying its services through 19 branches.

Bank of Kathmandu

Bank of Kathmandu Limited (BOK) has today become a landmark in the Nepalese banking sector by being among the few commercial banks which is entirely managed by Nepalese professionals and owned by the general public. BOK started its operation in

March 1995 with the objective to stimulate the Nepalese economy and take it to newer heights. It's current share capital is Rs. 603,141,300 and Total Assets Rs.14,570,098,804. BoK is currently operating 16 branches.

Standard Chartered Bank Ltd

Standard Chartered Bank Nepal Limited has been in operation in Nepal since 1987 when it was initially registered as a joint-venture operation. Today the Bank is an integral part of Standard Chartered Group who has 75% ownership in the company with 25% shares owned by the Nepalese public. It's current share capital is Rs.41,32,54,800 and total assets Rs. 28,59,66,89,451.It is currently providing service through 15 branches.

Nepal Industrial and Commercial Bank Ltd.

Nepal Industrial & Commercial Bank Limited (NIC Bank) commenced its operation on the year 1998/07/28 A.D. The bank was promoted by some of the prominent business houses of the country. NIC is the first to be ISO 1901:2000 certified for quality management. It's current share capital is Rs. 660,000,000 and total assets Rs.11,678,834,055. It is currently providing service through 10 branches.

1.2 STATEMENT OF THE PROBLEM

The core banking business is mobilizing the deposit and utilizing it for lending to industry-lending business generally encourage because it has 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 borrow to fulfill its contractual obligation during the course of truncations. It is well-known fact 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 non-performing assets in the banking system are about 3.5 billions, while it is ever worse in case of two largest case commercial banks Rastriya Banijya bank and Nepal Bank Ltd. Nepal banking sector has been becoming a victim of huge non-performing assets. Government owned major banks are in critical condition and they are unable to utilize savings with floating the loans the banks accept that interest and principal will be served on time. But all loans are not recovered as the expectation of the bank. When the interest and principal cannot be recovered in time the loan is considered as classified loan or NPA. NPA burden is the major problem of the commercial banks because of the poor loan categorization, diversification, risk analysis; the overall performance of the government bank is poor. So the asset of NPA is increasing. The present study will attempt to make assessment of the problem and recommended solutions regarding NPA with following questions:

1. What are the major internal and external factors that influence the NPA growth?
2. What is the overall impact of NPA on the profitability of the bank?
3. What percentage of total assets and total assets and total lending is occupying by the non-performing assets of Nepalese commercial banking?
4. How do non-performing assets affect the return on shareholder equity and Return on Total assets

1.3 OBJECTIVES OF THE STUDY

The main objectives of the study is to examine the level of non-performing assets in total assets, total deposits and total lending of Nepalese Commercial Banks. The specific objectives are :

- To evaluate the impact of NPA on the profitability of the bank.
- To analyze the internal and external factors those influence the proper management of NPA
- To examine the level of NPA and other indicators that exists within public sector banks.
- To assess the relationship of Non-performing assets with total assets, total deposits and total lending of Nepalese commercial banks
- To observe the extent of implementation of NRB directives regarding loan loss provision for Non-performing Assets by public sector.
- To evaluate the effects of Non-performing assets on Return on Assets and Return on Equity of concerned Banks

1.4 LIMITATION OF THE STUDY

The study has been completed within many types of limitations and boundaries. The main limitation of this study is that, the study is based on secondary data. The published books, unpublished reports, public documents, articles of different authors, annual reports of the selected banks were the secondary sources. Errors are inevitable but the full effort has been exercised to minimize them. The study does not include the function of Performing Assets. The study is based on data and information provided by commercial banks and published in the report of NRB. The study period is 2003-2007 and is based on data and information of only five fiscal years. Beside, the study has been done for only five samples of commercial banks; therefore, the result of this study cannot be generalized.

1.5 ORGANIZATION OF THE STUDY

The study has been divided into five chapters, namely:

Chapter I: Introduction

The first chapter includes various aspects of this study like background of the study, statement of the problem, objectives of the study, limitation of the study and organization of the study.

Chapter II: Review of Literature

The second chapter deals with the review of available literature. This chapter includes both conceptual and theoretical review. It includes reviews of books, reports, banking journals, commercial banks at glance, review of related empirical studies and concluding remarks.

Chapter III: Research Methodology

This chapter comprises the research methodology used in the study, which includes research design, source of data, methods of data analysis, populations and samples along with different statistical and financial tool used in this study. It provides guidelines and gives a road map to analyze the collected data.

Chapter IV: Data Presentation and Analysis

This chapter covers analysis, presentation and interpretation of the acquired data, which was collected through the designed methodology. It includes analysis of loan and advances, NPA and Net profit; loan and advances, net profit & NPA of sample banks; correlation analysis; comparative performance of sample banks, hypothesis test and major finding. Data are presented in tabular, graphic or in an equation form to achieve study objective.

Fifth V: Summary, Conclusion and Recommendations

The final chapter includes summary, conclusion of the study and recommendation for academicians as well as for practitioners

CHAPTER-II

REVIEW OF LITERATURE

2.1 Conceptual Foundation

The number of commercial banks and other financial institutions has increased significantly over the years. As of December 2010, the financial system in Nepal is composed of 29 commercial banks, 58 development banks, and 79 finance companies. The banking sector includes 23 commercial banks with three public banks, including ADBL, which was recently converted in to commercial bank. These commercial banks holds about 84 percent asset share of the total assets of Rs. 506,129 million in the financial sector. Though Nepalese financial sector is reasonably diversified with institutional arrangement of varied nature of financial institutions including commercial banks to development banks to cooperatives, still commercial banks are the major players in this system and they occupy substantial share in the structure of the financial sector. But still the importance of lending in banks has remained virtually unchanged. Lending still is one of the essential and important functions where the whole banking business is rested upon. Many researchers have published their articles, papers regarding the lending policies and practices of commercial banks and other financial institutions. Review of such related books, articles and papers along with various dissertations done by senior scholars have been studied and analyzed, and results and conclusions generated from the analysis have been summarized in this chapter.

2.1.1 FINANCIAL INSTITUTIONS

Financial institutions are the organizations that issue financial claims against themselves and use the proceeds to purchase to purchase primarily the financial assets of others. They are financial intermediaries through which savers can indirectly provide funds to borrowers. They actively participate in the money market and the capital market, as both suppliers and demanders of funds. They act as the bridge between the savers and users of the fund. In other words, they collect the scattered deposits and give loans or invest to maximize their wealth.

Financial institutions refer to any institution established with the objective of providing loan to agriculture, cooperative, industry or any other specific economic sector, or of accepting deposit from the general public. The term also refers to any other institution called financial institution by NG by publishing a notice in Nepal Gazette. However, the term does not signify commercial bank, (NRB Act, 2012).

a) Banking Financial Institutions

Banks are the financial intermediaries with which people are most familiar. A primary job of banks is to take in deposits from people who want to save and use these deposits to make loans to people who want to borrow. Banks pay depositors interest on their deposits and charge borrowers slightly higher interest on their loans. The difference between these rates of interest covers the banks cost and returns some profit to the owners of the banks.

Besides being financial intermediaries, banks play a second important role in the economy; they facilitate purchases of goods and services by allowing people to write checks against their deposits. In other words, banks help create a special asset that people can use as a medium of exchange. A medium of exchange is a n item that people can easily use to engage in transactions. A bank’s role in providing a medium of exchange distinguishes it from any other financial institutions. Stocks and bonds, like bank deposits, are a possible store of value for the wealth that people have accumulated in past saving, but access to this wealth is not as easy, cheap, and immediate as just writing a check (Mankiw, 2000:557);

This institution offers the public both deposit and credit services, as well as a growing list of newer and more innovative services, such as investment advice, security underwriting, and financial planning (Rose, 2001: 82). They devote most of their resources to meeting the financial needs of business firms. However, banks have significantly expanded their offerings of financial services to consumers and units of government. It includes Commercial banks, Development Banks, etc.

b) Non Banking Financial Institutions

These institutions began primarily to reach small savers and help these customers achieve home ownership and other personal goals. Non Banking Financial institutions include Finance companies, Cooperatives, Credit Unions, Saving banks, money market funds, Postal Saving, Insurance companies, Welfare Fund, etc.

2.2 COMMERCIAL BANK

The word ‘bank’ generally refers to the commercial bank. For, most of the banks in the world are found established with a view to finance and help in developing trade, industry and commerce. In fact, Bank of England which was established as a commercial bank, is the oldest bank in the banking history of the world. Later on, the British Government converted the same bank into central bank. In Nepal too, Nepal Bank limited, which is a commercial bank, is the first modern system of bank established in the year 1994 B.S.

2.2.1 Origin and History of Central Bank

Nepal Rastra Bank is the Central bank of Nepal. It was established in the country on 26th April 1956 with its central office in kathmandu for (a) regulating the issue of paper currency, (b) securing country-wide circulation of Nepalese currency, and (c) achieving stability in exchange rate on the currency side; and on the banking side, (a) to mobilize capital for economic development, (b) to stimulate trade and industry and (c) to develop banking system

Besides Nepal Bank, we have, at present, a number of other commercial banks namely, Rastriya Banijya Bank-owned, managed and controlled by the government, Himalayan Bank, Nepal Arab Bank ltd. Nepal Investment Bank, Standard chartered bank etc. Except Nepal bank and Rastriya Banijya Bank, all the other bank mentioned above are established in the join collaboration with the foreign banks. All these bank perform almost the same type of functions:

Functions of Commercial banks

- Receiving deposits :- Receiving deposits from public is the first function of any commercial bank. It receives deposits from depositors in different types of accounts namely i) Current account, ii) Saving account and iii) Fixed account
- Granting loans :- Granting of loans is the next equally important function of a commercial bank. It grants loan to the general public and the trading and industrial organization against the securities of gold, silver, shares and debentures of a company, government bonds, land and buildings, etc. It can also grant loans to the clients against their deposit in the fixed deposit account. At

present, the commercial banks like Nepal Bank and Rastriya Banijya Bank provide loans to the public against the securities of agricultural crops too like wheat, rice, tea etc.

- Discounting bills and promissory notes:- Commercial banks discount the bills of exchanges and promissory notes of businessmen so as to facilitate them in their business. They, however, charge some interest (called banker's discount) for providing such services.
- Dealing in foreign exchanges:- With the consent of Nepal Rastra Bank, Commercial banks of Nepal can deal in foreign exchange transactions. The commercial banks buy and sell currencies of different countries at the rate as stated by Nepal Rastra Bank.
- Underwriting functions:- This includes the function of selling shares and debentures of a joint stock company to the general public. Commercial banks underwrite shares and debentures of newly established companies.
- Agency services: - Agency services are the other significant functions of a commercial bank. It provides agency services to its customer in various ways, such as by remitting cash from one place to another in and outside the country by means of draft, T.T, etc., by opening L.C on behalf of its customers and by sending invoices and collecting money from different dealers on behalf of its customers. The bank charges some commission for such services rendered.

2.2.2 FINANCIAL PERFORMANCE AND FINANCIAL INSTITUTION

Financial soundness is a situation where depositor's funds are safe in a stable banking system. The financial soundness of a financial institution may be strong or unsatisfactory varying from bank to another. External factors such as deregulation; lack of information among customers; homogeneity of the bank business, connection among banks do cause bank failure. Some useful measures of financial performance which is the alternative term as financial soundness are coined into what is referred to as CAMEL. The acronym 'CAMEL' refers to the five components of a bank's condition that are stressed: Capital adequacy, Assets quality, Management, Earnings, and Liquidity. A sixth component, a bank's Sensitivity to market risk, was added in 1997; hence the acronym was changed to CAMELS.(Note: that the bulk of the academic literature is based on pre-1997 data and is thus based on CAMEL ratings). Ratings are assigned for each component in addition to the overall rating of a bank's financial condition. The ratings are assigned on a scale from 1 to 5 (Bhandari, 2003: 127).

Capital Adequacy

This ultimately determines how well financial institutions can cope with shocks to their balance sheets. The bank monitors the adequacy of its capital using ratios established by The Bank for International Settlements. Capital adequacy in commercial banks is measured in relation to the relative risk weights assigned to the different category of assets held both on and off the balance items.

Assets Quality

The solvency of financial institutions typically is at risk when their assets become impaired, so it is important to monitor indicators of the quality of their assets in terms of overexposure to specific risks trends in non-performing loans, and the health and profitability of bank borrowers especially the corporate sector. Credit risk is inherent in lending, which is the major banking business. It arises when a borrower defaults on the loan repayment agreement. A financial institution whose borrowers default on their loan repayments may face cash flow problems, which eventually affect its liquidity position. Ultimately, this negatively impacts on the profitability and capital through extra specific provisions for bad debts.

Earnings

This continued viability of a bank depends on its ability to earn an adequate return on its assets and capital. Good earnings performance enables a bank to fund its expansion, remain competitive in the market and replenish and /or increase its capital. A number of authors have urged that, banks that must survive need: Higher Return on Assets (ROA)., better return on net worth/ Equity (ROE), sound capital base i.e. the Capital Adequacy Ratio(CAR), adaptation pf corporate governance ensuring transparency to stakeholders that is equity holders, regulators and the public.

Liquidity

Initially solvent financial institutions may be driven toward closure by poor management of short-term liquidity. Indicators should cover funding sources and capture large maturity mismatches. An unmatched position potentially enhances profitability but also increases the risk of losses. The “M” represents Management, given that this paper is hinged on financial performance, the management component in not considered in the measure.

Generally, literature on corporate governance comprises attributes such as financial transparency, disclosure and trust among others and it is revealed that financial transparency and disclosure enhance trust between the stakeholders and organizations like commercial banks. Capital Adequacy, Earnings and Liquidity are the key dimensions of measuring financial performance in Commercial Banks. In summary, this literature forms an underpinning for the establishment of the association between corporate governance and financial performance.

2.2.3 Relationship of Transparency, Disclosure & Financial Performance

Transparency, disclosure and trust, which constitute the integral of corporate governance, can provide pressure for improved financial performance. Financial performance, present and perspective is a benchmark for investment. The Mckinsey Quarterly surveys suggest that institutional investors will pay as much 28% more for the shares of well governed companies in emerging markets. According to the corporate governance survey 2002, carried out by the Kuala Lumpur stock exchange and accounting firm Price Water House Coopers (PWC), the majority of investors in Malaysia are prepared to pay 20% premium for companies for companies with superior corporate governance practices. (Rogers, 2003: 7)

2.2.4 NRB DIRECTIVES TO COMMERCIAL BANKS RELATING TO CREDIT

2.2.4.1 Directive Credit

Banks have to extend a certain percentage of loan and advances in the deprived and priority. Currently, deprived sector lending should be at least 0.25% to 3 % depending on the banks and priority sector lending at least 12% inclusive of deprived sector lending to their total credit portfolio. However, monetary policy of FY 2059/2060 BS announced by NRB has pledge to phase out priority sector credit program in next five years but to continue with deprived sector credit program.

