CHAPTER- I

INTRODUCTION

1.1 Background of the Study

Nepal is a least developed and land locked country situated between the two biggest and highly populated countries India and China. Therefore, Nepal is known as a buffer state. Economically, Nepal is dominated by these countries financial and investing activities. Nepal is one of the very few countries in the world in terms of rich and unique cultural heritage, manifested in its architecture, temples, sculptures, monuments etc. Aside from this, it is also richly gifted with natural resources like vast forests, many perennial rivers and minerals.

Despite of the above natural resources and attributes, Nepal is still a developing country characterized by high population growth rate, low per capita income and low rate of capital formation. Nepal remained in self-imposed isolation for more than a century until it saw the dawn of democracy in 1951. The Nepalese economy relies heavily on short-term domestic debt and highly concession foreign aid loans of long maturity. Many reasons are there for the slow pace of development such as landlocked position, misuse of resources, absence of economic infrastructure, political instability, poor economic policy and institutional weaknesses. For this to overcome, the process of capital accumulation among other perquisites should be enhanced.

As most of the labor forces are unemployed, it is necessary to transform the huge labor force in to industrial sector. Only few percentage of total population is involved in industrial sector and service sector. The economic development of nation is on initial stage. Nepal has adopted mixed and liberal economic policy with the implicit objective to help the state and the private sector. For the economic growth and development, government has now initiated various economic policies such as industrial policy, foreign investment policy, privatization policy and trade and transit policy.

Due to difficulties and lack of infrastructure development of financial sector, the growths of financial sector are badly affected. Domestic crisis create huge problem in development of

financial sector in Nepal. Besides that the concept of borderless country took rapid motion in these days. Liberalization, globalization as well as privatization are most common and essential part of investment and other activities in financial sector of Nepal. Prior to the restoration of democracy, when the government has not liberalized its economic policy, there are only few numbers of industries in Nepal. Especially after restoration of the democracy, the concept of the liberalization policies has been incorporated as directive principal and state policies. The open market concept creates several opportunities and threats. Rapid development in information-technology sector is also milestone for increasing investment activities. Thus, competitive environment was formed in national market as well as international market. The liberalization policy attracts foreign investor as well as national investor to invest financial sector and commercial sector, which help to raise the life standard of people.

Capital accumulation plays an important role in accelerating the economic growth of a nation, which in turn is determined among other, by saving and investment propensities. However, the capacity to save in developing countries is quite low with a relative higher marginal propensity of consumption. As a result, such countries are badly entrapped into the vicious circle of poverty. Therefore, the basic problem for the developing countries is in raising the level of saving and thus investments.

The banking sector is largely responsible for collecting household saving in terms of different types of deposit and regulating them in the society by lending different sectors of economy. The different sector has now reached to the most remote areas of the country and has experienced a good deal in the growth of the economy. By lending their resources in the small-scale industries under intensive banking program has enabled the banks to share in the economic growth of the economy.

Banking concept existed even in the ancient period when goldsmiths and the rich people used to issue the common people against the promised of safekeeping of their valuable items on the presentation of the receipt; the depositors would get bank their gold and valuables of the paying a small amount for safekeeping and saving.

Banking institutions are inevitable for the recourse mobilization and all round development of the country. It is necessary for economic development; it maintains economic confident of various segment and extend credit to the people. Bank and banking activities have prominent role in the development of our country. The pace of development of the country grew as bank and its activities gradually developed. The Nepalese financial sector is composed of banking sector and non-banking sector. Banking sector comprises Nepal Rastra Bank (NRB) commercial banks development banks, micro credit development banks, finance companies. Other financial institutions comprise of the insurance companies, employees provident fund, citizens investment trust, co-cooperative financial institutions, non governmental organizations (NGOs) performing the limited banking activities postal saving offices and Nepal stock exchange (NEPSE). Nepal bank Limited and Rastriya Banijya Bank were the only commercial banks operating over the last three decades in Nepal before the opening of foreign joint venture banks. Today there are altogether 25 commercial banks operating in the Nepali financial market. Still many other commercial banks are in the process of opening in the market. Similarly, 36 Development Banks, 72 Finance Companies, 11 Micro Credit Development Banks are functioning in the country. There has been a tremendous growth in banking traction in terms of their length and breadth due to these commercial joint venture banks.

1.2 Origin of Bank in Nepal

The bank helps in uplifting the industry, agriculture and business in the country. It is said to be concerned with the economic development of the country. According to the history, it is found that people of our country have been involved in business and trade since long time back. Though the production of copper utensils had been started during the 7^{th} century, business relationship could not be established with India since India was involved in the production of copper utensil. However, the craft concerned with copper, wood and metal in our country did attract the Chinese and the Tibetan a lot, thus resulting in the establishment of business relationship with China and Tibet.

History relates that Nepal had its own coin since long time back. Since there was no system of having the dates of issuance of the coin it still remains a mystery in our country. However,

it has been found that coins have been used in the times of the King Mandev and King Gunakamadev. The history also states that King Gunakamadev had received loans from the public in the 8th century to renovate "Kathmandu City". By the end of the 8th century, it is said that the businessperson named Shankhadhar Shakha had paid back all the loans taken from the public and since then Nepal Sambat had stated in our country. This tells us that the system of lending money and paying back started long time back in our country.

After the issuance of coins, credit system started in our country. Merchant and big business-men started lending out money based on collateral provided by the creditors and charge them with higher interest rates.

Long back, around the 12th century Sadssivade brought out silver coins that were called ' Daam'. Later on in the 14th century, King Jayasthiti Malla divided the people into 64 castes according to their occupation, amongst which 'TANKADHARI' one is that dealt with the lending of money to the public. Since the main objective of the 'TANKADHARI' was to earn profit, they used to charge people at higher interest rate.

In order to protect people from higher interest rate, Prime Minister Ranadeep Singh established 'TEJARATH ADDA' in the 19th century. The 'TEJARATH ADDA' was responsible for providing loans to the people working in the government offices based on the security and the public based on the collateral they deposited in the 'TEJARATH ADDA' was not to earn profit, it charged its creditors with a low interest rate of 5% per annum. It had no other sources besides the government so it limited in serving a certain area. Again, it was only subjected to lend but did not accept deposits, hence it cloud not be counted as a bank. However, it can be said that 'TEJARATH ADDA' was the main financial institution that led to the development of modern banking system into the country. As a basic need, cottage industries were started in the country thus establishing business relationship with India. When Chandra Shamsher became the Prime Minister of our country in 1980 B.S., a treaty was singed which stated that Nepal could establish business relationship with countries beyond India as well. This led to the need of modern banking system in the country. This led the establishment of Nepal Bank Limited was established as the first modern bank in our

country in B.S. 1994 Kartik 30th according to the Nepal Bank Act 1993. Thus, the year B.S. 1994 is said to be the Golden year for modern banking system in Nepal.

In this way, in 1944 AD, International monetary conference held in Brussels had formally recommended that each country should possesses a central bank of its own. Central bank will control and manages banking activities in the country. Moreover, there will be no direct control of government on it and will be an autonomous institution.

Nepal Rastra Bank as a central bank of Nepal has been established under "Nepal Rastra Bank Act 2012" on 14th Baisakh, 2013 BS to perform the function of the central banking in Nepal.

In 2016 BS, an industrial bank namely Nepal Industrial Development Corporation (NIDC) was established under NIDC act 2016.

Subsequently another fully state owned commercial bank "Rastriya Banijya Bank" was established on 10th Magh, 2022 BS under Rastriya Banijya Bank act 2021 which was the second commercial bank of Nepal.

In 2024 BS Agriculture Development Bank was established under Agricultural Development Bank act 2024 BS.

In 2042 BS, Nepal also adopted liberal free economic policy and allowed to establish Joint venture bank under collaboration with foreign bank as well as on private sector. Only after this, there came the hoard of the commercial banks widening vertically as well horizontally.

1.3 Lending Management

Lending is regarded as the one of income generating sources in commercials banks. Lending is the credit provided by financial institutions to their client. Further, lending is regarded as the heart of the commercial banks in the sense that; it occupies large volume of transactions; it covers the main part of investment; the most of the investment activities based on lending; it is the main factor of the creating profitability; it is the main sources of creating

profitability; it determines the profitability. It affects the overall economy of the country. It also affects on national economy to some extent. Since, it provides loan to corporation and industry, government. It is proved from very beginning that lending is the shareholder's wealth maximization derivative. Thus, effective management of lending should seriously be considered by commercial banks.

The lending function is considered by the banking industry as the most important function for the utilization of funds. Since, banks earn their highest gross profits from loans; the administration of loan portfolios seriously affects the profitability of banks. Indeed, the large number of non-performing loans is the main cause of bank failure. With respect to performance, banks now use various measures to assess bank efficiency and related functions in the bank lending process. Traditionally, banks determined operating efficiency by using measures of bank profitability, such as return on equity, return on assets, and return on investment; also, banks used operational ratios, such as monetary output per staff member, and total operating expenses per unit of output.

Lending management is the system, which helps to manage lending effectively. In other words, lending management refers management of credit exposures arising from loans, corporate bonds, and credit derivatives. Lending exposures are the main source of investment in commercial banks and return on such investment is supposed to be main source of income.

1.5 Focus of the Study

Financial institutions are currently viewed as catalyst in the process of economic growth of country. A key factor in the development of an economy is the mobilization of the domestic resources. As intermediaries, the financial institution helps the process of resources mobilization. The importance of financial institutions in the economy has of late growth to an enormous extent. The government in turn is required to regulate their activities so that the financial policies are implemented as per the requirement of the country. Policy such as lending to priority and deprived sectors, lending to the educated unemployed people, lending for creation of entrepreneurs in the society are certain examples which the government in developing economy try to implement with the help of financial institutions. The importance

of financial intermediation has R.C. Brayent in these words, “Economists and historians agrees has been closely associated with the expansion and increasing diversification of financial intermediation”.