In case of shortfall in any sector, the concerned bank has to pay penalty at the highest lending rate of the bank during the shortfall period which is monitored quarterly.

2.2.4.2 Single Borrower Limit

Single borrower's limit refers to the maximum credit limits that can be extended to a customer, firm, company or companies of the same group. Such limit is currently as under:

a. Funded: 25% of Core Capital.
b. Non-funded: 50% Core Capital.

The bank, where, a single borrower enjoys credit limit more than above should bring it within the limit. If above limit is not observed by a bank, 30% additional risk weight is assigned to such credit portfolio warranting additional capital.

Interest Spread

Weighted interest spread between lending rate and deposit rate should not exceed 5%. Such rate is calculated as under:

$$\text{WALR} = \frac{\textit{InterestIncomeForSixMonths}}{\begin{array}{l}\textit{AverageInterestEarningAssets} \\ \text{Outstanding on the month - end of 6 months}\end{array}}$$

$$\text{WADR} = \frac{\textit{InterestExpensesForSixMonths}}{\begin{array}{l}\textit{AverageDepositOuts}\tan \textit{ding} \\ \textit{ontheMonthendof}\ 6\textit{months}\end{array}}$$

WALR= Weighted Average Lending Rate.
WADR= Weighted Average Deposit Rate.

Interest Spread= WALR – WADR.

Interest in move in excess of 5% spread on bi-annual basis (mid January and mid-July) should be retained in the bank as Interest Spread Reserve and no dividend can be given out of this fund. However, this fund is treated as supplementary capital.

Interest Spread limit of 5% was scrapped on 25th July 2002.

Interest Rate

Banks are free to fix interest rate on deposits and loans. Interest rates on all types of deposits and loans should be published in the local newspapers and communicated to NRB minimum on a quarterly basis and immediately when revised. Deviation of 0.50% from the published rate is allowed on all types of loans and deposits.

2.2.4.3 Loan Classification and Provisioning

A bank is required to classify their loan on the basis of overdue aging schedule and provide on a quarterly basis as follows:

Type	Criteria	Provision Requirement
Pass	Principal overdue up to 3 months	1%.
Substandard	Principal overdue up to 6 months	25%.
Doubtful	Principal overdue up to 1 Year	50%
Bad	Principal overdue up to 1 Year	100%.

Pass loan is called 'performing' and others are called 'Non-Performing Assets'. Provision requirement in case of loan given against personal guarantee only is additional 20% for pass, Substandard and Doubtful loans. Provision for restructured, rescheduled and swapped loan is 12.5%.

Provision for Pass Loan made up to 1.25% of total risk weighted assets is treated as supplementary capital.

Investment portfolio of the bank should be accounted at market value or cost whichever is less. If investment securities have not been listed in the stock market, 100% provision should be made against such an investment and deposited at 'Investment Adjustment Reserve'.

2.2.4.4 Sectoral Credit Limit

Credit concentration in one sector increases the risk of a bank. Hence, NRB requires banks to monitor its credit portfolio in following ways:

a. Level I: Sector where credit of a bank ranges from 50-100% of core Capital.

Bank has to devise a proper Credit Information System to monitor such credit at least quarterly.

b. Level II: Sector where credit of a bank is above 100% of Core Capital. Board of Directors of the bank should decide annually whether it wants/does not want to have credit exposure more than 100% in any sector. Decision of the Board should notify to Banking Operations Department and Supervision and Inspection Department of NRB.

2.2.4.5. Prohibition

Banks are prohibited to do following activities:

- Purchase and sale of goods with transaction motive.
- Purchase of fixed assets not for own use.
- Extending credit facilities against the security of own share..
- Extending credit facilities to the director or the member of his undivided family.
- Extending credit facilities to the director or the member of his undivided family.
- Extending credit facilities to the shareholder holding more than 1% share and to his undivided family.
- Extending credit to the company where the director or the members of his undivided family have 10% stake.
- Acting as the managing agent.
- Declaration/distributed of dividend to shareholder before complete amortization of preliminary expenses accumulated loss and before appropriation of fund for capital adequacy, reserves and provisions.

2.2.5 Performing and Non-performing Assets of the commercial banks

Non-performing assets is the double edge sword on which it decrease the revenue of the bank. It decreases the loan able fund of the bank. Today Non-performing Assets become the serious problem for all the banking and financial institutions. It decreases the efficiency as well as the reputation of the banking institution. It also decreases the confidence level of the shareholder's and creates the worst case of the bankruptcy.
Since NPA has many unpredictable effects not only to the lending bank but also to the whole society and economy of the nation. The NPA germinate from the time of analysis period during the lending process. Hence to decrease level of Non-performing Assets, the banks should be aware from the time of lending and the project should be analyzed carefully for its validity. Since, the NPA has many unpredictable effects not only to the lending bank but also to the whole society and economy of the nation. The NPA germinate from the time of analysis period during the lending process. Hence to decrease level of Non Performing Assets, the banks should be aware from the time of lending and the project should be analyzed carefully for its validity. The lending team should be given necessary training, full authority and should also be made responsible. There morale should be raised. They should not be enforced or make them to sanction loan in pressure. The bank should also visit the customer regularly, analyze their performance, there status should be revised in periodic basis and should also give financial guidance if necessary.

The Non Performing Assets consumes the capital and assets and destroys the whole system. The defaulters or the clients who do not repay the loan back should be punished. Recently a new bill was presented in the parliament for discussion, in which, there were provision for punishment for defaulters, which is very good news for the bank. It is also a very positive encouraging movement from the side of Government. Willful defaulters should be banned by the society. Unfortunately, it comes in papers and news that such defaulters get shelter from political parties. These things should not happen. It's not a good signal for a developing country. The business houses should also follow their business ethics.

In Nepal, Debt Recovery Tribunal is formed by the Government to recover the bad debts of the bank. It should be enacted and should be given full authority and power.

Finally, commercial banks or Nepal are found conscious regarding the Non Performing Assets. Their NPA is also within the international level. They have been giving full effort to decrease and minimize the level of NPA which have been accumulated for years. They have got significant achievement in this regard. Most of the banks have decreased the NPA. There is also a special effort from Government and from private sector to minimize the NPA and recover the bad loans.

2.2.6 TREATMENT OF NPA IN MACROECONOMIC STATISTICS

Treatment of NPA in Macroeconomic statistics has been subdivided into various parts which are given below

2.2.6.1 Part A –Policies and Practices

In part A there is the classification of loans and off-balance sheet items

2.2.6.2 Classification of loans and off-balance sheet items

There is no uniform system of classifications of loans and off-balance sheet items. Many countries have adopted, mainly through regulatory and supervisory framework, a three- tier approach towards classification of Non Performing Assets (NPAs), corresponding to 'substandard', 'doubtful' and 'loss' categories, using delinquency period as the main bench mark. Thus, 'substandard' assets are those where principal and/or interest are more than 90 days past due; 'doubtful' assets are those where principal and/or interest are at least 180 days past due; and 'loss' assets are those where principal and/or interest are at least 1 year past due. This classification category is also applied to contingent accounts or Off-Balance Sheet items, since they are treated the same way as loans. The delinquency period is applied for classification of various 'on-balance' sheet assets and 'off-balance' sheet items, so as to provide, among others, an objective criterion for appropriate classification, depending on the possibility of collectibility. However, if, in the bank's judgment, an asset is impaired to such an extent and its collectibility is in serious doubt that it should straightaway be classified as 'doubtful' or 'loss', waiting for the delinquency period. The delinquency period varies across countries and it differs in relation to the types of accounts. Also, in some countries, banks themselves classify the loans, on the basis of judgmental factors. In view of the varied practices followed, primarily depending on the structure of the banking system, credit delivery systems, and socioeconomic conditions, it will not be advisable to prescribe a set of definition of Non-Performing Assets. One may rely on the approach adopted by the national authorities.

2.2.6.3 Provisioning Requirements

The practices of provisioning differ among countries, following the asset classification system adopted. Most of the counties have adopted the standard requirements of provisioning- 20 percent of the outstanding balance in respect of 'substandard' category of asset; 50 percent in respect of 'doubtful' category; and 100 percent in respect of 'loss' category. While some countries have imposed lower percentages, yet some others have adopted the system of provisioning, in a phased manner. Recognition of collateral- fully or partially in assessing the provisioning requirements, as applicable in some countries, has great impact on provisioning. Also, tax deductibility of specific provisions towards loan losses, as extended by tax authorities in some countries, constitutes a strong positive incentive for banks to make adequate provisions. It is, therefore, necessary that banks should be required to fully explain the policies and procedures adopted in making provisions towards NPAs .

2.2.6.4 Recognition of Income on Non-Performing Loans (NPLs)

Stricter regulations have been laid down by supervisory authorities in many countries with regard to income recognition on Non-Performing Loans (NPLs). The suspension of interest payments is required on loans that are classified as 'non-performing' ('substandard', 'doubtful' and 'loss'). Any uncollected interest payment on NPL is considered non-accrued interest. Previously accrued, but uncollected interest is reversed out of income. Failure to do so would overstate income. Uncollected interest is normally put in a memorandum account. NPLs are restored on an accrual basis only after full settlement has been made on all delinquent principal and interest.

2.2.6.5 Criteria for 'write-off' of bad loans

The policy with regard to 'write-off' of bad loans by banks is set by the Board of Directors, depending, among others, on the repayment culture and legal system prevalent. It will be inadvisable for the regulatory authority to lay down specific guidelines as to when a loan could be considered as 'non-recoverable' and written-off.

The banks may, however, be exhorted that balance sheets would need to be cleansed, as early as possible.

2.2.6.6. PART B – REPORTING REQUIREMENT

In part B there is the inclement of interest Income, Loans and provisions.

2.2.6.7 Interest Income

Ideally, interest income should reflect only interest income realized and should exclude interest accrued on NPLs, so as to avoid overstating of income. The banks may be required to report the balance of uncollected interest on NPLs, as a memorandum item. It would be useful, if additions and deletions during the preceding specified period are also reflected.

2.2.6.8 Loans

It will be appropriate to record the "specific provisions" as a contra item, thus reducing the total loan outstanding, so as to reflect the recoverable value of the loans. Thus, while specific loan loss provisions are reported as contra asset, nonetheless, provisions, other than for loan losses, should, however, appear under liabilities.

2.2.6.9 Non-Performing Assets (NPAs)

The banks may be required to report Non-Performing Loans (NPLs), preferably under various categories, as a memorandum item. It is important that the amount of outstanding NPLs should not include interest not realized. The additions and deletions during the preceding specified period may also be reflected. The total of on-balance sheet assets, other, other than loans, and off-balance sheet items, classified as 'non-performing', may be reported separately, under various categories. Additions and deletions during the preceding specified period should also be reported.

2.2.6.10 Provisions

General provisions may be required to be reported as a separate item under 'capital and reserves'. The specific provisions may be required to be reported, so as to facilitate arriving at provision-adjusted NPLs i.e.; Net NPLs. Additions and deletions during the preceding specified period may also be required to be reported.

2.2.6.11 Cross Country Comparison of Financial Soundness

If the policies and practices followed in the matter of classification of assets, provisioning, income recognition etc., are fully explained, it will be possible for the analysts to make meaningful cross country comparison of financial soundness.

2.3 REVIEW OF RELATED EMPIRICAL STUDIES

2.3.1 Review of Earlier Thesis

For the purpose of this study, relevant thesis works regarding several aspects of banking sectors conducted by different intellectuals and students are discussed below:

In the research conducted by *Dirga Narayan Kafle (2005) on "Non Performing Loans of Nepalese Commercial Banks"*, devised following major findings and suggested following major recommendations to be adopted in order to decrease the level of NPA and increase the efficiency of the commercial banking industry.

Major Findings:

a. The return on assets (RoA) and return on equity (RoE) of the bank somehow depend upon Non Performing Loan. The bank should reduce its NPL to increase RoA and RoE of the bank.
b. Mnagement inefficiency is one of major cause behind high level of NPA of Commercial banks.

Major Recommendations:

a. Those banks having high level of NPL should take immediate action. The bank should dispose off the collateral taken from the borrower and recover principal and interest amount.
b. Corporate structure of the banks play key role in the effective loan management. There should be separate department for credit appraisal, documentation, disbursement, relationship maintenance and inspections.
c. Maintenance efficiency should be enhanced. Hence necessary trainings should be given to the managers and staffs.

Kapil Mani Gyawali (2007) in his study titled "*Impact of NPA on Profitability of Commercial Banks*" found following major findings and gave following major recommendations.

Major Findings:

a. The low ratio, i.e., total assets ratio of SCBL is the indication of risk averse attitude of the management or they have the policy of investing low in the risky assets like loan & advance. They have the higher proportion of their investment in risk-free assets like treasury bills, national saving bonds etc.
b. The average ratio of non performing assets to total loan & advance indicates the proportion of non- performing assets to total loan & advance. RBB has significantly higher proportion of the non performing loan in the total loan portfolio & this ratio, which exhibits the critical condition of the bank.
c. NPA to total assets shows how much NPA is there in total assets. SCBL has the lower ratio of NPA to total assets & it can be seen that it provides less amount of loan & advance, where as RBB has the highest ratio of NPA to Total Assets because it provides the higher amount of its resources as loan & advances.
d. High negative correlation of NBL is the result of high non- performing loans in the total loan portfolio.

Major Recommendations:

a. SCBL has low loan & advances to total deposit ratio, i.e., lower than the standard range. Therefore they should utilize the deposited fund efficiently.
b. RBB has high level of NPA total assets ratio with comparison to rest banks which reduce the profitability of the banks. Therefore they should reduce the portion of non- performing assets.
c. Negative return on loan & advances ratio which indicates they are ineffective to employee its resource in the form of loan & advances. Therefore, they should pay attention on the efficiency of their credit department.
d. Commercial banks should hire Assets Management Co. to resolve the problem of NPA

Niranjan Shrestha (2007) in his research, "*Non Performing Assets of Commercial Banks*" made following major findings and advised following major recommendations:

Major Findings:

a. The result shows significant difference in NPA of commercial banks and international standard of 4%.
b. High degree of negative correlation exists between NPA with RoA and RoE. The banks should reduce their level of NPA to increase RoA, RoE and profitability.
c. Management in efficiency is one of the major causes behind high level of NPA of commercial banks.

Major Recommendations:

a) Follow the regulation of Nepal Rastra Bank
b) Those banks having high level of NPA should take immediate action. The bank should dispose off the collateral taken from the borrower and recover principal and interest amount.
c) Formation of assets management company is necessary.

The study conducted by *Suman K.C. (2007)* on "*Credit Portfolio Management of Commercial Banks in Nepal*" found following major findings and suggested following major recommendations:

Major Findings:

a. The result shows no significant difference in NPA of commercial banks and international standard of 4%.
b. The recent regulation relating to loan loss provision has no effect on profitability and liquidity shows the positive result. It means profitability and liquidity has been unaffected by the stringent regulation relating to Loan loss Provision.
c. Correlation coefficient regarding Provision for Loan Loss with RoA and RoE indicate that there is a negative relationship between them.

Major Recommendations:

a. Investment view point: There should be good investment decision which increases the corporate value of the firms.
b. Bank should be sensitive to adverse movement in the external factors such as interest rate, exchange rate and commodity prices.

c. Pricing of loan should be based on compensating risk of loan.
d. Proper and Prudent management.
e. Follow the regulation of Nepal Rastra Bank.

Prakash Lamsal (2006) in his study titled "*Financial Analysis of Agriculture Development Bank*" found following major findings and gave following major recommendations.

Major Findings:

a. Non Banking asset is the source to increment the Non Performing Assets.
b. Overdue is the initial phase of the Non Performing Assets. In general every year, high overdue outstanding is seen in presented data. Over due has to be reduced in the years to come.
c. Among the analyzed six years data of the ADB/N, Non Performing interest is in increasing trend. It is a burden to the bank.
d. Profitability ratios of ADB/N do not give satisfactory result over the six years period.

Major Recommendations:

a. Projects base lending is very essential and regular observation of the invested projects has to be maintained.
b. Return trend of the invested projects are very much important. There are study factors to observe the performance of the banks so that returnable projects are to be invested.
c. Make the very effective and full autonomy body division to the Non Performing Assets management.
d. Government has to initiate to help the bank to collect the bad loans by initiating the legal force. Bank has to take effective helps from the government in collection of bad loans.
e. Vision of the bank management has to be cleared for the project base lending. Coercion to lend should not be exercised by the promoters and policy makers.

He concludes that project analysis in the pre-phase of loan investment should be made better to reduce non performance of loan. If the projected financial position of the project is good it will give good return. Chronic loan has to be recovered by giving attractive incentives to the staffs and very accretive rebate properly. Timely regular monitoring and evaluation of the project should be done.

Saroja Poudyal (2006) in her research "*A Study of NPA of Commercial Banks of Nepal*" came across following major findings and gave following major recommendations:

Major Findings:

a. In recent years Nabil 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.
b. High degree of negative correlation exists between NPA and ROE of Nabil Bank. The banks should reduce there level of NPA to increase ROE and ROA and profitability.
c. Loan loss provision for Doubtful loan seems to be higher in case of both banks Nabil and SCBNL.

Major Recommendations:

a. Create credit appraisal department to receive application and gather necessary information and give approval for lending.
b. Credit administrative department to disburse loans transaction, the repayment of principal and interest and provide information regularly to executive level.
c. Legal department to properly execute necessary legal documents for the safeguard of bank. Update the documents and its validity.
d. Credit control Department (Recovery Cell) to regularly follow up the borrowers about their installment dues and remind them their due dates in case of default.

She concludes that ineffective credit policy, political pressure to lend to low credit profile borrowers, overvaluation of collateral are major causes of mounting NPA of the banks. Other factors lending to accumulation of non performing assets is weak loan sanctioning process, ineffective credit monitoring and supervision system, economic slowdown, borrowers' misconduct, etc. He further suggests continual review and classification of loan enables banks to monitor quality of their loan portfolios and to take remedial action to counter deterioration in credit quality. In addition to this establishing recovery cell, hiring Assets Management Company are also measures to resolve the problem of non performing loan.

Govind Ghimire (2005) in his research, "*Non Performing Assets of Commercial Banks: Cause and Effect*" found following major findings and advised following major recommendations:

Major Findings:

a. Non Performing Assets on overall profitability of the bank tend to have inverse relationship. Profitability is affected due to provisioning requirement.
b. There is some relationship between credit extend and increment on Non Performing assets.
c. It may be significant in case of aggressive credit expansion. Findings showed that Non Banking Assets is created due to having Non Performing Assets.

Major Recommendations:

a) Float loan on business position, viability and business need. Proper attention of personal integrity of borrowers should be taken.
b) Strong follow up system in commercial banks for recovery of due loans. It is required to have general proactive of follow up before the loans turn into bad.
c) Avoid Credit Concentration to a single sector and project.
d) Strong Legal system should be created. Government should be create necessary laws and take necessary actions. The tribunal constituted under Bank and Financial Institutions loan recovery Act 2058 should pay special attention while translating the provision of the act into practice. Bank should be empowered to proceed to arrest the will defaulters.
e) Formation of Assets Management Company.
f) Avoidance of Undue Pressure.

He concludes that profitability of commercial banks has been affected due to increasing level of Non Performing Assets. Bad intensions, weak monitoring and mismanagement were found the major responsible factors for NPA growth. He further suggested the bank to analyze the loan proposal properly before extending any loan and conduct all feasibility study do the project. The banks should also act immediately to collect the bad loans.

In the study of *Rajesh Bhandary* (2004) titled "Analysis of Non Performing Assets of Commercial Banks of Nepal", he found following major findings and suggested following major recommendations.

Major Findings:

a. There is negative correlation exists between NPA with ROA and ROE.
b. The external factors are major contributing for the growth of NPA in any banks. Political and economic situation of the country and borrower related factors were found most crucial in the conversion of good loans into bad.
c. Lack of asset management company, Execution of the court proceedings and cumbersome legal procedure and economic recession and political instability are major problems associated with the management of NPA.

Major Recommendations:

a. Formulation of NPA management committee and reviewing of its performance on monthly basis may bring the colour in the management of NPA.
b. Approaching to loan recovery tribunal for dispose off bad loans from loan portfolio.
c. All banks should make initiative towards the establishment of Asset Management Company so that bad loans of the banks could be removed from the Balance Sheet.

2.3.2 Review of Related Journals and Articles

Prashanth K. Reddy (2003), in his study "*A Comparative Study of Non Performing Assets* in India in the Global Context – Similarities and Dissimilarities, Remedial Measures" has stressed on the importance of a sound understanding of the macroeconomic variables and systemic issues pertaining to banks and the economy for solving the NPA problem along with the criticality of a strong legal framework and legislative framework. He gave following suggestions:

a. Don't eliminate-manage. Banks should focus on management of NPA rather than elimination.
b. Foreign experiences must be utilized along with a clear understanding of the

local conditions to create a tailor made solution which is transparent and fair to all stakeholders.

c. He further argues that changes required to tackle the NPA problem would have to span the entire gamut of Judiciary, Policy and the bureaucracy to be truly effective.

Professor Bishwambher Pyakuryal (2001) has stated in his article entitled 'Our Economy is in a Volatile Stage' that the banks have not been able to collect their overdue due to the increasing cumulative NPAs in Nepalese commercial banks. There is no additional demand of the investment due to the higher risk and present uncertainty. According to his article, revenue collection was negative and regular expenditure was higher than the revenue during that time which indicated volatility of the economy. Even before the declaration of emergency, the government didn't have surplus revenue to pay for the remuneration and benefits of retired civil servants. Up to 65% of the country’s development expenditure was being financed by foreign aid. He also predicted that if Nepal couldn’t meet the regular expenditure through its revenue, it would be very difficult to convince the donor community. This could push the society toward what is called a 'mass unrest society.' He also added the need to establish some kind of Asset Management Company to take over the non-performing assets (NPAs) of the government-owned banks.

Narayan Sapkota (2004) in his article published on 19thMay 2004 in Rajdhani National Daily entitled "Portion of NPA in Commercial Banks – High in Public, Low in Private", has highlighted the fact of NPA as being less in private banks in comparison to public banks. He has mentioned that the NPA of two big nationalized banks (NBL and RBB) was about 60% and the loans were in very serious situation. He further added that in order to improve this situation and to make healthy banking environment, financial reform program had been brought; as its consequences, the management of these two big banks was handed to foreign company on a contract but the ratio of NPL was not reduced.

While most of the privately owned banks had NPA within international standard, some had it above that standard. As per international standard 5% NPA was acceptable during 2004. He also mentioned the average NPA of the Nepalese banking sector to be 30% which is very high.

2.4 Concluding Remarks

From the study of previous thesis it has been found that increasing Non-performing assets is one of the major challenges faced by Nepalese commercial banks in the present context. There are many research conducted on this topic. In other research, most researchers used correlation between the Non performing assets with Net Profit, Return on Equity and Return on Assets.

In this research, ANOVA test has been used to test significant difference between the levels of NPA among the commercial banks, which has not been done in other research. In this research five commercial banks are taken into consideration. The recommendations are given regarding pre sanction period and post sanction of loan and after loan being turned into non performance.

The NPA is in decreasing trend. Most of the banks have been found to have controlled NPA. Inverse relations were found between the NPA and RoE and NPA and RoA. The level of NPA among the banks showed no significant difference. Non Performing Assets adversely affected the profitability of the bank.

CHAPTER – III

RESEARCH METHODOLOGY

3.1 Research Design

In order to make any type of research a well set of research design is necessary, which fulfills the objectives of the study. Generally, research design is the structure and strategy of investigation conceives to obtain answer to research questions and to control the actual variance. The research is attempted to examine and find out the problem and possibility of generating the investment portfolio of commercial banks with references to selected banks. Regarding the nature of this research, most of the data and information are concerned with past performance of the portfolio performance. In this respect, present study is also based on descriptive as well as analytical research. Descriptive research design describes the general pattern of the banking investment, Nepalese investors, business structure and problem of the portfolio management etc. for analytical purpose; we evaluate the situation and events occurring at present and past data of selected commercial banks.

3.2 Sample Selection

Sampling method is used to select banks for this study; only five selected public commercial banks are selected and are taken as a sample. The sample banks taken for the study are Standard Chartered Bank, Bank of Kathmandu, Nepal Industrial and Commercial bank, Himalayan Bank and Nabil Bank ltd. The portion of the population of these two banks is selected for the analysis of the response of the respondents of the employees of the bank.

3.3 population and sample

The term ‘population’ for research means all the member of any well defined class of people, event or object. It means that the entire group of people, events or things of interest that a researcher wished to investigate. A representative part of population selected from it with the objection of investigation its propertied is called sample. For purpose of study, the random sampling had been used to analysis about total member number and inters group number.

The commercial banking industry is the population of this research. There are all together 29 commercial banks operating in Nepal till date December 2010 and out of them, five banks are taken as sample for this study. Since profitability is a factor related to NPA of banks, it was taken as the basis for taking sample. Profitability was linked with the market share value of the banks. Some of the banks in the sample have high market share value whereas some have low value. This variation was taken into consideration in order to make the study representative to the extent possible to the commercial banking industry of Nepal. Following are the commercial banks currently operating in Nepal. For the purpose of study only five banks are taken as sample for the study. The total collection of commercial banks is the population. The sample commercial banks are as follows:

Table 3.1

List of Commercial Banks Selected as Sample this Study

S. N.	Commercial Banks
1.	Standard Chartered Bank.
2.	Nabil Bank Ltd.
3.	Himalayan Bank Ltd.
4.	Bank of Kathmandu Ltd.
5.	Nepal Industrial and Commercial Bank Ltd.

Source :http://www.nepalstock.com.np)

By the survey it has been stated that in Nepal the total number of commercial bank is 31

3.4 TYPES AND SOURCES OF DATA

For the purpose of analysis in this research, manly the secondary data will be used. The facts and figures provided by the banks will be taken into consideration. But some data which are not published will be directly collected from the bank. The bank professionals will also be interrogated wherever needed.

The main source of data is the annual reports published by the banks. The statistical reports of the NRB are also the main source. Furthermore the publications of Ministry of Finance (MoF), Security Exchange Board of Nepal (SEBON), unpublished thesis and journals, different web sites, libraries etc. and other data published in the Newspaper and Magazines are also used.

3.5 DATA COLLECTION TECHNIQUES

In order to collect the data annual report published by the commercial banks and Nepal Rastra Bank (NRB), Economic report and other published statistical are collected. Data from such reports are used in this study and to obtain the additional information, informal talk made with bank personals. Similarly information is collected from Newspapers, Magazines, Web sites, bulletin, booklets and journal published from relative banks.

3.6 DATA ANALYSIS TOOLS

For the fulfillment of the study objectives various financial tools as well as statistical tools have been employed. The description of financial tools as well as statistical tools is described below.

3.6.1 STATISTICAL TOOLS

The statistical tool is essential to measure the relationship of two or more variable. It is the mathematical technique used to facilitate the analysis and interpretation of the performance of the organization. It helps to compare the performance, strengthen, weakness of the organization. It also helps to present the data, show the relation and deviations or differences of variables of organizations. In this study, the following statistical tools are used:

3.6.1.1 Mean (Average)

Mean is defined as sum of observations divided by their number in the selected sample. It is the popular measure for representing the entire data. It is the average of the data. It is further used in many statistical and financial analysis tools

Mean $\bar{X} = \frac{X}{n}$

Where,

$\sum X$ = Sum of Variable 'X'

n = No. of observation

3.6.1.2 Correlation Analysis

Correlation coefficient is defined as the association between the dependent variable and independent variable. It is a method of determining the relationship between these two variables. If the two variables are so related change in the value of independent variable cause the change in the dependent variable then it is said to have correlation coefficient (Sunity and Silwal: 325).

The most widely used in practice for calculating correlation coefficient between two variables is "Karl Pearson's correlation coefficient." The correlation coefficient between two variables X and Y, usually denoted by r (X, Y) or r_{xy} or simply r, is a numerical measure of linear relationship between them and is defined as

r_{12} = Correlation coefficient between X_1 and X_2

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

Where,

r = correlation co-efficient

n = Total no. of year

X = Dependent Variable

Y= Independent Variable

The value of r lies between -1 and + 1 symbolically,

$$-1 \le r \le +1$$

The correlation coefficient is systematic in two variables, i.e. $r_{xy} = r_{yx}$ (It can be verified by exchanging X and Y in the formula). It is a pure number independent of the unit of measurement.