With the growing activities of bank after the NBL and RBB, new banking policy was introduced for establishment of international investment banks and joint venture banks in foreign investment with Nepalese co-operation. Its objective was to create healthy competitive banking system and provide cheap banking facilities to people.

Commercial banks are the heart of financial system. They hold the deposits on many persons, government institutions and business units. They make funds available through their lending and investing activities to borrowing; individuals, business firm and government establishments. In doing so, they assist both the flow of goods and services form the products to consumers and the financial activities of the government. These facts show the commercial banking system of nation is important to the functioning of the economy.

Bank creates funds form its client to saving and lends the some to needing person or business institutions in terms of loan, advances and investment. So, proper financial decision making is more important in banking transaction for its efficiency and profitability. Most of the financial decision making are concerned with lending policy and lending management. It plays the vital role in the business succession, so efficient lending management is needed. This study deals with the lending position, non-performing loan, lending portfolio management and relation of lending in profitability of the selected bank.

1.6 Statement of the Problem

Capital resource is the prime source of the economic development of the country. Economic development of a country succeeds only when the development of the capital formation mechanism exists. The major cause of this chronic problem is the lack of economic development or the slow rate of the national economic growth. With the increased sophistication and liberalization of financial markets, this has made the problem of debt management one of the most important issues in economic policy. More than 60% of the

domestic debt have maturities of one year or shorter and less than 9% of domestic debt has maturities of 10 years or longer.

Banking, especially the commercial banking sectors can flourish the capital resources in the country. Commercial banks collect or deposit necessary capital from the people in the different parts of the country. They powerfully help in the creation of the capital resources for the national investment. Effective utilization of capital is depends up on creditability position of the bank.

Commercial banks suffered from various types of problem such non-performing loan. They do not mobilize their deposit properly in terms of development of the nation. It is no debate that high profitable institutions can easily get their goals and can serve the society. To improve the profitability situation of the bank, it is necessary to establish the higher creditability position of the bank. Credit is the most effective area in commercial bank. While granting the loan, banks which do not analyze the documents submitted by the borrowers, are resulting increasing non-performing loan. Thus lending management is considered as the main issues is Nepalese banking sector. Commercial bank's investment has been found to be have lower productive due to the lack of supervision regarding whether there is a proper utilization of their investment or not.

Lending management concept has appeared as a major research gap in Nepalese commercial banks. There is lack of scientific research that could identify the issues of Lending management in commercial banks. In this regard, the performance of the commercial banks is to be analyzed in terms of lending. Some research questions regarding to the credit practices, liquidity position, economic and industrial environment, management quality are considered as a clear evident in present situation.

1. Is the lending practices adopted by sampled commercial banks in good position?
2. What is the lending efficiency of the sampled Nepalese commercial banks?
3. Is credit position of bank influences the profitability?
4. Does internal performance caused for increase in non-performing loan?
5. How does the commercial bank manage lending portfolio?

1.7 Objectives of the Study

This research study entitled “Lending Management of commercial banks” covers following objectives.

- To analyze the portfolio of lending of selected banks
- To examine position of the priority sector lending of selected banks
- To examine the impact of loan and deposit on profit of the selected banks
- To explore the relationship of total loan with deposit and non-performing loan and profitability

1.8 Limitations of the Study

The main limitations of this study are presented below.

1. The findings of this study depend upon the data and information of a Five Years time horizon.
2. This study concentrates only on the portfolio of lending, impact of deposit, loan and non performing loan in profit. Also, data and information of the sampled commercial banks only are used by the researcher.
3. The research study based upon the secondary data and information mostly. Hence, the validity of results depends upon the accuracy of data supplied.
4. It consist of sample banks only. It does not represent the overall banks.

1.9 Organization of the Study

The present study is organized in such a way that the stated objectives can easily be fulfilled. The structure of the study will try to analyze the study in a systematic way. The study report is designed in five chapters which are as follows.

Chapter-I: Introduction

This chapter includes the basic concept and background of the study. It has served orientation for readers to know about the basic information of research area, various problem of the study, objectives of the study, significance of the study and limitation of the study.

Chapter-II: Literature Review

The second chapter of the study covers readers that they are familiar with important research that has been carried out in similar areas. It also establishes that the study as a link in a chain of research that is developing and emerging knowledge about concerned field.

Chapter-III: Research Methodology

Research methodology refers to the various steps to adopt by researcher in studying a problem with certain objectives in view. It incorporates various source of data related with the study and various tools techniques such as statistical and financial employed for presenting the data.

Chapter-IV: Presentation and Analysis of Data

This chapter is the main part of the research. This chapter analyses the data related with study and presents the finding of the study and also comments briefly on them.

Chapter-V: Summary, Conclusion and Recommendations

This chapter deals with the summary and conclusion. It also recommend to the concerned organization for the better improvement.

CHAPTER-II
REVIEW OF LITERATURE

2.1 Conceptual Review

Commercial banks are those banks that pool together the saving of the community and arrange for their productive use. They supply the financial needs of modern business by various means. They accept deposits from the public on condition that they are repayable on demand or on short notice. In other words, a bank is a financial intermediary, a dealer in loans and in debts. It borrows from one set of people and lends to hiring money and hiring out again. Some banks draw their capital mainly from their shareholders, other's mainly from depositors. Some lend mainly to industry, others mainly to government, central and local. Some deal in short loans, borrowings and lending for short periods, others deal in long periods. However the business of individual bank may differ, their essential function is to gather saving together and lend out what they collect.

"A bank is a business organization that receives and holds deposits of funds others and makes loans or extends credits and transfer funds by written order of depositors."

"A commercial banker is a dealer in money and a substitute for money, such as cheque or bill of exchange .He also provides a variety of financial services."

The primary economic function of the commercial bank is to hold demand deposits and to honor cheques drawn upon them. In short, to provide us, the economies, with the most important component of the money supply.

Commercial bank plays an important role in directing affairs of the economy in various ways. The operations of commercial banks record the economic pulse of the economy. The size and composition of their transaction mirror the economic happenings in the country. For instance, the mass failure of commercial banks during 1980 has reflected the phenomenon of several global depressions around the world. Commercial banks have played a vital role in

giving direction financing the requirements of trade and industry in the country. In a planned economy, bank make the entire planned productive process possible by providing funds for all types of production incorporated in the plan, regardless of whether the production is in the public sector, joint sector or in the private sector or combination of the organization or another. They endeavor to promote enterprise development by investing loans and sometimes thorough the investment in shares and debentures. Therefore, they support the country's overall economic development process by financing in various ways.

In the Nepalese context, the Nepal Commercial Bank Act 2031 B.S**.** defines a commercial bank as one, which exchanges money, deposits money, accepts deposits, grants loans and performs commercial banking functions.

As an outcome of, the economic liberalization policy, government of Nepal (GON) has put its face in the international arena so many investment opportunities are evolved within the nation that foster integrated and speedily development of the nation is possible, only when competitive banking services reach the nook sand corners of the nation. Commercial banks occupy an important place in the framework of every economy by providing required capital for the development of industry trade and business out of the saving collected as deposits, besides, commercial in view of facilitating the economic & social life. Banks are the essential part of the business activities, which are established to safeguard people's money and utilizing the money in making loans and investments. With respect to Nepal, there are several commercial banks operating in various regions especially in the kingdom with foreign collaboration or joint investment.

The American Institute of Banking has laid down the four major functions of the commercial banks such as receiving and handling deposit, handling payments for its clients, making loans and investments and creating money by extension of credit. Nepal Commercial Bank Act 2031 BS has emphasized the major functions of commercial bank which are mentioned below.

- They accept custody of funds with or without interest and open fixed accounts and saving accounts in the name depositors.

- They make available credit in the form of loan, overdraft and co-financing to the industry, commerce, agriculture, expert and service.
- They help to issue shares and debentures of any company or any other corporate body, guarantee or underwrite such shares or debentures and undertake any agency business but do not become a managing agent.
- Conduct transactions in bonds, provisionary notes or bills of exchange, foreign exchange relating to commerce or corporation.
- Collection, sale and purchase of bills, collection and dissemination of trade information, provide service of opening and making payment of letter of credit, help industry and business by providing bank gurantee.
- They issue letter of credit, draft and traveler's cheque. They remit or transit find to different place within or outside the nation. They purchase, sell or accept the securities of government.

Meaning and Definition of Lending

Commercial bank as of its primary function makes lending activity. It is apparent that loan is defined as a thing is lent, esp. a sum of money. Likewise, debt means a sum of money owed to somebody. However in financial terms loan or debt means principal or interest availed to the borrowers against the security. Debt means money that owes or will lend to individual or person (Ghimire, 2005).

Further the term loan is defined as a lending. Delivery by one party and receipt by another party, a sum of money upon agreement expressed or implied, to repay it with or with out interest. Any thing furnished for temporary use to a person at his request, on that condition it shall be returned or its use. Therefore, loan includes-

- The creation of debt by lender's payment of or agreement to pay money to the debtor or to a third party for him account of the debtor
- The creation of debt by a credit to an account with the lender upon which the debtor is entitled to draw immediately
- The creation of debt pursuant to a lender credit card or similar arrangement
- The forbearance of debt arising from a loan: Uniform consumer credit code: 3-106.

With respect to alternative view, debt means 'principal and interest' provided to debtor by banks or financial institutions, with the pledge of immovable or movable property or other securities or guarantee or without guarantee and the word also means over dues of the transaction beyond balance or fees, commission and interest incurred in that relation.