Interpretation of correlation coefficient

i. When r = +1, there is perfect positive correlation.

ii. When r = -1, there is perfect negative correlation.

iii. When r = 0, there is no correlation.

iv. When r lies between 0.7 and 0.999 (– 0.7 to – 0.999) there is a high degree of positive (or negative) correlation.

v. When r lies between 0.5 and 0.699 (– 0.5 to – 0.699) there is a moderate degree of positive (or negative) correlation.

vi. When r is less than 0.5, there is low degree of correlation.

3.6.1.3 Analysis of Variance (ANOVA)

Analysis of Variance often abbreviated ANOVA is a powerful statistical tool for tests of significance to evaluate differences among the parameters of several groups. It is specially designed to test whether the means of more than two quantitative populations are equal. It consists of classifying and cross classifying statistical results and testing whether the means of a specified classification differ significantly (Sharma, Chaudhari, 2003: 330).

There are two types of ANOVA; One way ANOVA and Two way ANOVA.

In one factor ANOVA only one factor is considered at a time and we may conduct the experiment through a number of sample studies. The main objectives of One way ANOVA is to analyze difference among the group means by considering one factor (one variable). Through an analysis of the variation in the data, both among and within the several groups, we are able to draw conclusions about possible differences in group means.

F-test statistics:

$$F = \frac{MSC}{MSE}$$

Where,

MSC = Mean sum of squares within samples (columns) = $\frac{SSC}{K \, Z1}$

MSE = Mean sum of squares within samples (errors) = $\frac{SSE}{n\,\mathrm{Z}\,K}$

There are many situations where the response variable of interest may be affected by more than one factor. Under Two-way ANOVA, the effect of two factors (two variables) is studied simultaneously. The data are classified according to two different factors. The effect of one factor is studied through the column wise figure and totals and of the other through the row wise figures and totals.

The Two-way ANOVA F- test statistics are:

F = $\frac{MSC}{MSE}$ …………… (1) With d.f. is [(C – 1), (C – 1) (r – 1)]

And F = $\frac{MSR}{MSE}$ .... (1) With d.f. [(C – 1), (C – 1) (r – 1)].

Where,
MSC = Mean sum of squares of variations between columns
MSR = Mean sum of squares of variations between row
MSE = Mean sum of squares of variation due to error (residual)

In order to find MSC, MSR and MSE, we need to find SSC, SSR, SST and SSE.

3.6.2 FINANCIAL TOOLS

Financial analysis is the process of identifying the financial strength and weakness of the firm by properly establishing relationship between the item of balance sheet and profit & loss account (Pandey, 2000: 108). While adopting financial tools, a ratio is used as benchmark for evaluating the financial position and performance of any firm. Financial analysis is the use of financial statement to analyze a company's financial position and performance and to assess future financial performance, (Wild, Subramanyam and Halsey, 2003: 13).

3.6.2.1 Technical (Trend) Analysis

In this analysis the past trend is analyzed of any data and future movement is predicted. Technical analysis presents the past data in the charts and predicts the patterns of future. It shows where the organization is going in that particular matter of analysis. In the technical analysis different charts and picture are used which makes it simple to understand. It is used to analyze the data as well as to present the data. (Francis, 1998: 98)

3.6.2.2 Ratio Analysis

Ratio analysis is the most effective tool of financial analysis. It is the widely used tool in financial analysis. A ratio simply shows the relationship between the two variables or one another. It presents the relative strengths and weakness of any firms or organization and financial performance of the organization. It summaries the financial figurer and make quantitative judgment about the financial performances and positions. The relationship between two accounting figures expressed mathematically is known as financial ratio (Pandey, 2000:108). To make analysis, we can use various ratios. But only those ratios have been calculated which are related to the subject matter.

a. Net Profit to Loan and Advances = $\frac{Net\ \mathrm{Pr}\,ofit}{Loan\ \&\ Advances} \times 100\%$

b. NPA to Loan and Advances = $\frac{NPA}{Loan\ \&\ Advances} \times 100\%$

It is the percentage of Non Performing Loan and Advances. It shows how much of the total loan and advances are not performing well.

Return on Equity

This ratio assesses the effectiveness of the management with respect to both its operating and financing decisions. (Pradhan, 2004: 59)

c. ROE = $\frac{NetIncome}{CommonEquity} \times 100\%$

Return on total Assets (ROA)

This ratio measures the return on total assets after interest and taxes

d. ROA = $\frac{NetIncome}{TotalAssets} \times 100\%$

These three net Profit Ratio, ROA and ROE are used to check the profitability of the firm. It measures the efficiency and effectiveness of the firm's management.

3.7 TEST OF HYPOTHESIS

As per objective of the study, following hypothesis are formulated

Hypothesis 1

There is no significant different between the NPA level of commercial banks of Nepal and international Standard of 4%.

Hypothesis 2

There is no significant difference between the NPAs of commercial banks of Nepal.

CHAPTER – IV

PRESENTATION AND ANALYSIS OF DATA

In this chapter, efforts have been made to present and analyze the collected data. This is the main part of the research. It is the body of the report. Data collected from various sources were classified and tabulated as requirement of the study and in accordance to the nature of the data. Different statistical and financial tools are used to analyze the data collected under the study. To make easier and clearer to the understanding of the study, data are presented in the table and figures also.

4.1 ANALYSIS OF LOAN AND ADVANCES, NPA AND NET PROFIT

In this section the Loan and advances, Non Performing Assets and Net Profit trend and its level are analyzed of the whole commercial banking industry as well as selected banks.

4.1.1 Commercial Banking Industry

Table 4.1

Loan and Advances, NPA and Net Profit of Commercial Banking Industry

(In billions)

Year	2003	2004	2005	2006	2007
L&A	111.9	127.06	148.4	194.5	229.4
NPA	32.01	28.93	27.88	26.16	24.22
NPA to L&A (%)	28.68	22.77	18.79	13.45	10.56

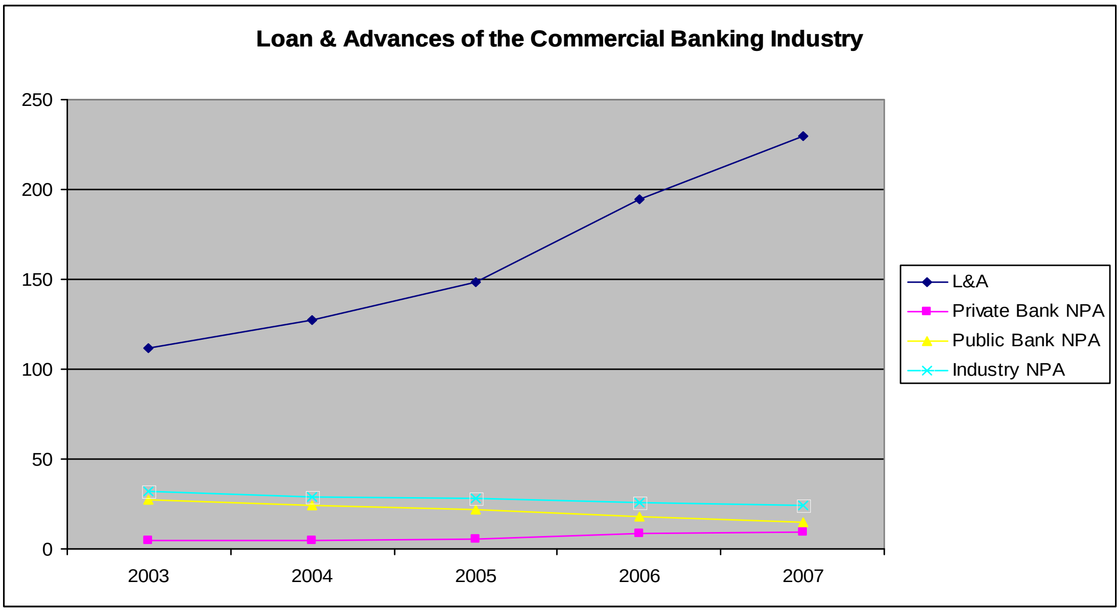
Source: NRB, Banking and Financial Statistics (July, 2007)

The Loan and Advances of the whole commercial banking industry is growing significantly. It is a positive aspect of the economy as well as prosperity of a country. At the same time the NPA of the whole industry is also in decreasing slowly but steadily. It is also very encouraging for the industry.

The NPA of the public commercial banks are relatively high compared to the private banks. They have the NPA level which is out of the tolerance level. Due to high NPA level with the public commercial banks the NPA of whole banking industry seems very high. If we look at the NPA of private commercial banks they have low NPA but they also need to do a lot to bring the NPA to a minimum level. The encouraging aspect is the NPA level of both private and public banks are in decreasing trend.

Figure 4.1

Loan and Advances of the Commercial Banking Industry



(Source: NRB, Banking and Financial Statistics, 2007)

The above figure shows that the Loan & Advances is in increasing trend. NPA of private banks is in increasing trend where as NPA of Public banks is in decreasing trend and the NPA of Industry is also in decreasing trend.

4.1.2 Profitability of Commercial Banks of Nepal

Table 4.2

Profitability of Commercial Banks of Nepal (Industry)

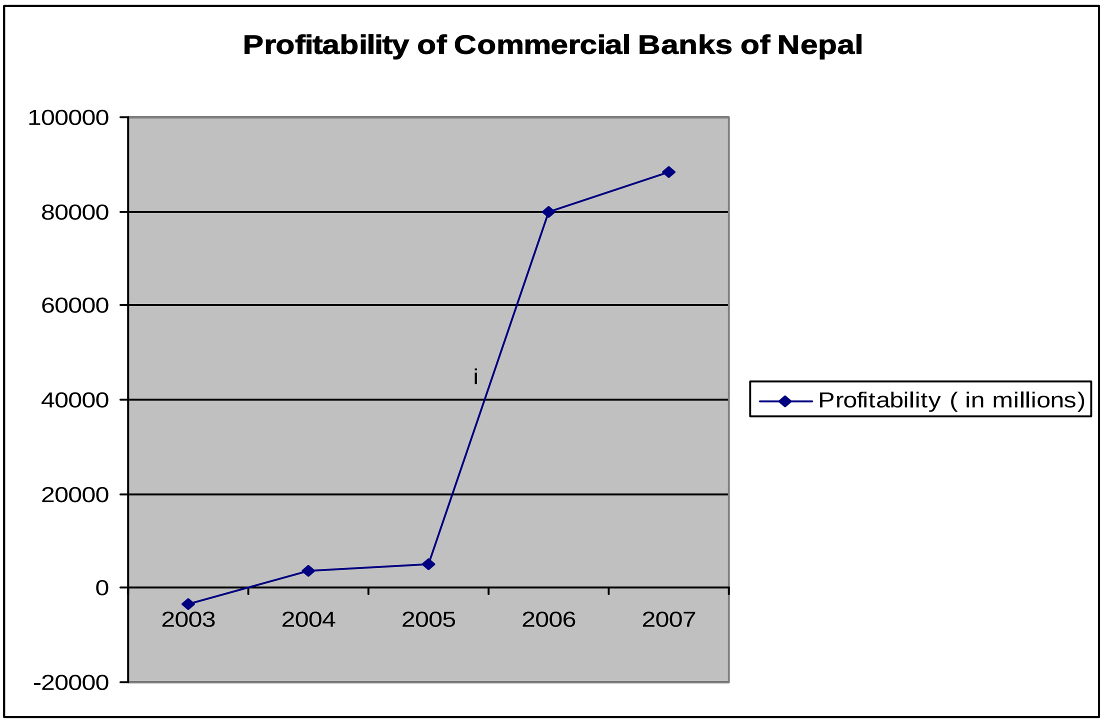
(In millions)

Year	2003	2004	2005	2006	2007
Profitability (in million)	- 3317	3707	5205	79888	88300

The whole commercial banking industry was in loss in fiscal year 2003. The whole commercial banking industry was Rs. 3317 million in FY. From the F.Y. 2004, the profit figure started to become positive. The profit has increased yearly.

Figure 4.2

Profitability of Commercial Banks of Nepal



(Source: NRB, Banking and Financial Statistics, 2007)

The above figure shows that the profit of commercial banks from year 2003 to 2007 is in increasing trend.