The supreme court of India has defined the debt during the decision of the case United Bank of India vs. DRT (1999 ISJ Banking). Sudhir Gupta stated that in the case of his hand, there cannot be any dispute that the expression 'debt' has to be given the widest amplitude to mean any ability which is alleged as dues from any person by bank during the course of any business activities undertaken by bank either in cash of otherwise, whether secured or unsecured, whether payable under a degree of order of any court or otherwise and legally recoverable on the application (Gupta, 2002).

Loan Disbursement and Classification

One of the main functions of commercial bank is to create credit from its borrowed fund. Loan and advances are the assets coming from such activities. Loans and advances dominate the asset side of the balance sheet of any bank and also constitute the primary sources of income to the banks. They are also the least liquid of the bank's entire asset. Loans and advances may take different form and are allowed against various types of securities. Loans, overdrafts, discounting of bills of exchange etc are some of the forms of the bank lending. Granting loans and advances always carry a certain degree of risk. This loan and advances are also regarded as risky assets of banks.

Loan classification refers to categories or grade based on the perceived risk and other relevant characteristics of loan and as per guideline of central bank. The process of continual review and classification of loans enables banks monitor the quality of their loan portfolios and when necessary to take remedial actions to counter deterioration in the credit quality in this portfolios. In most of the countries, a number of days a past due payments represents a minimum condition for loan classification purposes. However some criteria which exhibit forward looking features also considered. In the context of Nepal, as per guidelines of NRB loans are classified into four categories namely pass, substandard, doubtful and loss.

Pass Category: All loans and advances the principal of which are not past due or past due for a period up to three months. Only loans under pass category are termed as performing loan.
Substandard Category: All loans and advances the principal of which are past due for a period of more than three months and up to six months.

Doubtful Category: All loans and advances the principal of which are past due for a period more than six months and up to one year.

Loss Category: All loans and advances the principal of which are past due for a period of more than one year.

Performing loans are these loans that repay principal and interest timely to the bank from the cash flow it generates. In the context of Nepal, the loans classified as a pass category is termed as performing loan.

These are the loans that do not repay principal and interest timely to the bank. Non-performing loan (NPL) has many different meanings which vary from the country to country. In some countries non- performing loan means the loan impaired. In some countries it means that the payments are past due, but there are significant differences among countries how many days a payment period should be in arrears before past due status is triggered. Nevertheless, a rather common feature of non-performing loan appears to be that a payment of more than 90 days past due. In Nepal also, if the loan is past due for over 3 months it is non-performing loan. Hence the loans falling under substandard, doubtful and loss categories are regarded as non-performing loan.

Loan Loss Provision

Loan loss provision is the accumulated amount or fund that is proved as a safeguard to cover possible losses upon classification of risk inherited by individual loans. There is risk inherent in every loan. Hence, provision is made as cushion against possible losses and to reflect the true picture of the bank's asset. There is practice of showing net loan (total loans- loan loss provision) in financial statements. The amount required for provisioning depends upon the

level of non-performing asset and their quality. High amount of provision is an indication of the bank's credit portfolio needs serious attention. One percent provision of total credit is an ideal position as it is the minimum requirement for all good loans. In Nepal 1%, 25%, 50% and 100% provision are made for pass, substandard, doubtful loan and losses respectively.

Lending Process

Commercial bank follows several steps to disburse loan to the borrowers. The lending policies might be different form one bank to another. In general, these steps can be pointed out of follows.

Application: the needy are required to submit an application to the bank along with required documents. The documents required for credit proposal appraisal and processing by banks are as follows:

- Loan application
- Citizenship certificate of applicant
- Firm/ company registration certificate (if self employed)
- Income tax registration certificate (if self employed)
- Authenticated partnership deed in case of partnership firm, and memorandum and article of association in case of company
- Attested copy of board resolution in case of company resolved to avail loan and banking facilities form bank against the pledge, hypothecation, and mortgage of fixed property owned by company or property of third party named.
- Letter of authority authorizing to sign loan deed and other relevant document paper which are deemed necessary while dealing with bank on behalf of firm/company.
- Feasibility report/scheme (for new project)

Lending Appraisal and Possessing

Basically, appraisal of loan proposal is processing for the analysis of the variability of the scheme proposed. It also helps to assets the actual financial assistance needed to operate the scheme.

Commercial bank carries out loan appraisal on the basis of past performance, future forecast and information available form the documents submitted by aspirant borrowers.

The bank tries to ascertain the following during loan processing:

- The cost of estimate us examined so that the appropriate estimate can be accepted. Under and over estimates are rejected. Similarly, the specification of machinery should be proper.
- Working capital projection has to be reasonable as compared to past performance and on the basis of target for future expansion.
- The return rates should be adequate like return on investment (ROI), internal rate of return (IRR) and debt service coverage ratio (DSCR).
- The capacity, competency, integrity and commitment of promoters/ partners/ proprietors/ directors/personnel should be intact.
- SWOT (strength, weakness, opportunity and threat) analysis of the proposed project must give reasonable assurance.

Portfolio Analysis

In financial leverage, portfolio could be defined as the composite mixed of ownership to financial assets/investments in which a particular investor wishes to invest. Thus, portfolios are composition of investments in various sectors which in turn are composed of expected risk and return of their component investments. It helps an investor to make optimal investment decision minimizing overall risk and maximizing overall return. Portfolio theory was first developed by Markowitz in connection with the investment in stock market securities. The ground theory was that, if the correlation between the assets return is not perfectively positive, investing in two assets can minimize risk.

Portfolio Management

In general, portfolio management is the process of selecting a combination of investment alternatives that provide the investor a maximum attainable return for a given level of risk or a minimum risk for a given level of return. Portfolio management can also be taken as the

management of risk and return. It aims to determine an appropriate mix of investments that attains optimum level of risk and return depending upon the attitude of investor.

According to Cohen, Zinbarg and Zeikel, “Portfolio management is the art of handling a pool of funds, so that it not only preserves its original worth but also overtime appreciates in value and yields an adequate return consistent with the level of risk assumed.”

According to Weston and Brigham, “A portfolio simply represents the practice among investors of having their funds in more than one asset. The combination of investment assets is called a portfolio.”

According to Lawrence J. Giman , “ Portfolio means a collection or group of assets.”
According to Sharpe, Alexander and Bailey, “Portfolio construction involves identifying those specific assets in which to invest as well as determining the proportions of the investors wealth to put in to each one.”

According to Raymond, Brockington, “The term ‘portfolio’ simply means collection of investments. For an investor through the stock exchange the portfolio will be a collection of shareholders in different companies. For a property investor, portfolio will be a collection of buildings. To a financial manager within an individual company, portfolio will be a collection of real capital projects. It will be apparent that the actual nature of the components of a portfolio depends on the population of opportunities from which the selection has been made.”

Portfolio management of banks' loan investments basically are the allocation of funds to different types of consumption and investment loans having different degrees of risk and varying rates of return in such a way that balances the conflicting goal of maximizing return and minimizing risk. The process of managing banks’ loan investments considers a number of relevant and influencing factors such as the availability of funds, liquidity required, central bank’s rules and regulations that abide banks, risk associated with the respective industries, and the expected rate of return on respective loan sanctioned sectors. In addition, the banks

should carefully examine the macro economic indicators such as interest rates, inflation, aggregate expected money multiplier, national income; saving ratio etc. effective management of banks' loan investments can lead the banks into the success as loan investments constitute the major portion of a traditional bank's total assets.

2.2 Review of Articles

The article of Patrick F. Reidy (2005) provides an overview of the credit portfolio management function, structural alternatives, the skill necessary for its effective implementation, and a final word on training and compensation. The focus is on corporate credit portfolios, as these often present the largest concentration challenges though they can be easily modified.

Modern portfolio management of bank assets has fundamentally changed the requirements for individuals using this technique: their backgrounds, their training, and their skills on using available resources. While traditional credit training remains necessary, today's portfolio manager augments this background with knowledge of early-warning systems, alternative structures to better set risk/return parameters, and more.

Traditional training focused on the individual loan. Traditional credit training focused on the analysis of a firm's management, operations and financial structure as the basis for determining a borrower's creditworthiness; now training programs incorporate not only these techniques, but also that elusive element called a bank's credit future.

In essence a bank's credit culture was a serious of written and unwritten rule about which types of customers, industries and credit profiles were acceptable. This culture ultimately dictated the structure and composition the bank's total portfolio.

Protection measures against portfolio losses focused on loan loss reserves based on moving-average formulas. Concentration risk was to be avoided, but there were always those special customers for whom exceptions could be made. If the formulas were correct, then overall expected losses in the portfolio would be covered by reserves. But those formulas and

expectations were not always so accommodative. As a result, certain concentrations would invariably lead to extraordinary, or incorrect, losses that were charged income in the previous year of their income.

Portfolio management looks at the impact of loans individually, collectively, and comparatively. Modern portfolio management techniques have supplemented these unwritten rules with portfolio analysis and policies that establish limits on exposure by country, by obligor, by industry, and so on. These limits are derived form a specific focus on the technical aspects of this asset class segmentation of credit product and an analysis of the effect of combining credits onto portfolios. Credit portfolios can now be evaluated on the basis of fundamental as well as quantitative portfolio analysis. (This is now being further institutionalized in terms of capital as defined in the updated in the updated Basel Capital Accords.)

Functionally, credit is now segmented into four parts.

1. Origination and determination of the required level of customer commitment: The sales/relationship function in credit portfolio management is often separate from the analysis/underwriting function. This allows for an efficient use of resources for client development as well as analytical discipline and consistency. The relationship manager determines the commitment level that will maximize relationship income.
2. Fundamental analysis of the individual credit: the underwriting function in credit portfolio management is charged with the more traditional responsibility of individual credit analysis and monitoring. But this function is being driven more and more toward a specialization based on industry, so that the full benefits of analyzing alternative borrowers within an industry can be achieved. The more specialized structure enables credit portfolio management (CPM) to provide key value-added analysis to relationship and product managers in complex customer support for example, merger and acquisition analysis. It also provides for a centralized, efficient use of analytical resources.
3. Portfolio monitoring: Many more tools and information resources exist today than available in the past for portfolio monitoring. For examples, institutions now set various portfolio limits to shape the structure of the desired portfolio. Early-warning processes

to portfolio deterioration have become an integral part of credit risk management. For large corporate portfolios, Merton based models relate information inherent in the equity markets to a firm's debt level. Bind spreads and credit derivative premiums provide a forward-looking credit view form the market that can be compared with a bank's own credit view.

4. The role of credit authorities: The credit approval function determines the desired exposure level for the institution's books within the context of pre-established limits by obligor and industry. As a result, credit approval manages expected loss and allocates capital to desirable transactions. CPM, as separate form credit approval, optimizes the use capital through alterations to the portfolio's profile.

Alternative Structures for CPM

The establishment of credit portfolio management is typically an evolutionary process for each banking institution. At start-up, CPM usually takes a defensive role-eliminating concentration risk and culling underperforming relationships from the risk/return point of view. As CPM develops, optimization of the selected portfolio is added to its role, adjusting exposures to take into account the best risk/return structure. The adjustments often use the credit derivatives markets in order not to disturb the primary relationship with the customer. In its advanced form, CPM adds the bank's credit view to its role, with the intention of improving the portfolio's relative value performance among different asset classes.

The state of CPM along this development curve often dictates whether it is located inside the wall (subject to the possibility of receiving nonpublic information) or outside the wall (not subject to nonpublic information and freer to adjust positions.)

Functions of CPM

CPM achieves two principles goals:

1. To match required hold levels with desired hold levels.
2. To optimize the portfolio of assets ultimately held by the bank.
3. To do this effectively, CPM must perform all or some of the following key functions, depending on the state of the development curve discussed above.

- Serve as an analytical and advisory group to the line and to the approval authorities, plus serve as an integral part of critical deal teams.
- Prepare the credit approval package and advocate the transaction to the credit approval authorities.
- Closely monitor obligor risks, returns and concentrations.
- Evaluate, establish, and effectively use advanced modeling techniques to help determine the potential risk inherent in the portfolio and its assets correlations.
- Manage those same risks through the judicious use of loan sales and synthetic instruments such as credit default swaps.

In the article by Mass, Paul Van (2002) head of the credit products Europe, Bank of America, title "Active loan Portfolio management through the use if credit derivatives" has to give the reader a brief overview of common derivatives the size and scope of their markets and their role on structured credit products. This case study uses as a reference a current deal that Bank of America has structured using credit derivatives. In his study researcher shows that credit derivatives market has grown and it continuing to grow at far greater rate.

According to the research, credit derivatives market is widely predicted that volumes will continue to increase dramatically. An increase in liquidity through new market participation has aided and will continue to aid growth. Moreover, there has been an increased use of credit derivatives by banks for managing credit risk, for example concentration risk which has improved liquidity. This activity is facilitating an increased understanding of credit risk and investor willingness to accept structured transactions. The most frequently encountered one of the credit derivative is credit default swaps.

Credit Default Swaps

Credit default swaps is a bilateral contract between two counter-parties, in which the "protection buyer" pays a periodic fee for protection a contingent payment on the default (or any other specified credit event) of a reference obligation, from the "operation seller".

How is Protection Triggered?

A reference obligation is nominated in the credit default swap contract and, should a credit event occur on this obligation, the protection seller may be asked to compensate the protection buyer. The definition of "credit event" can vary between contracts and it is therefore imperative that both parties to a transaction agree and understand the scope of protection. Credit events are one or more of bankruptcy, failure to pay, obligation acceleration, repudiation/ moratorium or restructuring, as specified in the related confirmation.

A contingent payment can take two forms depending on whether the transaction is cash settled or physically settled. In cash settlement, the contingent payment is calculated by taking the par price of the reference obligation and subtracting from it its current post-credit event market value. Physical settlement involves the protection seller taking delivery of the reference obligation versus the payment of par. An advantage of physical settlement is that potential disputes over the fair market price of a post-credit event reference obligation are avoided.

Trade Rationale

- Credit default swaps can be tailored to meet specific investment needs. Investors can choose the reference credit, term (typically one to five years), or notional amount and currency.
- Credit default swaps can be used to offload exposure whilst maintaining client relationships. An application of this would be a bank with a loan to a client buying default protection on the exposure to the client. This hedge need not necessarily be disclosed to the client.
- For investors with balance-sheet/funding constraints, being a seller of protection (hence a receiver of a periodic fee) can be used as an unfunded investment.
- Risk managers may use credit default swaps in order to hedge their risk. By purchasing default protection, they are decreasing their exposure to a potentially risky credit and freeing credit lines.

Applying Credit Derivatives in Loan Portfolio Management

Improved risk measurement systems have enabled banks to isolate specific components of portfolio risks. The credit derivative market has developed tools to effectively manage these specific risks. Loan portfolio management has driven a convergence among credit derivative and asset securitization market activity. This convergence has led to an array of solutions of loan portfolio management.

Researcher concluded that credit derivatives markets are still relatively new and the market is set to continue to grow rapidly in the next few years. An increased focus and better credit derivative valuation models will continue to exacerbate this growth. The existence of credit derivatives and their increasing use in loan portfolio management is exciting. Moreover, structure will seek to find new applications for credit derivatives, which help loan providers, dissect and identify the credit exposure they desire and transfer unwanted exposure to another party. The prospects for the further use of credit derivatives and the increase in structures in which they will feature deserve a watchful eye.

Barbara and Sotiris (2001) in the article title "Service failures and service Recovery in retail banking the customers' perspective", they focus on an empirical investigation of service failures and service recovery in retail banking. Different types of failures and recovery strategies used by Greek banks to them were identified using the critical incident technique.
The importance and benefits of providing service quality are well documented in the academic literature, and business participations strive to design and implements programs to ensure that the customer is satisfied with his/her encounters with a service firm and, in turn, with various dimensions of service quality. However, quality discrepancies and shortfalls are likely to occur, especially when human input is largely responsible for the "Production" and delivery of the offering. The problem that arises for organizations are what happens when a service shortfall occurs; how can they recover form service failure?

In the article, Wei-Shong Lin Peter, Kuo-ChungC Mei Albert Kuo-Chung (2006) "The internal performance measures of bank lending: a value-added approach" define the lending function is considered by the banking industry as the most important function for the

utilization of funds. Since, banks earn their highest gross profits from loans; the administration of loan portfolios seriously affects the profitability of banks. Indeed, the large number of non-performing loans is the main cause of bank failure. Banks are learning to review their risk portfolios using the criteria laid down by Basel II. Greenspan has indicated that Basel's goal is to induce bankers to improve their risk management capability, including how the institutions price products, reserve for loss, and control their operations (Rehm, 2002). This research is in line with the purpose of Basel II, i.e. to reduce a bank's operational risk during the lending process through a better monitoring of the employees in the lending department.

According to them, with respect to performance, banks now use various measures to assess bank efficiency and related functions in the bank lending process. Traditionally, banks determined operating efficiency by using measures of bank profitability, such as return on equity, return on assets, and return on investment; also, banks used operational ratios, such as monetary output per staff member, and total operating expenses per unit of output.

Banks adopted data envelopment analysis (DEA) in the 1990s as the principal method for assessing bank efficiency. DEA is a linear-programming method initially developed by Charnes et al. (1978) to measure the comparative performance of homogeneous organizations. The objective of DEA was to build an efficiency frontier of inputs and outputs, where production is maximized under fixed costs or costs are minimized under restricted production. Thanassoulis (1999) concluded that banks were increasingly using DEA as a tool for assessing, monitoring, and improving performance. The system is widely discussed in recent literature containing banking performance studies. Sherman, Gold (1985), Berg et al. (1993), Ferrier, and Lovell (1990) adopted DEA as a tool for assessing corporate banking performance.

Grasing (2002) described the efforts of the Nolan Company to develop benchmarks for commercial banks involving many of the top performing banks. The goal of establishing the benchmarked banks was to establish drivers of high performance. The cost per each completed loan, the cost per thousand dollars of loans, the non-interest revenue from each

loan per each thousand dollars, the total number of loans per employee, and the dollar amount of loans per employee were used as the performance measures for commercial banking.

As reported by Boucher (1996), measuring the productivity of a loan officer is the key to improving commercial lending performance. The productivity measure of a loan officer is quarterly loan sales. The manager can use this information to analyze the loan officers' quarterly productivity.

Perro and Ruoff (1997) used the value tree to depict some of the values and risk drivers for commercial lending. The drivers of lending revenue are operating fees and interest income that are driven by new loans and existing loan volumes. The drivers of lending expenses consist of interest expense, operating expense, loss revenues and unexpected losses in commercial loans.

In the studies of Grasing and Boucher, as well as those of Perro and Ruoff, all of the performance measures are final measures. Using final measures as the primary tools to evaluate lending performance, however, may result in the following problems:

- Final measures used to evaluate final outputs of the lending process cannot predict in advance whether a lending operation may become a problem loan. That is, the final measures cannot reduce the operational risk of lending in advance.
- In general, the period of lending will be long term – a minimum of three or five years. Performance measures of the lending should concentrate on the quality rather than the quantity of the loan. Therefore, when using final measures as indicators of evaluating loan performance, quarterly or yearly measures are not incompatible with regular performance measures.
- A borrower may pay in accordance with the bank's requirements for one period, but in the next period, he or she can violate or breach the agreement. The regular loan performance measure emphasizes cash flow in, but neglects the quality of each lending process, leading to a possibly biased performance measure.