4.2 LOAN & ADVANCES, NET PROFIT & NPA OF SELECTED BANKS

4.2.1 Nabil Bank Ltd.

Table 4.3

Loan & Advances, Net Profit and NPA of Nabil Bank

(In millions)

Year	2003	2004	2005	2006	2007
L & A	8113.68	8548.66	10946.74	13278.78	15903.0
NPA	449.50	286.38	144.50	183.25	178.11
Net Profit	416	455	520.11	635.26	674
NPA / L& A (%)	5.54	3.35	1.32	1.38	1.12

(Source: http://www.nabilbank.org.np)

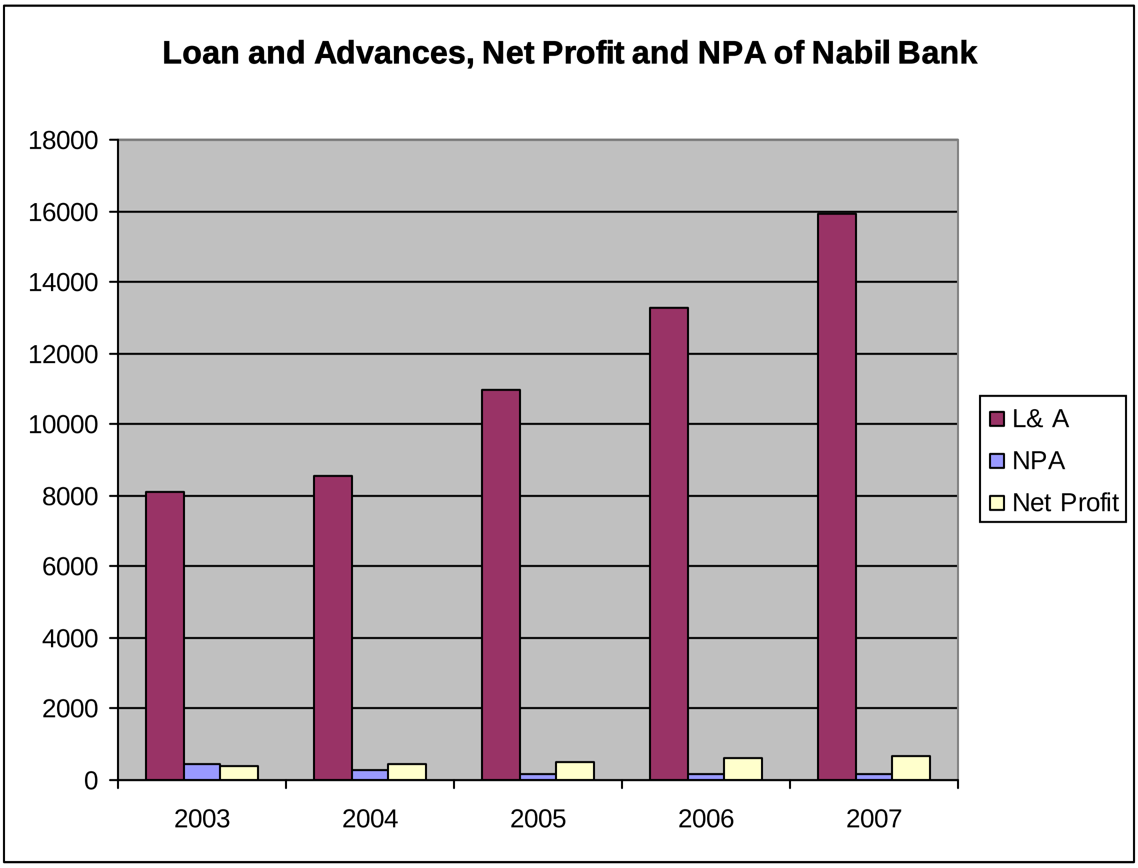
Nabil bank has increasing trend in the Loan and Advances. It is one of the largest lenders in Nepal. Where as, its Non Performing Assets Asset ratio is in decreasing trend. It has improved a lot in the quality of the Loan and Advances. The NPA ratio to total loan and advances has dropped to 1.12% in the F.Y 2007 from 5.54% in the F.Y 2003. The loan amount is also nearly doubled from 8113.68 million in F.Y 2003 to 15903 million in F.Y 2007. Nabil bank is exhibiting the quality of good management by providing large loan with very low Non Performing Loan.

The net profit of Nabil Bank is growing significantly. In FY 2007 Nabil Bank earned Rs 674 milloin which is 6.10% higher than the previous year. In FY 2003 the net profit was only Rs.416 million. The net profit is in increasing trend.

The figure depicts the level of Loan and Advances, the level of Non Performing Assets and the trend of the Net Profit of Nabil Bank Ltd.

Figure 4.3

Loan & Advances, Net Profit and NPA of Nabil Bank



The above figure shows that the Loan and Advances is in increasing trend. NPA is in decreasing trend. Net profit is in increasing trend. The NPA ratio to total loan and advances is also in decreasing trend.

4.2.2 Himalayan Bank Limited

Table 4.4

Loan & Advances, Net Profit and NPA of Himalayan Bank

(In millions)

Year	2003	2004	2005	2006	2007
L & A	10844.60	12919.63	13451.17	15761.97	17793.70
NPA	1093.14	1147.26	1000.77	1040.29	642.35
Net Profit	212	263	308	457.45	491.82
NPA / L&A(%)	10.08	8.88	7.44	6.60	3.61

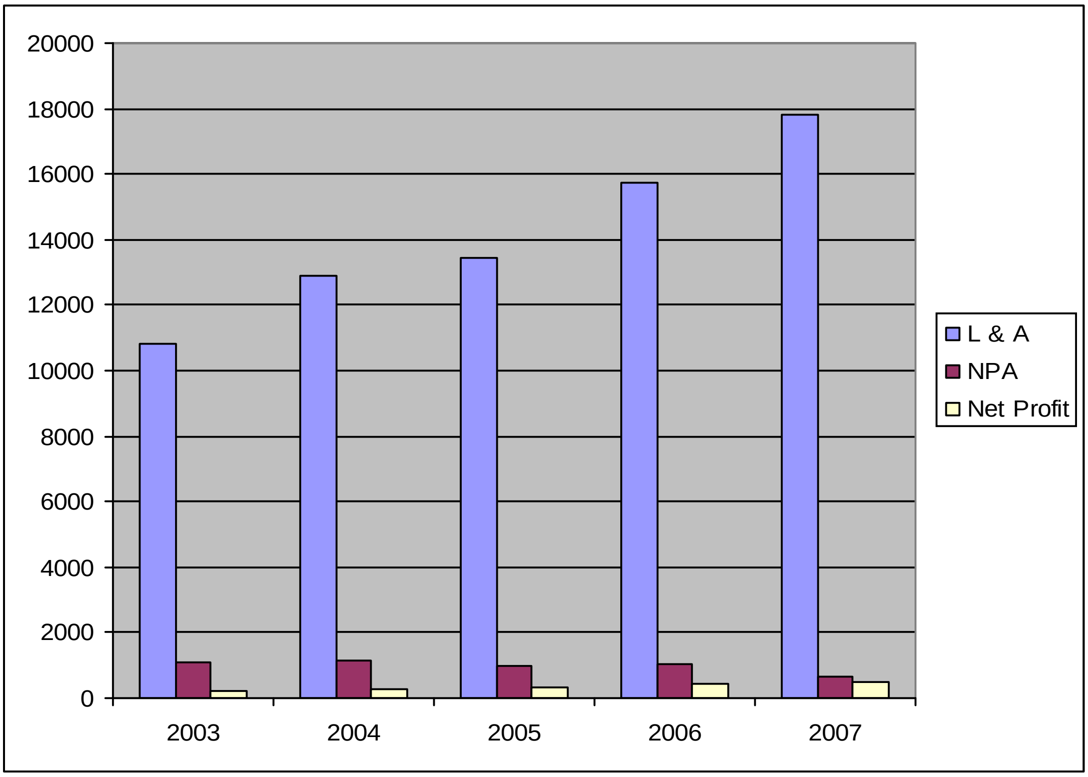
(Source: http://www.himalayanbank.org.np)

Himalayan bank has increasing trend in the Loan and Advances, where as its NPA is in decreasing trend. Himalayan bank is aggressive in the sanction of loan. It is one of the highest lending commercial banks of Nepal. But its loan quality is not satisfactory compared to other commercial banks operating in Nepal. Although it's NPA is decreasing slowly and steady. The NPA has dropped to 3.61% in the FY 2007 from 10.08 % in the FY 2003. The Loan amount has increased from 10844.60 million in FY 2003 to 17793.70 million in FY 2007.

The Net Profit of HBL is growing steadily. HBL earned 491.82 million in FY 2007 which is 7.51% higher than the previous fiscal year. In FY 2003 the net profit was Rs.212 million. The net profit is in increasing trend.

Figure 4.4

Loan & Advances, Net Profit and NPA of Himalayan Bank



The above figure depicts that the Loan and Advances is in increasing trend. NPA is in decreasing trend. Net profit is in increasing trend. The NPA ratio to total loan and advances is also in decreasing trend.

4.2.3 Bank of Kathmandu Ltd.

Bank of Kathmandu has increasing trend in the Loan and Advances, where as, its NPA is in decreasing trend in general while in FY 2007 NPA has increased. It has improved a lot in quality of the Loan and Advances. The growth rate of loan and advances of Bank of Kathmandu is relatively slow compared to other banks. The NPA has dropped to 2.51% in the FY 2007 from 8.67% in the FY 2003. The loan amount is also doubled from Rs.4846.03 million in FY 2003 to Rs.9694 million in FY 2007.

Table 4.5

Loan & Advances, Net Profit and NPA of BoK

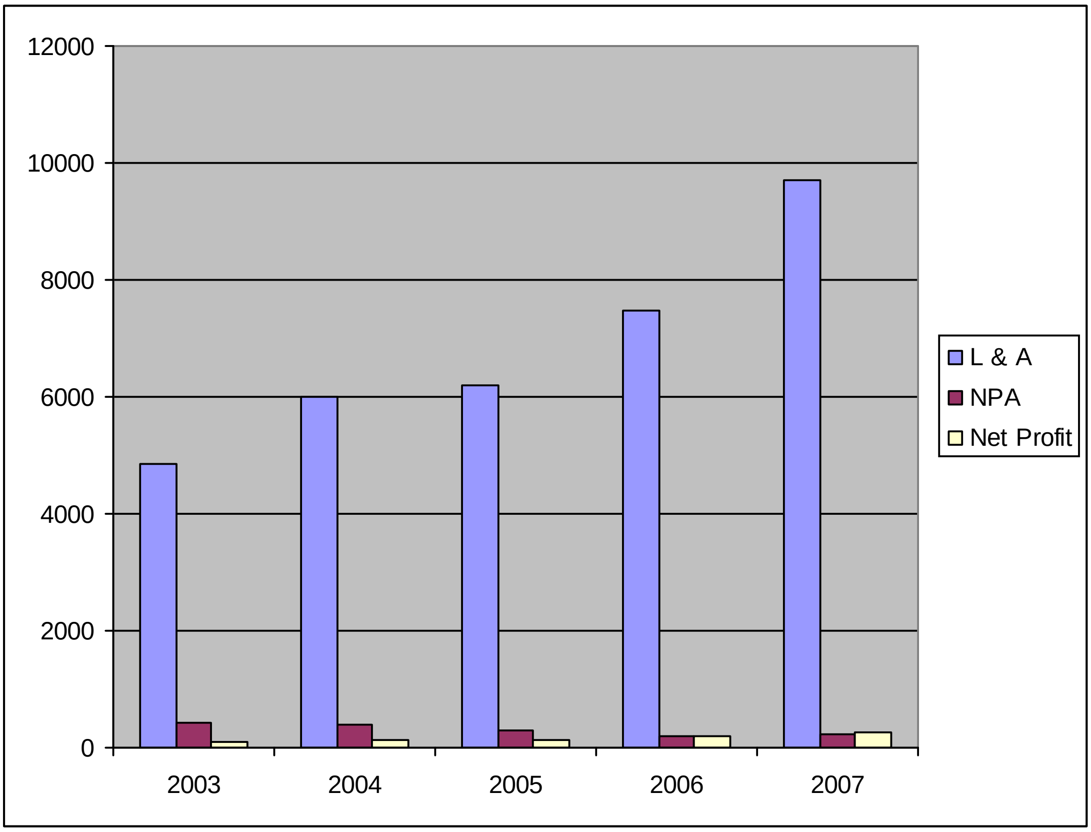
(In millions)

Year	2003	2004	2005	2006	2007
L & A	4856.03	6008.31	6182.05	7488.70	9694
NPA	421.02	400.15	308.48	203.69	243.32
Net Profit	82	128	140	202	262
NPA / L& A (%)	8.67	6.66	4.99	2.72	2.51

(Source: Annual Reports of BoK)

Figure 4.5

Loan & Advances, Net Profit and NPA of BoK



The Net Profit of Bank of Kathmandu has progressive trend. Bank of Kathmandu earned 262 million in FY 2007 which is 30% higher than previous year. In FY 2003, Bank of Kathmandu earned Rs. 82 million. The rate of profit increment is considerably high. Within five years Annual profit of Rs. 82 million to Rs. 262 million proves that it has been doing its business very well.

Figure 4.5 depicts that the Loan and Advances is in increasing trend. NPA is in decreasing trend. Net profit is in increasing trend. The NPA ratio to total loan and advances is also in decreasing trend.

4.2.4 Standard Chartered Bank Ltd.

Table 4.6

Loan & Advances, Net Profit and NPA of Standard Chartered Bank

(In millions)

Year	2003	2004	2005	2006	2007
L & A	6000.16	6693.86	8420.87	9206.28	10790.10
NPA	247.81	252.36	226.52	196.09	197.46
Net Profit	507	538	536	659	693
NPA / L&A (%)	4.13	3.77	2.69	2.13	1.83

(Source: Annual Reports of SCB)

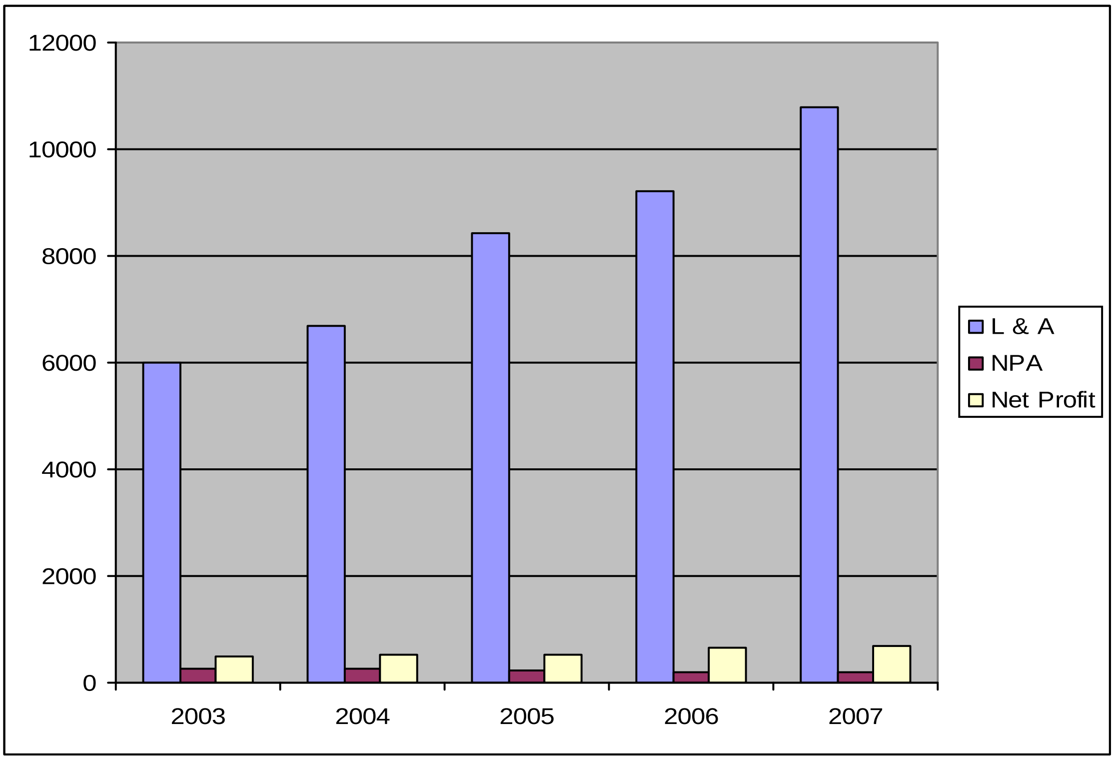
Standard Chartered bank has increasing trend in Loan and Advances. In the other hand, its NPA is in decreasing trend. It is a positive signal of good bank. It has improved a lot in the quality of the Loan and Advances. The NPA has dropped to 1.83% in the FY 2007 from 4.13% in the FY 2003. The loan amount is also grown significantly from Rs.6000.16 million in FY 2003 to Rs.10790.10 million on FY 2007.