To resolve the problems that can occur when using final measures as performance indicators, we should choose internal performance measures of bank lending activities as the main analytical core for our study for various reasons. First, the internal measures used can evaluate internal outputs of the lending process. Therefore, these measures can prevent problems loans from occurring in the future. Second, the internal measures can be compatible with a bank's regular performance quarterly or yearly measures. Third, the internal measures are based on quality not quantity, and a quality-based measure can prevent a possible bias in measuring banking loan performance.

Analytical Structure and Value-Added Analysis

This research indicates the importance of using internal measures to evaluate lending performance and resolve any problems derived from using final measures. The main purpose is to monitor and access the lending performance accurately and reduce probability of overdue loans and bad loans.

Before constructing appropriate internal measures, we utilize the concept of a value-added approach to analyze the process of lending activities, which are as follows.

1. Analyzing process of lending activities
2. Finding outputs of process of lending activities
3. Finding internal measures of output of lending activities
4. Finding internal sub-measures to improve the correctness of Capacity and Condition
5. Improving performance of banking loan

Then we find proper outputs of each lending activity and construct internal measures of outputs for those lending activities. Among these internal measures, the analysis of a borrower's capacity and condition is the key factor to estimate the probability of the borrower's ability to repay the loan and interest in the future. To improve loan performance, this research builds on internal sub-measures to monitor employees in the lending department.

In this research, a value-added approach uses a competitive strategy and the concept of the value chain developed by Porter (1985). The research has a specific goal; that is, to determine the appropriate internal performance measure for each activity along the route of the lending process. This production process can be described as a value-added process. The total value added, across the profit production process, can be measured by using the differences between the values of all outputs and inputs. The value-added analysis carefully counts only the incremental profit an activity generates during the production process. The final measure then is referred to as the total value created from this profit production process. The internal measure in this research is referred to as the value created from a specific activity during the process.

In order to increase the added value of each lending activity, the lending process is analyzed to find the appropriate internal performance measure for each activity along the lending production process. Schuler and Jackson (1996) revealed three basic types of performance measure criteria: trait-based, behavior-based, and outcome-based. The benefit represents the performance outcome of a lending-related employee, but not the trait, or the behavior. These internal measures are used to monitor and enhance the quality of each lending activity. Consequently, the characteristics of these internal measures become mainly outcome-based and quality-oriented.

Process and Work Analysis of Bank Lending Activity

Johnson and Johnson (1985), Hempel and Simonson (1999) and Koch and Macdonald (2000) all pointed out that the activities in the process of commercial and industrial(C&I) loans follow eight steps. These steps are application, credit analysis, decision, document preparation, closing, recording, servicing and administration, and collection.

The first step of the C&I loan process is the application, which is conducted by a loan officer. This step covers the initial interview and screening of a loan request. Initially, the loan officer obtains as much information as possible about the situation of the borrower, for example, his or her previous credit history, current outstanding loans, and current financial statement. The loan officer gathers company information, including legal status, principal

employees, main products or services sold, production techniques employed, important competitors, and directors of the company.

The second step is the credit analysis conducted by the credit department. First, the analyst in the credit department receives the financial information of the borrower gathered by the loan officer; then he or she conducts a comparative and historic analysis of the company's financial data. After finishing the financial comparative analysis, the analyst prepares a recommendation report for the loan officer about whether the loan should be granted, rejected, or qualified.

In the third step, the loan officer obtains the credit analysis report and determines whether the report accurately describes the borrowing capacity and characteristics of the borrower. The loan officer then grants the loan with or without considerations of collateral. The loan officer notifies the borrower of his or her decision and proceeds to negotiate loan terms if the loan is to be granted.

When the loan officer and the borrowing company are in agreement, the fourth step is the loan operation. Here it is necessary to prepare primary notes, agreements, collateral or non-collateral agreements. If collateral is required, the amount of collateral and additional collateral documentation are indicated.

In the fifth step, the loan officer obtains the borrower's signatures and receives collateral; then the loan operation is closed and the loan proceeds.

The sixth step is the recording of the loan conducted by the loan operation and credit department staff. A loan operation clerk classifies and codes the loan for entry into the commercial loan system, and he or she reviews the loan for compliance with the bank's loan policies. Finally, the loan operation clerk and credit department staff member file the loan notes, authorization, and receipts in designated files.

The seventh step is loan servicing and administration conducted by a loan operation operator, a loan officer, a credit department staff member, and a financial analyst. The loan operation staff person prepares the loan payment notices to notify the borrower and is responsible for receiving periodic payments. The loan officer makes periodic visits and customer calls to obtain new financial statements from the borrower and provides that information to credit department and reviews the loan for compliance with the loan agreement. A credit department financial analyst also receives and reviews the borrower's periodic financial statements.

In the eighth stage, the loan officer may receive periodic delinquency information and need to follow up on this with borrowers. The loan officer also needs to adjust loan terms and conditions as deemed necessary, and to take legal action if non-collectible procedures and foreclosure on the loan are required.

After analyzing these lending activities, a value chain of lending activities can be identified, and the rationale for determining how values are created can be determined.

Outputs of Bank Lending Activities

It can be observed from the work analysis in the previous section that the particular process of lending covers eight important activities – application, credit analysis, decision, document preparation, closing, recording, servicing and administration and collection. This study employs the work analysis for activities at each stage of the lending process using with a value-added approach, to find the appropriate outputs.

Internal Measures before Lending Decision

As analyzed above, internal measures are used to monitor and enhance the quality of each lending activity. Hence, the internal measures become the measures of the value or quality of outputs. The visiting report is the output after the activity of application. The purpose of the visiting report is to help the loan officer understand the borrower's associated problems. The factors for evaluation generally used in this situation are in line with the 6C principles of basic lending. These 6C's are character, capacity, capital, collateral, conditions and control

(Rose, 1991), which are also important reference indexes for banks when making a credit analysis to decide whether or not a borrower is worthy of a loan.

Viewed overall, according to the 6C principles, the internal measure for measuring the value or quality of the output at this stage, regarding the visiting report, can be determined by whether the collection of information by the loan officer concerning the 6C's is accurate and complete, or not.

By analyzing a borrower's situation using the 6C principles, the comparatively more difficult situations encountered by a loan officer become capacity and condition because in addition to the understanding and analysis of the information about capacity and condition. It is also necessary to determine whether any future changes will affect the financial situation and the loan repaying ability of an enterprise. Therefore, if an excellent, professional loan officer can accurately and completely collect information in these capacity and condition, the value of the visiting report will be high.

When a loan officer completes the visiting report, he or she enters the activity of credit analysis. The primarily outputs of this activity are the financial analysis report and the recommendation report. The credit analyst has to proceed with financial analysis first in accordance with the business financial reports and related documents collected the loan officer, and turn them into relevant financial reports.

At this stage, the internal measure is used to measure the quality of the analysis the loan recommendation report, as prepared by the analyst at the credit department using the 6C information. In other words, a comprehensive description and explanation must be provided regarding how to carry out the analysis and whether to approve object to the loan.

During the Analytical Process of this stage, there are two difficulties:

1. How to analyze and predict the borrower's recent financial situation and loan repaying ability according to the collected information regarding capacity and condition of the borrower; and

2. How to provide an appropriate recommendation as to the interest rate of the loan, since only good recommendations will cause the bank not to incur a loss

Thus, if the associated staff at the credit department can conquer these two difficulties, the value and quality of the financial analysis report and recommendation report can be enhanced.

When the above two reports are complete, they are submitted to the loan officer who proceeds with the decision-making process of the loan. The outputs after entering the third activity, the decision-making, consist of the report of the decision and the final C&I loan terms. When a loan officer proceeds with the lending decision in accordance with the recommendation offered by the credit department, there will be three follow-up circumstances. The first is where both the credit department and loan officer object to the lending. The second is where both approve of the loan. The third is where either entity objects to the lending. If one party objects, the objecting party must explain his or her reasons in the report regarding that decision. Generally speaking, main differences of opinion regarding the loan can arise from different opinions and viewpoints held about the estimation of the future development of the borrower. Under these circumstances, the internal measure used to measure the outputs at this stage the loan process relates to the quality of the 6C information used in the report of the decision provides an explanation and prediction of the future financial condition of the corporate enterprise seeking the loan.

When both object to the lending, the entire lending process comes to an end, and there will be no activity and output at the next stage. On the other hand, when both approve of the loan, the loan officer will notify the borrower and move on to the negotiation of the lending conditions, the next step. The interest rate of the loan is then used as the internal measure for the outputs at this stage. The interest rate is based the estimated risk of a particular borrower, therefore, the higher the lending interest rates after negotiation, the higher the value of the outputs. To avoid the adverse selection problem, i.e. that the higher lending interest rates are associated with higher loan risk, the internal performance measure approach here tries to

reduce the asymmetric information between borrower and bank by monitoring the employees and accurately assess the borrower's management capability and its strategic fit.

Internal Measures for Lending Documentation

When the lending is confirmed and related lending terms are negotiated, the stage of document preparation begins. The outputs of this stage are the documents and contracts related to this loan. The internal measure for assessing the outputs refers to the accuracy achieved in the preparation of the loan-related documents and contracts. The purpose here is to avoid differences in the terms of negotiation set down in the relevant documents. After this step, the completed documents and contracts are submitted to the loan officer for processing and signing by the borrower. Following this exercise, the entire lending process moves to the closing stage.

The output of the closing stage is the received document or collateral. The internal measures here will indicate whether the documents and contracts selected and received are complete, and whether the amount and quality of the collateral conform to the executed decision report. Next, the person in charge needs to submit relevant documents and information to the loan operation and credit department for the recording stage. The important outputs of this stage are the operating files and credit files. The internal measure at this stage is a determination of whether any documents are missing. The bank must be prevented during the document review and loan information stages from inaccurate assessments of the borrower because of incomplete information, as well as inaccurate assessments of the entire lending process at hand, again because of missing documents.