The Net Profit of the Standard Chartered Bank grew significantly up to fiscal year 2004 but in the fiscal year 2005 bank's net profit decreased slightly compared to previous FY.

But after FY 2005 the net profit is in increasing trend. Standard Chartered earned Rs.693 million in the FY 2007 which is 5.15% greater than the previous year.

Figure 4.6

Loan & Advances, Net Profit and NPA of Standard Chartered



The above figure depicts that the Loan and Advances is in increasing trend. NPA is in decreasing trend. Net profit is in increasing trend. The NPA ratio to total loan and advances is also in decreasing trend.

4.2.5 Nepal Industrial and Commercial Bank Ltd.

Nepal Industrial and Commercial (NIC) bank has increasing trend in the Loan and Advances. In the other hand, its NPA is in decreasing trend. It is a positive signal of a good bank. It has improved a lot in the quality of the Loan and Advances. The NPA has dropped to 1.11% in the FY 2007 from 6.66% in the F.Y 2003. The Loan amount is also grew significantly from Rs. 2562.86 million in FY 2003 to Rs. 9128.70 million in FY 2007.

The Net Profit of the Nepal Industrial and Commercial bank grew significantly up to fiscal year 2005 but in the F.Y 2006 the bank's net profit decreased slightly compare to previous fiscal year. But in F.Y 2007, net profit increased by 158.47 million. NIC earned 158.47 million in F.Y 2007 which is 64.06% greater than the previous year. In FY 2003 NIC earned Rs. 25.94 million net profit.

Table 4.7

Loan & Advances, Net Profit and NPA of NIC Bank

(In millions)

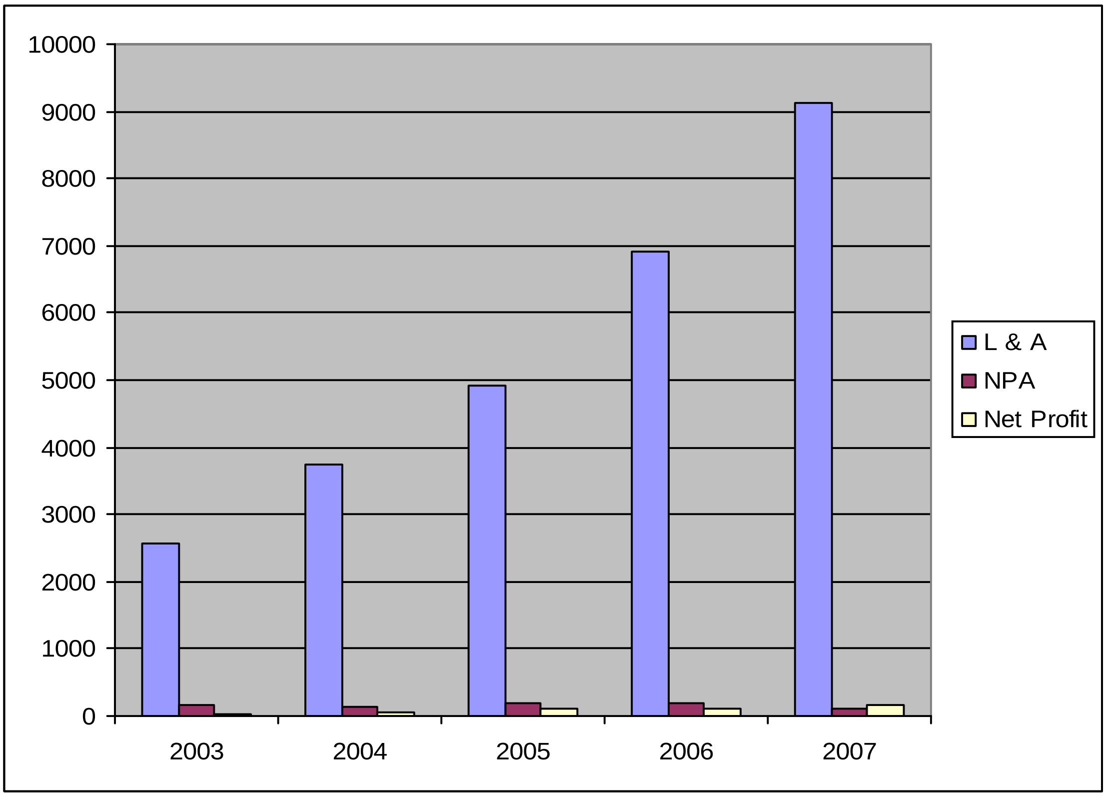
Year	2003	2004	2005	2006	2007
L & A	2562.86	3743.09	4909.36	6902.10	9128.70
NPA	170.69	146.73	185.57	179.45	101.33
Net Profit	25.94	68.26	113.75	96.59	158.47
NPA/ L& A (%)	6.66	3.92	3.78	2.60	1.11

(Source: Annual Reports of NIC Bank)

The above below depicts that the Loan and Advances is in increasing trend. NPA is in decreasing trend. Net profit is in increasing trend. The NPA ratio to total loan and advances is also in decreasing trend.

Figure 4.7

Loan & Advances, Net Profit and NPA of NIC Bank



4.3 CORRELATION ANALYSIS

In this section the relation between Non Performing assets and Net Profit, Return on Shareholder's Equity and Return on Assets are analyzed and the data and information are depicted.

4.3.1 Correlation between NPA and Net Profit

The correlation between the ratio of NPA to L&A and ratio of Net Profit to L&A is analyzed to find out what type of relationship does exist between these two entities of individual banks.

Table 4.8

Correlation Coefficient between NPA and Net Profit

Banks	Nabil	HBL	BoK	NIC	SCB
Correlation Coefficient	0.72	− 0.82	− 0.98	−0.44	0.87

(Source: Annex 1, 2, 3, 4 and 5)

The correlation coefficient between the NPA and Net Profit of Himalayan Bank Ltd, Bank of Kathmandu, and Nepal Industrial and Commercial Bank commercial banks are negative. It means the NPA and Net Profit have inverse relationship, that means when the NPA is high the Net Profit will decrease and when the NPA decreases the Net Profit increases.

Where as the correlation coefficient between the NPA and Net Profit of Nabil Bank and Standard Chartered Bank are positive. It means the NPA and Net Profit have direct relationship, that means when the NPA is high the Net profit will increase and when the NPA decreases the Net Profit decreases.

The Bank of Kathmandu has the highest degree of inverse correlation between the NPA and the net Profit. The Nepal Industrial and Commercial Bank has the lowest degree of inverse correlation between the NPA and the Net Profit.

4.3.2 Correlation between NPA and ROE

The high degree of negative correlation of different commercial banks between NPA and Return on Common Equity (ROE) indicates towards the inverse relation between NPA and ROE. The NPA of all commercial banks found in to have inverse correlation with the ROE.

Table 4.9

Correlation Coefficient between NPA and ROE

Banks	NABIL	HBL	BOK	NIC	SCB
Correlation Coefficient	− 0.84	−0.78	−0.99	−0.91	−0.73

(Source: Annex 1,2,3,4 and 5)

The inverse relationship between the NPA and RoE, shows the increase in Non Performing Assets will decrease the return on equity capital of bank. Or it means the level of NPA effect on return on equity. Therefore bank should reduce their level of NPA to increase the RoE.

4.3.3 Correlation between NPA and RoA

Table 4.11, the correlation coefficient between the Non Performing Assets to Return on Assets shows that there is negative relationship between these two variables. The established theory also states that the Profit and Non Performing Assets flow in the opposite direction. The NPA of all commercial banks found to have inverse correlation with the RoA. The banks are found to have high degree of negative correlation. The Bank of Kathmandu Ltd has the highest degree of inverse correlation between the NPA and RoA.

Table 4.10

Correlation between NPA and RoA

Banks	Nabil	HBL	BoK	NIC	SCB
Correlation Coefficient	−0.78	−0.78	−0.99	−0.62	−0.58

(Source: Annex 1,2,3,4 and 5)

From the above correlation analysis of Non Performing Assets with Net Profit, Return on Share holder’s equity and Return on Total Assets, it is found that NPA has inverse relationship with Net Profit, Shareholders equity and Total Assets. These three ratio exhibits the profitability of the business. Hence, Non Performing Assets reduces profitability of the banks and return to the share holders and employment of assets.

4.4 COMPARATIVE PERFORMANCE OF SAMPLE BANKS

Table 4.11

Comparative Performance of Sample Banks

(In millions)

FY	2006/07					2005/06				
Banks	L&A	NPA	Net Profit	NBA	L.L Provision	L&A	NPA	Net Profit	NBA	**L.L Provision**
NaBL	15903	178.11	673.96	Nil	357.25	13278	183.25	635.26	Nil	356.23
HBL	17793.70	642.35	491.82	12.77	760.1	15761.97	1040.29	457.45	21.73	1029
BoK	9694	243.32	262	3.6	294.77	7488.70	203.69	202	7.3	229.61
SCB	10790.10	197.46	693	Nil	287.5	9206.28	196.09	659	Nil	270.8
NIC	9128.70	101.33	158.47	2.6	187.25	6902.10	179.45	96.59	1.1	246.16

(Source: Annual Reports of Corresponding Banks)

In the fiscal year 2006/07, among the selected banks, Standard Chartered Bank earned the highest net profit followed by Nabil Bank. The net profit of rest of the banks has increased.

Standard Chartered Bank and Nabil Bank are better than other banks. Both have nil Non Banking Assets (NBA) where as Himalayan Bank has highest NBA on fiscal year 2007.

Loan loss provision is the fund set aside to minimize the effect of possible loan losses of the banks. The loan loss is directly related to NPA. Among the sample banks NIC has the lowest NPA hence it has lowest provision for loan loss. The HBL which has the highest

NPA has highest loan loss provision. Due to high NPA, large sum has to be set aside for provision, due to which the banks' loanable fund decreases affecting its revenue.

From profit and NMB, Standard Chartered Bank and Nabil Bank are the best among the sample banks. From NPA and Loan loss provision NIC is the best. HBL is very aggressive. It has highest loan and advances and its profit is high but at the same time its NBA, NPA and loan Loan Loss Provision is also very high.

4.5 HYPOTHESIS TEST

4.5.1 Hypothesis 1

There is no significant difference between the NPA levels of commercial banks of Nepal and the international standard of 4%.

Tabulated Value	Calculated Value	Result
$T_{tab} = 2.132$	$t_{cal} = 4.16$	$t_{cal} > _{tab}$

Since $t_{cal} > _{tab}$,

…H_0 is rejected.

… There is significant difference between the NPA level of commercial banks of Nepal and international Standard of 4%.

4.5.2 Hypothesis 2

There is no significant difference between the NPA levels of commercial banks of Nepal.

Tabulated Value	Calculated value	Result
$F_{tab} = 2.87$	$F_{tab} = 1.62$	$F_{tab} > F_{tab}$

Since $F_{tab} > F_{tab}$,

…H1 is rejected

…There is no significant difference between the levels NPA among the five commercial banks.

In Fiscal year 2007, HBL has the highest level of NPA (3.61%) where as the lowest is NIC (1.11%).

4.6 Major findings of the study

1. The loan and advances of all commercial banks are in increasing trend every year. The net profit of the commercial banks is also increasing. The total loan disbursed by the whole commercial banking industry reached to 229.5 billion in F.Y. 2007 which was only 111.9 billion in F.Y. 2003.

2. The NPA proportion of total Loan and Advances of whole commercial banking industry is in decreasing trend. It decreases to 10.56% in F.Y 2007 from 28.68% in 2003. The NPA of private banks is very low compared to public banks. In FY 2003 the NPA of private banks was Rs. 5.04 billion where as public bank NPA amounted to Rs. 26.97 billion. In FY 2007 the NPA of private banks was 9.3 billion whereas public bank NPA amounted to Rs.14.92 billion.

3. Nabil Bank has increased its Loan and Advances to Rs. 15903 million in F.Y 2007 from Rs 8113.68 million in 2003. There is significant drop of NPA. It decreased to Rs.178.11 million from Rs. 449.50 million in five years of time. Its profit has significantly improved. It was Rs. 673.96 million in FY 2007 which was only Rs. 416 in FY 2003.

4. Himalayan Bank has increased its Loan and Advances to Rs. 17793.70 million in FY 2007 from Rs.10844.60 million in 2003. It is the highest lending bank. Its NPA decreased to Rs. 642.35 million from Rs. 1093.14 million in five years. Its profit reached Rs. 491.82 million in FY 2007 which was only Rs. 212 million in FY 2003.

5. Bank of Kathmandu has increased its Loan and Advances to Rs.9694 million in FY 2007 which was only Rs 4856.03 million in FY 2003. Its NPA is Rs.243.32 million in FY 2007 which was Rs. 421.02 million in 2003. Net Profit increased significantly in five years time and reached to Rs.262 million from Rs 82 million.

6. Standard Chartered Bank has also increased its Loan and Advances to Rs 10790.10 million in F.Y 2007 which was only Rs 6000.16 million in F.Y 2003. Its NPA is Rs 197.46 million in F.Y 2007 which was Rs.247.81 million in 2003. Its profit reached Rs 693 million in F.Y 2007 which was only Rs.507 million in F.Y 2003.

7. Nepal Industrial and Commercial Bank also improved in loan and advances. Its Loan and Advances reached Rs 9128.70 million in FY 2007 from Rs. 2562.86 million in FY 2003. Its NPA is comparatively low. It achieved net profit of Rs 158.47 million in FY 2007 which was only Rs 25.94 million in FY 2003.

8. Among the sample banks Himalayan Bank Ltd has the highest Loan and Advances amounting Rs. 17793.70 million and Nepal Industrial and Commercial Bank has the lowest Rs. 9128.70 million.