Internal Measures for Loan Review

The pre-operation of the entire loan comes to an end upon the completion of the recording of the lending document. Following this stage is the servicing and administration for lending processes executed by the bank, such as loan review, the most crucial aspect. The main purposes now are to understand the borrowing enterprise and to continue supervising and monitoring for any possible future changes and difficulties that the enterprise may

experience. Such administration and monitoring will ensure that the entire lending process will be accomplished successfully.

The output upon the completion of the loan operation is the term report of payment, and the aim of which is to determine regularly all aspects of the borrower's loan payment costs. Thus, the internal measure selected for assessment at this stage is whether and when to make a timely reaction to any irregular payment by the borrower. In the next stage, the loan officer has to pay regular visits to acquire an understanding of the borrower's current and future situation and collect related information. The output of this stage is the term report after a periodic inspection visit. This collection of information should follow the 6C principles at the application stage and involve a comparison of differences in the corresponding information that was involved at successive stages of the loan process. The internal measure for assessing the output of this stage rests on the accuracy and completeness of the 6C information collected during the periodic inspection process.

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After the visits, the report made by the loan officer is submitted to the credit department for financial review and for new or renewed recommendations. Thus, the term report of financial analysis and recommendation become the outputs. The aim is to truly understand whether the borrower's own financial situation and structure have altered and if the originally promised value of collateral differs from later assessments.

Consequently, the internal measure for assessing the output of this stage takes on the nature of the former stage of credit analysis as reference, that is, the quality of the analysis of recommendation report regarding 6C information.

In this stage, the loan officer and credit department staff can still face problem described previously that has been identified, i.e. that either entity objects to the continuing lending. When these two persons in charge recognize that changes in the borrower's current financial situation have occurred and result can be a slump in the entire industrial environment and market, the possibility of collecting the loan back early must be addressed. Certainly, a wrong decision here will affect the profit earnings of this loan.

When the entire lending process has come to an end, the output of this stage represents the profit earning status of the loan, which is also the final measure of the loan in terms of lending performance assessment.

The researcher concluded that the final measures were mainly used to carry out performance assessment in evaluating bank lending performance. However, these methods usually created problems, such as the incapability of predicting whether a particular lending operation might turn into a problem loan; the inconsistency in the point of timing during performance assessment, the problematic length of time for routine assessment; and the neglecting of internal quality control in the entire lending process.

To prevent such problems, an internal measure approach can be used to monitor the value added at each stage along the vertical chain of lending activity. The internal measure at each stage is the output of the employee's service at each stage. The main concern then becomes the quality of these outputs. Among these measures, the specific internal measures used to evaluate the accuracy of a loan officer's analysis of the borrower's capacity and condition are critical to reducing overdue loans and bad debts.

Such measures are mainly adopted in order to analyze the borrower's strategies and organizational architecture. Considerable research has proved that the borrower's strategies and organizational architecture to be the most important determinants of firm profitability and the firm's ability to repay the banking loan. To this end, we have constructed a comprehensive analytical framework that will improve the accuracy of analyzing a borrower's capacity and condition.

Compared with final measures (DEA, benchmark, and productivity measures), the internal measures proposed in this research are more subjective. Such subjectivity is the characteristic of quality-oriented measure. The best we can do in this research instance is to provide a monitoring direction, not the exact scale of these measures. To implement such internal measure system, we offer two suggestions:

1. to enhance the ability of a lending department to review a borrower's capacity and condition, the bank should provide more training programs in business strategy and organizational management to the employees in the lending department; and
2. To evaluate the job performance of these department employees, banks should select their performance evaluators from those with superior knowledge in business strategies and organizational management.

The major benefit of using an internal measure to monitor the output quality of the employees in a lending department is a reduction in the likelihood of employee moral hazard behaviors. This reduction in turn would ease the lending operational risk, one of the main purposes of Basel II. To cope with employee fraud, a monitoring system of double checks from upper level managers about the rightness of any loan is a must. However, the asymmetric information between senior manager and the employee in a lending department about the employee's wrong doing always will exist. To effectively use local knowledge about possible fraud from a particular employee, assigning loan decision rights to teams might effectively prevent individual fraud. The final decision for a loan should be made through consensus or some type of voting mechanism among any team members who have participated in the evaluation process for the loan. Further study regarding team decision as well as the separation of decision management and control of lending inside a bank organization might be two of the directions future research can take regarding the prevention of employee fraud.

Corsby, Nick French and Meilanie Oughton (2003), in the article "Bank lending valuation on commercial property, Does European mortgage lending value add anything to the process?" researchers try to find out mortgage lending value in term in Europe should be based on sustainable values and this recommendation is compared to the current basis used for bank lending valuations mainly market value. According to them, the mortgage lending value shall mean that the value of the properly as determined by a valuer making a product assessment of the future marketability of the property by taking into account long-term sustainable aspects of the property, the normal and local market conditions, the current use and alternative appropriate uses of property. Speculative elements shall not be taken into account

in the assessment of the mortgage lending value. The mortgage lending value shall be documented in a transparent and clear manner.

In very simplistic term, bank lending falls into two categories: asset specific and corporate loan. These loans, in turn, can be divided into two further categories of secured and unsecured lending. It is in the case of secured lending that valuations are most directly and commonly used. In unsecured lending valuations are frequently relied on indirectly.

In secured lending, the underlying philosophy has been to determine the value of the assets on which the loan is based and to ensure that the former is greater than the amount borrowed. The degree by which the asset value exceeds the loan provides the margin of assets cover assessed thorough the loan to value ratio. The lender is interested in the position should be the borrower default and have an idea on the amount that the sale of the property asset would realize were the borrower, lender or receiver to sell the asset.

Another principal use of valuations is for assessments of corporate cash flow projections, used in most forms of lending. Here, the valuation figure and liquidity of assets are of equal importance. The valuations are relied on might be directly commissioned by the lender or could have been produced by the borrower other third parties for other reasons for requiring valuation might include calculations of net asset value, justification for granting the second charge; verification of the borrower's veracity decisions on action following the default of the borrower.

However, the changing influence of different types of information does not seem to have reduce lenders' desires for a valuation of the security and a number of initiatives have occurred which attempt to improve the ability of the valuation to underpin the loan decision. According to their view three main aspects of valuation are

i. Improve the communication between lender and valuer and agree more detailed relevant instructions.
ii. Develop new concepts and bases of valuation
iii. Improve the quality of information provision in valuation reporting

They concluded that the problem in valuation is quite straightforward. The banking communities are trying to identify a basis of value to which they can apply a loan value ratio and thus project their loan in the future should the borrower default. A simplistic understanding of value would therefore suggest that the figure provided should be a figure which has a life for the length of the loan. However, this very concept is economically impossible in any market with volatility. Values can only be snapshots in time. They do not have a shelf life. For this reason European mortgage lending valuation is conceptually and particularly redundant in real estate markets. It appears on the surface to be a solution to the banks' requirement for reduced risk property lending. In reality it may indeed transfer that risk by demanding a level of protection to the bank that valuation can not give. But if valuers agree to it, it could be the very to successful negligence claims in the aftermath of poor lending decision. This is because to concept appears to be determination of the virtually certain level of value below which the value will not fall for and indeterminate time into the future.

2.3 Review of National Literature

Nepal Rastra Bank (NRB) has issued directives to all commercial banks and financial institutions ensuring transparency during loan disbursement. As per provision, all commercial banks as well as financial institutions are now required to disclose the name of loan defaulters in every six months. Until now there was no such legal system of disclosing the loan defaulter's name. The new directives have also barred the financial institutions from lending any amount to the blacklisted defaulter and his family members. The Credit Information Bureau (CIB) can blacklist the firm, company or clear the debt within the stipulated period. As per the set criteria for blacklisting, the CIB would monitor those individuals and companies that have the principle loans of above Rs. 1 million. If the creditor fails to clear the amount within time, or is found mission the loans among others, the creditor can be blacklisted. (Central bank tightens blacklisting procedures, p.9)

Due to slowdown in the world economy and deteriorating law and order situation of the country, many sectors if the economy is already sick. When any sector of economy catches cold, bank start sneezing. Form this perspective, the banking industry as a whole is not trust.

Incase of investors having lower income, portfolio management may be limited to small saving income. But the other hand, portfolio management means to invest funds in various schemes of mutual funds like deposits, shares and debentures for the investors with surplus income. Therefore, portfolio management becomes very important for both an individuals as well as institutional investors. Large investors would like to select the best mix of investment assets. (Shrestha, "Portfolio management plays the vital role in individual as well as institutional", p.15)

The investor or whether banks, financial institutions, individuals, private or government sector, must not took the proposal by making decision without having adequate judgment because sometimes they perform out of norms, related studies, policies and techniques. A project appraisal will best viable only if it has accessed through conscious analysis as well as through investment decisions to make its macro and micro level viability effective (Lamichhane "Forty-six years of NRB).

In the article by Chhetri (2005), title "Non Performing Assets: A need for Rationalization" the writer has attempted to provide connation of the term NPA and its potential sources, implication of NPA in financial sector in the South East Asian Region. He had also given possible measures to contain NPA. Loans and advances of financial institutions are meant to be serviced either part of principal of the interest of the amount borrowed on stipulated time as agreed by the parties at the time of loan settlement. Since the date becomes past dues, the loan becomes non-performing asset. The book of the account with lending institution should be effectively operated by means of real transaction effected on the part of the debtor in order to remain loan performing.

As stated by the writer, the definition of NPA differs from country to country. In some of the developing countries of Asia Pacific Economic Cooperation (APEC) forum, a loan is classified as non-performing only after it has been arrear for at least 6 months. Similarly, it is after three months, in India. Loans thus defaulted are classified into different categories having their differing implication on the asset management of financial institution. He also stated that NPA are classified according to international practice into three categories namely

substandard, doubtful and loss depending up on the temporal position of loan default. Thus the degree of NPA assets depends solely on the length of time the asset has been in the form of none obliged by the loaner. The more time it has elapsed the worse condition of the asset is being perceived and such assets are treated accordingly. As per Mr. Chhetri's view, failure of business for which loan was used, defective and below standard credit appraisal system credit program sponsored by government, slowdown in economy recession, diversion of fund is some of the factors leading to accumulation of NPAs.

He said that there is serious implication of NPAs, on financial institution. He further added that the liability of credit institution dies not limit to the amount declared as NPA but extend to extra amount that required for provisioning depends upon the level of NPAs and their quality. As per his view, rising level of NPA create a psyche of worse environment especially in the financial sector. He mentioned that by reviewing the activities of the financial institution like waving interest, rescheduling the loan, writing off the loan, appointing private recovery agent, taking help of tribunals and law of land etc NPA can be reduced.

Finally he concluded that financial institutions are beset with the burden of mounting level of NPAs in developing countries. Such assets debar income flow of the financial institution while claiming additional resources in the form of provisioning thereby hindering gainful investment. Rising level of NPAs cannot be taken as stimulus but the vigilance demanded to solve the problem like this, eventually will generate vigor to gear up the banking and financial activities in more active way contributing to energizing growth.

Neupane (2062) in his article titled "Bad loans of Banking Sector- Challenges and Efforts to resolve it" has thrown some views regarding bad loans of banking sector. As mentioned by him there was various types of risk inherent in the credit. One, who manages risk, earns profit. He further added that the recent financial crisis in banking sector is due to weak accounting procedures, defect in loan classification, lack of transparency, loss control measures etc.

Like the other writers, Neupane has also stated that NPL is the indicator of financial crisis and the factors leading to NPL is economic slowdown, recession, bad intention of borrower, lack of credit policy, increase in interest rate etc. NPL increases resource mobilization cost and reduce profit-earning capacity of the bank. He has also mentioned that the international standard of acceptable NPA is 4% but there us about 16% NPL in Nepalese banking sector which is due to high level of NPL of two nationalized banks, as stated by the writer, the major implications of NPL are banks can not return depositors money on demand and it limits lending capacity of the bank. The writer has suggested internal measures for reducing NPL and its effect. Internal measure comprises classification of loans and advances and providing provisions for probable loss and external measures comprises of help from Credit Information Bureau (CIB), appointment of Asset Management Company (AMC) and Debt Recovery Tribunal (DRT).

Writer concludes, "Banks must give priority for reducing NPA. He has also mentioned that many countries are adopting various measures for reducing loan loss. Recently the president of Philippines has announced tax rebate system for reducing NPA. Now, it is high time to improve bad debts of banking sector with firm determination."

2.4 Lending in the Context of Nepal

Nepal Rastra Bank has issued unified directives to banks and financial institutions for implementation effective Shrawan 1 2062 (16 July 2005). This also contains the new directive concern in loan portfolios and provisioning. Except a few important changes, this directive has retained most of the previous provisions.

Classification of Loan and Advance

The classification criteria are as follows:

Pass Category: All loans and advances the principal of which are not past due or past due for a period up to three months. Only loans under pass category are termed as performing loan.

Substandard Category: All loans and advances the principal of which are past due for a period of more than three months and up to six months.

Doubtful Category: All loans and advances the principal of which are past due for a period more than six months and up to one year.

Loss Category: All loans and advances the principal of which are past due for a period of more than one year.

Lending institutions are not restricted from classifying the loan and advance from low risk category to high-risk category. For instances, loans falling under sub standard may be classified into doubtful or loss and loans falling under doubtful may be classified into loss category.

Additional Arrangement in Respect of 'Pass Loan'

All loans and advances extended against gold and silver, fixed deposit receipts, credit card and against security of government securities and NRB bonds shall be included under pass category. In other words, loan against these collateral shall be eligible for placing under pass category irrespective of the past due period. However, where collateral of fixed deposit receipt or government securities or NRB bonds is placed as additional security against loan for other purposes, such loans have to be classified as required for other loans. As per the classification issued by Nepal Rastra Bank earlier, loan against fixed deposit receipts of other banks shall also quality for inclusion under pass loan. However, this is not clarified in the Unified Directives.

Renewal of working capital loan having one year maturity period only may be classified as pass loan. Loans of working capital nature on which the service of interest is not regular shall be classified on the bases of total amount due period. Means, where the interest on working capital loan is not serviced regularly, such loans will be considered as 'overdue' and quality for classification on the basis of the overdue period. Accordingly, working capital loan will simple become pass loan on renewal of the facility provided interest is serviced regularly. The directive has not prohibited renewal of working capital facility with extended amount and outstanding interest amount is assumed collected by accommodating the same within that extended facility.

Additional Arrangement in Respect of 'Loss' Loan

Irrespective of whether the loan is past due or not, loans having any of the following discrepancies shall be classified as loan loss.

a) Loan with inadequate securities

This is very subjective and may lead to a difference in opinion between the lending institutions and auditors/NRB inspectors.

b) The borrower has been declared bankrupt

The bankruptcy law is yet to be enacted in the absence of the same; definition of bankrupt person may be imported form the 'Civil Code'.

c) The borrower is absconding or cannot he found

d) Purchased of discounted bills not realized within 90 days from the due data and non-fund base facilities like letters of credit and guarantee converted into fund base credit not realized within 90 days from the conversion data.

e) Misuse of credit

For this purpose, term 'misuse' means the credit has not been used for the purposed originally intended, non-operation of project, income earned form the project/ business are not used in repaying loan and advances but used for a other purposes, certified misuse if credit and facilities by the supervisions and auditors in course of the supervision or audit. As per the clarification provided by NRB earlier, even partial diversification of the credit is of allowed.

f) Project/ Business are not condition to operate or not in condition to operate. Accordingly, loan to entities not in operation but condition exists as to their operation may not qualify for loss categorization under this clause. Once restructuring process is considered, classification into loss category may not be necessary for temporarily closed down business.

g) Credit and loan is not written-off within 90 days from the due date.

Additional Arrangement in respect of Term Loan

In respect of loans (having the maturity period of more than one year period), the classification shall be made against the entire outstanding loan on the basis of the past sue period of overdue installment of principal/interest.

As a matter of fact, this provision is seen as the most discouraging factor on the part of banks and financial institutions to lend to the projects. Even in the event of non-payment of a small installment within the stipulated period, the entire project loan, which may be excessively large, shall require classification. This may have huge negative effect in the profitability of the financial institution. Accordingly, with a view to facilitate project lending particularly in this hour of insecurity feeling some relent in the rule is suggested.

Prohibition to Recover Principal and Interest by Exceeding Overdraft Limit

Principal and interest on loans and advances shall not be recovered by overdrawing the borrower's current account exceeding the limit of overdraft facility.

However, this arrangement shall not be considered as prohibitive for recovering the principal and interest by debating the costumers' account. Where as the system of recovery of principal and interest by debating the costumers' account exists and recovery is made as such resulting in overdraft, which is not settled within one month, then such overdrawn principal amount shall also be liable to be included under the outstanding loan. Such loans shall be downgraded by one step from its current classification. In respect of recognition of interest, the same shall be as per the clause relating to income recognition mentioned in directives no 4.

Income recognition directives require that all interest accruals on loans shall be recognized on cash collection basis only. The above directive allowing the settlement of overdrawn account within one-month period has led to believe that such accrued interest may be recognized if paid within a month's time.

Under this clause, banks and financial institutions may debit the borrower's current account, irrespective of the balance available, for recovery of interest and principal. By doing so, it may buy a month's time for collecting the same. This may save the lending institutions from requiring classifying the loan to a higher category. However, in respect of the interest, the cushion is not available since the directive has expressively mentioned that the recognition of interest shall be on cash basis only (directive no 4 and 15).

Loan Rescheduling and Restructuring

Loans may be rescheduled or restructured only upon submission of a written plan on action by the borrower, which is restructuring on the Following grounds.

a. Evidence of existence of adequate loan documentation and securities.
b. The lending institution is assured as to the possibility of recovery of restructured or rescheduled loan. The term reschedule means process of extending repayment period/time of credit taken by the borrower. And, restructuring means process of changing the nature or conditions of loan/facility, adding or deleting of conditions and change in time limit.

In addition to submission of the written plan of action for rescheduling or restructuring of loan as above, at least 25% of accrued interest outstanding on data of restructuring or rescheduling should have been collected. Renewal of loan by collecting all interest can be classified as pass loan.

In case of restructuring or rescheduling of loan of an industry which is recommended by the sick industry preliminary enquiry and recommendation committee formed under the ministry of industry of Nepal, commerce and supply after recovery of 12% accrued interest and completion of all necessary procedure, provision for loan loss at a minimum of 25% will be required. However, where the loan is restructured or rescheduled by collecting less than 12% interest, such loan shall require loan loss provisioning on past due period basis as is applicable to all.

The term of rescheduling and restructuring may be as per the understanding between the loan provider and borrower. This is true even in the case of recommended sick industries.

At least 25% of total accrued interest up to the date of rescheduling of restructuring should have been collected. In such a case, the classification of the loan will remain in the current position. However, where rescheduling or restructuring is done against collection of all interest meaning all outstanding interest, the loan (principal) will be eligible for classification under pass category. However, it is not dear as to the requisite treatment where portion of interest is waived and balance is collected in full. Where the lending institutions agree to waived interest accruals, the same have to be accounted first to facilitate calculation of 25% interest on reduced outstanding balance.

In the case of sick industries recommended by the committee, rescheduling or restructuring is allowed with collection of less than 12% interest with the condition that loan shall be classified and normal provision is made. In other cases, collection of at least 25% is mandatory for restructuring and rescheduling.