9. Positive correlation was found between NPA and the Net Profit of Nabil Bank and Standard Chartered Bank while it was negative for other three banks of the sample.

10. The Non Performing Assets have inverse relationship with Return on Equity and Return on Assets. That Non Performing Assets decreases the RoE and RoA of the organization. Hence it decreases the profitability of the organization.

11. The Non Performing Assets level of the commercial banks of Nepal lies within the international standard of 4%. All the sample banks have maintained their NPA level, it would be good for them to maintain at present level.

12. There is no significant difference in the NPA level between the commercial banks of Nepal. Among the banks selected for this study, Himalayan Bank has highest level of NPA (3.61%) where as the lowest is 1.11% of NIC.

CHAPTER – V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This study includes the summary of the whole chapters. Summary is the main crux of finding of the research. This section also contains the conclusion of the study and the valuable recommendations.

5.1 SUMMARY

The role of Commercial banks for the economic mobility cannot be over emphasized. Commercial banks provide a number of services to the people. The services provided by commercial banks are accepting deposit, providing financial securities, granting loan, money exchanges, financial consultancy, fund transfer, etc. Commercial banks work as intermediaries between the two sectors of the economy: the surplus sector and the deficit sector. They provide money to the deficit sector as a loan and they collect money from the surplus sector through various schemes of the deposits.

Commercial banks generally employ two types of assets namely performing assets and non performing assets. Nonperforming assets and their contribution to the revenue generation is generally over looked.

This study focused the causes, impact and remedies of burning problem of NPA level with the help of secondary data analysis. In the same way the study will also be focused on non performing assets of five sample banks namely Himalayan Bank, Standard chartered Bank, Nabil Bank, Bank of Kathmandu and Nepal Industrial and Commercial Bank.

The main objective of the study is to examine the level of non-performing assets in total assets, total deposits and total lending of Nepalese Commercial Banks. The specifics objectives are to evaluate the impact of NPA on the profitability of the bank. It analyze the internal and external factors to influence the proper management of NPA. It also have to describe the level of NPA and other indicators that exists within public sectors banks. It examine the relationship of Non-performing assets with total assets, total deposits and total lending of Nepalese Commercial banks. It assess the extent of implementation of NRB directives regarding loan loss provision for Non-performing Assets by public sector and to indicate the effects of Non-performing assets on Return and Return on Equity of concerned banks.

Research design is a plan, structure and strategies of investigation conceived so as to obtain answer to research question and control variance. The plan mean now researcher investigator collect the data structure in term controlling the data in term of money and time.” We can say that the research design is specification of methods and procedures for acquiring the information needed. It is the plan, structure and strategy of investigation conceived so as to obtain answer to research question and to control; variances. It is the overall operational pattern of framework of the projects that stipulates what information is to be collected from which sources by what purpose.
The main objective of research design is to make analysis in non-performing assets of commercial banks in Nepal and provide valuable recommendation. In other words, this research is aimed at studying the non-performing assets of commercial banks. This will follow analytical and descriptive research design. And it also analyzes the composition of trend of non-performing assets, loan recovery and profitability condition of commercial banks. The design for this research is made by financial statistical tools. So it can be also called roadmap for Research study or blueprint of the study. The Research Design is the overall operational pattern of frameworks of the project that stipulates what information is to be collected, from which source, by what procedures, how to conduct analysis, etc. The research design of this study is analytical as well as descriptive. This study is the evaluation of Non Performing Assets (NPA) of commercial banks of Nepal.

Data analysis and presentation is the main part of the research. It is the body of the report. Different statistical and financial tools are used to analyze the data collected under the study. According to the data presentation and research it shows that
Nabil bank’s NPA ratio to total loan and advances has dropped to 1.12% in FY 2007 from 5.54% in the FY 2003. The net profit of Nabil bank is 674 million in FY 2007
Himalayan bank’s NPA has decreased to 3.61% in FY 2007 and loan amount has increased from 10844.60 million in FY 2003 to 17793.70 million in FY 2007. The net profit of HBL was 491.82 million in FY 2007.

Bank of Kathmandu’s NPA has dropped to 2.51% in FY 2007. Bank of Kathmandu earned 262 million in FY 2007

Standard Chartered bank’s NPA has dropped to 1.83% and net profit was Rs 693 million in FY 2007.

Nepal Industrial and Commercial bank’s dropped to 1.11% and net profit was Rs 158.47 in FY 2007.

5.2 CONCLUSION

The conclusion that are derived for the study are based on major findings. Nonperforming loans epitomize bad investment. They misallocate credit from good projects, which do not receive funding, to failed projects. Bad investment ends up in misallocation of capital. The economy performs below its production potential.

The Non Performing Assets is the double edge sword that will decrease the revenue and profitability of the bank in one hand and in other hand it decreases the loanable fund due to the necessity to keep fund aside in the form of Loan Loss Provision. The NPA also decreases the efficiency of the bank. It decreases the goodwill and reputation of the bank. It decreases the goodwill and the reputation of the bank. It decreases the confidence level of the shareholders as well as the customers. In the worst case the Bank can be bankrupted.

Since, the NPA has many unpredictable effects not only to the lending bank but also to the whole society and economy of the nation. The NPA germinate from the time of analysis period during the lending process. Hence to decrease level of Non Performing Assets, the banks should be aware from the time of lending and the project should be analyzed carefully for its validity. The lending team should be given necessary training, full authority and should also be made responsible. There morale should be raised. They should not be enforced or make them to sanction loan in pressure. The bank should also visit the customer regularly, analyze their performance, there status should be revised in periodic basis and should also give financial guidance if necessary.

The Non Performing Assets consumes the capital and assets and destroys the whole system. The defaulters or the clients who do not repay the loan back should be punished. Recently a new bill was presented in the parliament for discussion, in which, there were provision for punishment for defaulters, which is very good news for the bank. It is also a very positive encouraging movement from the side of Government. Willful defaulters should be banned by the society. Unfortunately, it comes in papers and news that such defaulters get shelter from political parties. These things should not happen. It's not a good signal for a developing country. The business houses should also follow their business ethics.

In Nepal, Debt Recovery Tribunal is formed by the Government to recover the bad debts of the bank. It should be enacted and should be given full authority and power.

Finally, commercial banks or Nepal are found conscious regarding the Non Performing Assets. Their NPA is also within the international level. They have been giving full effort to decrease and minimize the level of NPA which have been accumulated for years. They have got significant achievement in this regard. Most of the banks have decreased the NPA. There is also a special effort from Government and from private sector to minimize the NPA and recover the bad loans.

5.3 RECOMMENDATIONS

High level of non-performing assets not only decreases the profitability of the banks but also affects the 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 recommendation, which will help to reduce the level of NPA of Nepalese Commercial Banks.

1. Corporate structure of bank plays key role in the effective management. Loan being 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 creating system effectiveness.

2. Loan must be given only 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. The bank should take proper valuation of collateral so that it can at least recover its principal and interest amount in case of failure of the borrower to repay the loan.

3. 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.

4. 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 loan, the bank should dispose off the collateral taken from them and recover the principal and the interest amount there of.

5. Diversification of loan should be managed by the individual banks. In the context of Nepal, it is provided to the borrowers who often go to the bank and that too not in the new sector. Default by older borrowers can be found, which should be avoided.

6. 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.

7. 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.

8. Every commercial bank should maintain loan loss provision as per NRB's directives regarding non performing assets.

9. The credit staff team should be given special training and education.

10. The bank should use the state- of- art computerized information system to maintain the information of credit and creditors for effective management of the bank.

11. Bad intension, weak monitoring & mismanagement at top level are the major internal reasons turning good loan into bad loan therefore commercial bank should take corrective action immediately.

12. The accounting policies must be transparent & must follow best auditing practices.

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ANNEX 1

Correlation between NPA and Net Profit of Nabil Bank Ltd.

Year	NPA to L&A (X)	Net Profit to L&A (Y)	X^2	Y^2	XY
2003	5.54	5.127143	30.6916	26.2875984	28.40437
2004	3.35	5.322472	11.2225	28.3287038	17.83028
2005	1.32	4.751278	1.7424	22.5746384	6.271686
2006	1.38	4.784024	1.9044	22.886884	6.601953
2007	1.12	4.238194	1.2544	17.9622888	4.746777
	12.71	**24.22311**	**46.8153**	**118.040113**	**63.85507**

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - \left(\sum X\right)^2}\sqrt{n\sum Y^2 - \left(\sum Y\right)^2}}$$

$$= \frac{5 \times 63.85 - 12.71 \times 24.22}{\sqrt{5 \times 46.81 - (12.71)^2} \times \sqrt{5 \times 118.04 - (24.22)^2}} = \frac{11.399}{15.79} = 0.72$$

…There is high degree of direct relationship between NPA and net profit of Nabil Bank.

Correlation between NPA and RoE of Nabil Bank Ltd.

Year	NPA to L&A (X)	RoE (Y)	X^2	Y^2	XY
2003	5.54	84.66	30.6916	7167.3156	469.0164
2004	3.35	92.61	11.2225	8576.6121	310.2435
2005	1.32	105.49	1.7424	11128.1401	139.2468
2006	1.38	129.21	1.9044	16695.2241	178.3098
2007	1.12	137.08	1.2544	18790.9264	153.5296
	12.71	**549.05**	**46.8153**	**62358.2183**	**1250.346**

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - \left(\sum X\right)^2}\sqrt{n\sum Y^2 - \left(\sum Y\right)^2}}$$

$$= = \frac{5 \times 1250.34 - 12.71 \times 549.05}{\sqrt{5 \times 46.81 - (12.71)^2} \times \sqrt{5 \times 62358.22 - (549.05)^2}} = \frac{-726.69}{865.82} = -0.84$$

…There is high degree of inverse relationship between NPA and RoE of Nabil Bank

Correlation between NPA and ROA of NABIL Bank Ltd.

Year	NPA to L&A (X)	RoA (Y)	X^2	Y^2	XY
2003	5.54	2.43	30.6916	5.9049	13.4622
2004	3.35	2.73	11.2225	7.4529	9.1455
2005	1.32	3.06	1.7424	9.3636	4.0392
2006	1.38	3.23	1.9044	10.4329	4.4574
2007	1.12	2.72	1.2544	7.3984	3.0464
	12.71	**14.17**	**46.8153**	**40.5527**	**34.1507**

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2}\sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 34.15 - 12.71 \times 14.17}{\sqrt{5 \times 46.81 - (12.71)^2} \times \sqrt{5 \times 40.55 - (14.17)^2}} = \frac{-9.34}{11.96} = -0.78$$

…There is high degree of inverse relationship between NPA and RoA of Nabil Bank

ANNEX 2

Correlation between NPA and Net Profit of Himalayan Bank Ltd

Year	NPA to L&A (X)	Net Profit to L&A (Y)	X^2	Y^2	XY
2003	10.08	1.95489	101.6064	3.821595	19.70529
2004	8.88	2.035662	78.8544	4.14392	18.07668
2005	7.44	2.289764	55.3536	5.243018	17.03584
2006	6.6	2.902239	43.56	8.42299	19.15478
2007	3.61	2.764012	13.0321	7.639762	9.978083
	36.61	**11.94657**	**292.4065**	**29.27128**	**83.95067**

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2}\sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 83.95 - 36.61 \times 11.94}{\sqrt{5 \times 292.41 - (36.61)^2} \times \sqrt{5 \times 29.27 - (11.94)^2}} = \frac{-17.61}{21.39} = -0.82$$

…There is high degree of inverse relationship between NPA and Net Profit of Himalayan Bank Ltd.

Correlation between NPA and RoA of Himalayan Bank Ltd

Year	NPA to L&A (X)	RoE(Y)	X^2	Y^2	XY
2003	10.08	49.45	101.6064	2445.303	498.456
2004	8.88	49.05	78.8544	2405.903	435.564
2005	7.44	47.91	55.3536	2295.368	356.4504
2006	6.6	59.24	43.56	3509.378	390.984
2007	3.61	60.66	13.0321	3679.636	218.9826
	36.61	**266.31**	**292.4065**	**14335.59**	**1900.437**

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2}\sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 1900.44 - 36.61 \times 266.31}{\sqrt{5 \times 292.41 - (36.61)^2} \times \sqrt{5 \times 14335.59 - (266.31)^2}} = \frac{-247.41}{303.55} = -0.82$$

…There is high degree of inverse relationship between NPA and RoE of Himalayan Bank Ltd.

Correlation between NPA and ROA of Himalayan Bank Ltd

Year	NPA to L&A (X)	RoA (Y)	X^2	Y^2	XY
2003	10.08	0.91	101.6064	0.8281	9.1728
2004	8.88	1.06	78.8544	1.1236	9.4128
2005	7.44	1.11	55.3536	1.2321	8.2584
2006	6.6	1.55	43.56	2.4025	10.23
2007	3.61	1.47	13.0321	2.1609	5.3067
	36.61	**6.1**	**292.4065**	**7.7472**	**42.3807**

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2}\sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 42.38 - 36.61 \times 6.1}{\sqrt{5 \times 292.41 - (36.61)^2} \times \sqrt{5 \times 7.75 - (6.1)^2}} = -\frac{11.42}{13.63} = -0.78$$

…There is high degree of inverse relationship between NPA and RoA of Himalayan Bank Ltd.

ANNEX 3

Correlation between NPA and Net Profit of Bank of Kathmandu Ltd.

Year	NPA to L&A (X)	Net Profit to L&A (Y)	X^2	Y^2	XY
2003	8.67	1.688622	75.1689	2.851445	14.64035
2004	6.66	2.130383	44.3556	4.538531	14.18835
2005	4.99	2.264621	24.9001	5.128508	11.30046
2006	2.72	2.697397	7.3984	7.275953	7.336921
2007	2.51	2.702703	6.3001	7.304602	6.783784
	25.55	**11.48373**	**158.1231**	**27.09904**	**54.24987**

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2}\sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 54.25 - 25.55 \times 11.48}{\sqrt{5 \times 158.12 - (25.55)^2} \times \sqrt{5 \times 27.099 - (11.48)^2}} = \frac{-22.064}{22.596} = -0.98$$

There is high degree of inverse relationship between NPA and Net Profit of BoK.

Correlation between NPA and RoE of Bank of Kathmandu.

Year	NPA to L&A (X)	RoE (Y)	X^2	Y^2	XY
2003	8.67	17.72	75.1689	313.9984	153.6324
2004	6.66	27.5	44.3556	756.25	183.15
2005	4.99	30.1	24.9001	906.01	150.199
2006	2.72	43.67	7.3984	1907.069	118.7824
2007	2.51	43.5	6.3001	1892.25	109.185
	25.55	**162.49**	**158.1231**	**5775.577**	**714.9488**

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2}\sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 714.95 - 25.55 \times 162.49}{\sqrt{5 \times 158.12 - (25.55)^2} \times \sqrt{5 \times 5775.58 - (162.49)^2}} = \frac{-576.87}{584.065} = -0.99$$

There is high degree of inverse relationship between NPA and RoE of Bank of Kathmandu.

Correlation between NPA and RoA of Bank of Kathmandu

Year	NPA to L&A (X)	RoA (Y)	X^2	Y^2	XY
2003	8.67	1.1	75.1689	1.21	9.537
2004	6.66	1.34	44.3556	1.7956	8.9244
2005	4.99	1.42	24.9001	2.0164	7.0858
2006	2.72	1.65	7.3984	2.7225	4.488
2007	2.51	1.8	6.3001	3.24	4.518
	25.55	**7.31**	**158.1231**	**10.9845**	**34.5532**

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2}\sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 34.55 - 25.55 \times 7.31}{\sqrt{5 \times 158.12 - (25.55)^2} \times \sqrt{5 \times 10.98 - (7.31)^2}} = \frac{-14.025}{14.2054} = -0.99$$

There is high degree of inverse relationship between NPA and RoA of Bank of Kathmandu.

ANNEX 4

Correlation between NPA and Net Profit of NIC

Year	NPA to L&A (X)	Net Profit to L&A (Y)	X^2	Y^2	XY
2003	6.66	1.01215	44.3556	1.024449	6.740922
2004	3.92	1.823627	15.3664	3.325615	7.148618
2005	3.78	2.317003	14.2884	5.368501	8.75827
2006	2.6	1.399429	6.76	1.958402	3.638516
2007	1.11	1.735954	1.2321	3.013535	1.926909
	18.07	**8.288163**	**82.0025**	**14.6905**	**28.21323**

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2}\sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 28.21 - 18.07 \times 8.29}{\sqrt{5 \times 82.0025 - (18.07)^2} \times \sqrt{5 \times 14.69 - (8.29)^2}} = \frac{-8.75}{19.87} = -0.44$$

There is low degree of inverse relation between NPA and Net Profit of Nepal Industrial and Commercial Bank Ltd.

Correlation between NPA and ROE of NIC

Year	NPA to L&A (X)	RoE(Y)	X^2	Y^2	XY
2003	6.66	4.81	44.3556	23.1361	32.0346
2004	3.92	11.64	15.3664	135.4896	45.6288
2005	3.78	17.44	14.2884	304.1536	65.9232
2006	2.6	14.12	6.76	199.3744	36.712
2007	1.11	20.68	1.2321	427.6624	22.9548
	18.07	**68.69**	**82.0025**	**1089.816**	**203.2534**

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2}\sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 203.25 - 18.07 \times 68.69}{\sqrt{5 \times 82.0025 - (18.07)^2} \times \sqrt{5 \times 1089.82 - (68.69)^2}} = \frac{-224.98}{247.08} = -0.91$$

There is high degree of inverse relation between NPA and RoE of Nepal Industrial and Commercial Bank Ltd.

Correlation between NPA and RoA of NIC Bank

Year	NPA to L&A(X)	RoA(Y)	X^2	Y^2	XY
2003	6.66	0.66	44.3556	0.4356	4.3956
2004	3.92	1.37	15.3664	1.8769	5.3704
2005	3.78	1.69	14.2884	2.8561	6.3882
2006	2.6	1.08	6.76	1.1664	2.808
2007	1.11	1.44	1.2321	2.0736	1.5984
	18.07	6.24	82.0025	8.4086	20.5606

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2}\sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 20.56 - 18.07 \times 6.24}{\sqrt{5 \times 82.0025 - (18.07)^2} \times \sqrt{5 \times 8.4086 - (6.24)^2}} = \frac{-9.95}{16.02} = -0.62$$

There is high degree of inverse relation between NPA and RoA of Nepal Industrial and Commercial Bank Ltd.

ANNEX 5

Correlation between NPA and Net Profit of SCB

Year	NPA to L&A (X)	Net Profit to L&A (Y)	X^2	Y^2	XY
2003	4.13	8.449775	17.0569	71.39869	34.89757
2004	3.77	8.037216	14.2129	64.59684	30.30031
2005	2.69	6.365138	7.2361	40.51498	17.12222
2006	2.13	7.158157	4.5369	51.23922	15.24687
2007	1.83	6.422554	3.3489	41.2492	11.75327
	14.55	**36.43284**	**46.3917**	**268.9989**	**109.3202**

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - \left(\sum X\right)^2}\sqrt{n\sum Y^2 - \left(\sum Y\right)^2}}$$

$$= \frac{5 \times 109.32 - 14.55 \times 36.43}{\sqrt{5 \times 46.39 - (14.55)^2} \times \sqrt{5 \times 268.99 - (36.43)^2}} = \frac{16.50}{18.90} = 0.873$$

…There is high degree of direct relationship between NPA and Net Profit of Standard Chartered Bank Ltd

Correlation between NPA and ROE of SCB

Year	NPA to L&A (X)	RoE (Y)	X^2	Y^2	XY
2003	4.13	149.3	17.0569	22290.49	616.609
2004	3.77	143.55	14.2129	20606.6	541.1835
2005	2.69	143.14	7.2361	20489.06	385.0466
2006	2.13	175.84	4.5369	30919.71	374.5392
2007	1.83	167.37	3.3489	28012.72	306.2871
	14.55	**779.2**	**46.3917**	**122318.6**	**2223.665**

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - \left(\sum X\right)^2}\sqrt{n\sum Y^2 - \left(\sum Y\right)^2}}$$

$$= = \frac{5 \times 2223.66 - 14.55 \times 779.20}{\sqrt{5 \times 46.39 - (14.55)^2} \times \sqrt{5 \times 122318.6 - (779.2)^2}} = \frac{-219.03}{299.90} = -0.73$$

…There is high degree of inverse relationship between NPA and RoE of Standard Chartered Bank Ltd.

Correlation between NPA and ROA of SCB

Year	NPA to L&A(X)	RoA (Y)	X^2	Y^2	XY
2003	4.13	2.42	17.0569	5.8564	9.9946
2004	3.77	2.27	14.2129	5.1529	8.5579
2005	2.69	2.46	7.2361	6.0516	6.6174
2006	2.13	2.56	4.5369	6.5536	5.4528
2007	1.83	2.42	3.3489	5.8564	4.4286
	14.55	12.13	46.3917	29.4709	35.0513

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2}\sqrt{n\sum Y^2 - (\sum Y)^2}}$$

$$= \frac{5 \times 35.05 - 14.55 \times 12.13}{\sqrt{5 \times 46.39 - (14.55)^2} \times \sqrt{5 \times 29.47 - (12.13)^2}} = \frac{-1.235}{2.099} = -0.58$$

…There is moderate degree of relationship between NPA and RoA of Standard Chartered Bank Ltd.

ANNEX 6

Test of Hypothesis 1

Banks	NPA (07) X	$X - \bar{X}$	$(X - \bar{X})^2$
NaBL	1.12	– 0.916	0.8391
HBL	3.61	1.574	2.4775
BoK	2.51	0.474	0.2246
SCB	1.83	– 0.206	0.0424
NIC	1.11	– 0.926	0.8575
Total	$\sum X = 10.18$		$\sum (X - \bar{X})^2 = 4.4411$

$$\bar{X} = \frac{X}{n} = \frac{10.18}{5} = 2.036$$

$$S^2 = \frac{1}{n-1} (X - \bar{X})^2 = \frac{1}{5-1} \times 4.4411 = 1.1103$$

Population Mean (μ) = 4

Step 1: Null Hypothesis (H_0): $\mu = 4$

There is no significant difference between the sample mean and population mean.

Step 2: Alternative Hypothesis H_1: $\mu < 4$

The population mean is less than sample mean (left tail test)

Step 3: Test Statistics under Hypothesis H_0:

$$t_{cal} = \frac{X - \mu}{\frac{S}{n}} = \frac{2.036 - 4}{\frac{1.1103}{5}} = 4.16$$

Step 4: Critical Value under H_1

The tabulated value of t for d.f. = 5-1 = 4 at 5% level of significance is given by:

$T_{tab} = 2.132$

Step 5: Decision

$t_{cal} < t_{tab}$

…H0 is rejected

…There is significant difference between the NPA levels of Nepalese commercial banks l standard of 4%

ANNEX 7

Test of Hypothesis 2

NPA									
NABL	**HBL**	**BOK**	**SCB**	**NIC**					
X_1	X_2	X_3	X_4	X_5	X_1^2	X_2^2	X_3^2	X_4^2	X_5^2
5.54	10.1	8.67	4.13	6.66	30.6916	102.01	75.1689	17.0569	44.3556
3.35	8.88	6.66	3.77	3.92	11.2225	78.8544	44.3556	14.2129	15.3664
1.32	7.44	4.99	2.69	3.78	1.7424	55.3536	24.9001	7.2361	14.2884
1.38	6.6	2.72	2.13	2.6	1.9044	43.56	7.3984	4.5369	6.76
1.12	3.61	2.51	1.83	1.11	1.2544	13.0321	6.3001	3.3489	1.2321
$\sum X_1 =$ 12.71	$\sum X_2 =$ 36.63	$\sum X_3 =$ 25.55	$\sum X_4 =$ 14.55	$\sum X_5 =$ 18.07	$\sum X_1^2 =$ 46.8153	$\sum X_2^2 =$ 292.8101	$\sum X_3^2 =$ 158.1231	$\sum X_4^2 =$ 46.3917	$\sum X_5^2 =$ 82.0025

T $= \sum X_1 + \sum X_2 + \sum X_3 + \sum X_4 + \sum X_5$

$= 12.71 + 36.63 + 25.55 + 14.55 + 18.07$

$= 107.51$

Correlation Factor (CF) = $\frac{T^2}{n} = \frac{107.5^2}{25} = 385.28$

Sum Square due to Total (SST) $= \sum X_1^{\ 2} + \sum X_2^{\ 2} + \sum X_3^{\ 2} + \sum X_4^{\ 2} + \sum X_5^{2}$

$= 46.81 + 292.81 + 158.12 + 46.39 + 82$

$= 626.14$

Sum Square due to column

$$(SSC) = \frac{(\sum X1)^2}{n1} + \frac{(\sum X2)^2}{n2} + \frac{(\sum X3)^2}{n3} + \frac{(\sum X4)^2}{n4} + \frac{(\sum X5)^2}{n5} - CF$$

$$= \frac{12.71^2}{5} + \frac{36.63^2}{5} + \frac{25.55^2}{5} + \frac{14.55^2}{5} + \frac{18.07^2}{5} - 385.28$$

$= 153.58$

Sum Square due to Error (SSE) = SST – SSC = 626.14 – 153.58 = 472.55

Step 1: Null Hypothesis H_0: «1 X «2 X «3 X «4 X «5. There is no significance difference between the NPA levels of the Commercial Banks of Nepal.

Step 2: Alternative Hypothesis H_1: «1 | «2 | «3 | «4 | «5. There is significance difference between the NPA levels of the Commercial Banks of Nepal.

One way ANOVA and Calculation of F

Causes of Variance	**Sum Square**	**Degree of Freedom (D.F.)**	**Mean Sum Square**	**F- Ratio**
Due to Column (between the banks)	SSC=153.58	C – 1 5 – 1 = 4	MSC = $\frac{SSC}{C Z1} = \frac{153.58}{4}$ =38.39	F= $\frac{MSC}{MSE}$ $= \frac{38.39}{23.63}$ =1.6246
Due to Error (within the Banks)	SSE=472.55	n – C 25 – 5 = 20	MSE = $\frac{SSE}{n ZC} = \frac{472.55}{20}$ =23.63	

Step 4: Critical Value under H1

The tabulated value of F degree of freedom (4, 20) at 5 % level of significance due to two tailed test is given by

F_{tab} = 2.87

Step5: Decision

Fcal < Ftab

…H1 is rejected.

…There is no significant difference between the levels of NPA among the five commercial banks

ANNEX 8

Nepal Stock Exchange Ltd.

Calculation of all Equity NEPSE INDEX

Date: 15 July 2008

	Commercial Banks.	Nepse Code	Nepse Code No.	Listed Shares	Paid UP Value	Total Paid Up Value	Today's Closing Price	Yesterday's Closing Price	Difference Price
1	Nabil Bank Ltd	NABIL	102	6873930	100	687393000	5275	5250	25
2	Nepal Investment Bank Ltd.	NIB	103	12039154	100	1203915400	2450	2431	19
3	Standard Chartered Bank Ltd.	SCB	104	6807840	100	680784000	6830	6860	-30
4	Himalayan Bank Ltd.	HBL	105	12162150	100	1216215000	1980	1980	0
5	Nepal SBI Bank Limited	SBI	106	8734791	100	873479100	1511	1511	0
6	Nepal Bangladesh Bank Ltd.	NBB	107	7442000	100	744200000	1001	1001	0
7	Everest Bank Ltd	EBL	108	3780000	100	378000000	3132	3195	-63
8	Bank of Kathmandu	BOK	109	6031413	100	603141300	2350	2340	10
9	Nepal Industrial & Co.Bank	NICB	110	7920000	100	792000000	1284	1310	-26
10	Machhachapuchhre Bank Ltd	MBL	111	8216513	100	821651300	1265	1265	0
11	Laxmi Bank Limited	LBL	112	7320000	100	732000000	1113	1113	0
12	Kumari Bank Ltd	KBL	113	9000000	100	900000000	1005	1015	-10
13	Lumbini Bank Ltd.	LUBL	114	7500000	100	750000000	631	609	22
14	Nepal Credit & Com. Bank	NCCB	115	13490400	100	1349040000	457	456	1
15	Siddhartha Bank Limited	SBL	116	8280000	100	828000000	1152	1110	42
16	NMB Bank Ltd.	NMBF	117	10000000	100	1000000000	930	923	7
17	Development Credit Bank Ltd.	DCBL	118	11074560	100	1107456000	855	860	-5
	TOTAL			146672751		14667275100			10

S.N.	Name of Bank	Share value as of 15 July 2008
1	NABIL	5250
2	HBL	1980
3	BOK	2340
4	SCB	6860
5	NIC	1310

(Source: www.nepse.com)