Loan Loss Provisioning

The loan loss provisioning on the outstanding loans and advances and bills purchases shall be done on the basis of classification, as follows:

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

(Source: NRB unified directives 26 July 2005)

Provisions on restructured or rescheduled loans made as follows:

a. A minimum of 12.5% provision shall be made on restrict or restructured loans.
b. In interest of restructuring or rescheduling of deprived sector loan and guaranteed or insured priority sector loan, the requisite provisioning shall be only 25% of the rates stated above.
c. Where the installment of principal and interest if restructured or rescheduled loan is serviced regularly for two consecutive years, such loan can be converted into pass loan.

Rescheduling/restructuring of loan resulting in improvement of classification to lowest risk category (pass) is not prohibited. However, such rescheduled loan shall require provisioning of at least 12.5%. The upper limit of such provisioning requirement is not specified even if a loss loan is reclassified and categorized as pass loan. However, adjustments to loan loss provisioning is allowed only on satisfactory service of the loan up to 2 consecutive years.

Loan loss provisioning on rescheduled/restructured sick industries recommended by sick industry preliminary enquiry and recommendation committee, upon recovery12% outstanding interest is fixed at minimum 25%. Meaning, restructured loss loan can be provided provisioning at 25% (upper limit is not prohibited though). The only concession provided in this case is rescheduling is made possible against collection of 12%. At the same time, the provisioning is required at minimum 25% (in other cases it is 12.5%).

Full provisioning shall be made against the uninsured priority, deprived sector loans and small and medium scale industrial loans

Provisioning against Priority Sector Lending

Full provisioning as per normal loan loss provisioning shall be made against the uninsured priority and deprived sector loans. However in respect of insured loans the requisite provisioning shall be 25% of the percentage normal loan loss provisioning. The required provisioning in the case of insured priority/deprived sector credit is as follows;

Pass	0.25%
Substandard	5%
Doubtful	12.5%
Loss	25%

2.5 Lending Practices in Nepal

Ojha (2002), in his dissertation about “lending practices” has found that the high volume of liquidity reveals that a degree of lending strength has been prevailing in all of the commercial banks. The lack of reliable lending opportunities and fear of losing the principal in rural

sector has been keeping these banks less oriented towards the lending function. Hence, the government should take appropriate action to initiate these banks to attract to flow credit in rural economy. Posing the compulsions by directives does not create long-term healthy lending practices unless the commercial banks are not self-motivated to flow credit in this sector.

He has found out that following the normal guidance of Nepal Rastra Bank and acting upon reduces many on the credit risk arising from borrower's defaulter, lack of proper credit appraisal, defaulter by blacklisted borrowers, and professional defaulter. The over confidence of commercial banks regarding credit appraisal efficiency and negligence taking information from Credit Information Bureau has caused many of the bad debts in these banks. He thinks that these banks have to follow the directives of NRB strictly and be more cautious and realistic while granting loans and advances.

Ojha has written that the commercial banks have to expand their credit in the area if rural economy so as to compromise between the liquidity and credit need such economy. This helps in minimizing the idle find in business and at the same time contribute to the national economy. The banks should also increase the volume of credit in the sector of agriculture as the ratio of contribution made by the banks in this priority sector is decreasing.

Khadka (2002) has carried out research on "A Comparative Study on Investment Policy of Commercial Banks NBL, NABIL, SCBNL and NIBL" with objective to find out the relationship between deposits, investments, loans and advances and net profit. She found that NBL is comparatively less successful in on balance sheet as well as off-balance sheet operations than that of other CBs. It predicts that in the coming days if it could not mobilize and utilize its resources as efficiently as other CBs to maximize the returns, it would lag behind in the comparative market of banking. Profitability positions of NBL are comparatively worse than that of other CBs. It predicts that NBL may not maintain the confidence of shareholders, depositors and its all customers if it cannot increase its volume even in future.

As the bank, experience many difficulties in recovering the loans and advances and their large amount is being blocked as non-performing assets. She suggested that there are urgent needs to workout a suitable mechanism through which the overdue loan can be mobilized.

Shrestha (2004) conducted a thesis "A Study on non-performing loans and loan loss provisioning" of commercial banks" reveled that SCBNL had risk averse attitude on the management or they have policy of investing low in the risky assets i.e. loans and advances as compared to NBL and Nabil because the loans and advance to total asset ratio of NBL, Nabil and SCBNL during the study period was appeared to be 52.3%, 47% and 29.24% respectively.

SCBNL has the higher consistent and variability on ratio during the study period where as the NBL has the lower consistent and variability as comparison to other two banks. Nabil has the moderate level of consistent and variability. In the same way, the proportion of non-performing loan with to loans of NBL was to found higher than other two banks. Not only has the public sectored bank, even private sector bank as Nabil has higher proportion of non-performing loan (i.e, 10.67%). However, in recent time Nabil has shown significant decrement in non-performing asset, which are the result of effective credit management and its efforts of recovering bad loans through the recovery of establishment of recovery cell.

Tamang (2005) conducted a research "A comparative study on credit management of HBL and Nabil bank ltd" has found out that the credit practices of Nbail in terms of loan advances to deposit ratio was found relatively low mean scores than HBL. It indicates that Nabil has been strong to mobilize its total deposit as loan and advance in comparison to HBL. Efficiency in terms of loan and advances to current asset ratio was found higher in Nbail which indicates that short term lending practices of Nabil was relatively good position in his study period. HBL has the best performance to generate interest income. This mean the HBL earned more profit than the Nabil. Lending policy of Nabil bank in terms of loss provision to total loan and advances was found relatively better than that of HBL because the mean score of the result was relatively low (i.e, $0.0451<0.0777$). The finding also showed meaningful that quality of management in both banks was good.

Ghimire (2005) explored in his research “Non-performing assets of commercial bank: cause and effect” found that Nepalese banking sector in recent days are facing several problems. With the level of increasing NPA profitability performance of he bank has been badly affected. To find out the cause of NPA increment with commercial banks basis of loan floatation procedure, follow up practice carried out by the bank for the recovery of overdue loan outstanding, internal responsible factor causing NPA growth have been tried to sort out.

Analysis shows that relationships of borrowers with top level of management as the most adopted basis for floating loan in Nepalese commercial banks. Similarly, respondent identified portfolio management consideration the second basis for floating loan in the certain sectors. Monitoring and control, security offered and financial strength were given average emphasis. It was found that commercial banks are giving least weight on personal integrity of the borrower whole giving loan.

About the internal responsible factor, that contributes turning good loan into bad loan. It was found that bad intension, weak monitoring and miss management are the most responsible factor for NPA growth. Similarly, weak legal provision and credit concentration are found as the least preferred factor in turning good loan ion to bad. Some factors such as lack of portfolio analysis, not having effective credit policy and shortfall on security were identified as having average effect on NPA growth.

In connection to the external factors, it has been found that recession, political and legal issues factors that are more relevant in turning good loan into bad. Likewise, legal provision for recovery as a reason of increment in Non-performing assets in Nepalese banks was found the factor having least impact. Supervision and monitoring system have been identified as average factor. It is therefore can be generalized that economic and industrial recession and not having strong legal provision for loan recovery are the major external factors that have major contribution for the increasing level of NPA.

It was tried to find out the economy sector the commercial bank are giving emphasis for lending. After analysis it was found that more emphasis industry and commercial sectors for

lending in Nepalese commercial banks. However, less than 35% weights are given to service and other sector. One way ANOVA was analyzed to find out the difference among three commercial banks. Result could not identify any significant differences among three commercial banks. Thus, the conclusion can be drawn that Nepalese commercial banks give most priority to trade sector for lending its resources. Same time it is found that service sector are not being given that much emphasis.

Gurung (2006) explored in his research "lending policy and recovery management of Standard Chartered Bank Nepal ltd and Nabil bank ltd" has found out that the deposit collection by the banks shows that increasing but in a fluctuating trend. The trend analysis of deposit collection the increase in deposit collection in the forthcoming years will continue. Out of different types of deposit collection account, higher account has been collected in saving deposit account. Out of the total deposit collection, SCBNL has disbursed 36% of average as a loan and Nabil has disbursed 52% of its deposit collection as a loan disbursement to deposit collection ratio of commercial banks, it is around 60%. Thus this ratio is quite low incasing of sample bank especially of SCBNL. It is further proved by the calculation of correlation coefficient, which is 0.75 and 0.23 of SCBNL and Nabil respectively.

In order to analyze the recovery management of these banks, their loan loss provision and NPL were analyzed. While looking at the loan loss provision of SCBNL it is in decreasing trend from 2002. The correlation coefficient of loan loss provision and loan disbursement of SCBNL is 0.36. While looking at he future trend of loan loss provision its shows the increasing trend in case of SCBNL and the trend of Loan loss provision is decreasing every year in case of Nabil, which is proved by the trend analysis. The correlation of loan loss provision and loan disbursement of Nabil is negative.

Neupane (2006) conducted the research "Non-performing loan and loan loss provisioning of NBL, RBB and NABIL" has found that measurement of lending strength in relative term has revealed that the loan and advance to total assets of NBL is highest but issued loan and advances are not generating the desired income. RBB shows the highest degree of deviation

and variation while Nabil has the most consistent ratio through out the study period. RBB and NBL have highest proportion of the non-performing loan in the total loan portfolio, which exhibit the critical condition of the banks. After taking the management by the foreign management groups NPL is decreasing but its rate is very low as compare to the expenses made for them. Keeping the view of international standard, not only the public sector bank even private sector bank as Nabil has higher proportion of NPL. Nabil has shown significant decrement in NPL, which is the results of banks effective management and its efforts of recovering bad loans through establishment of recovery cell. Correlation between loan and advances and deposit has found that RBB and NBL have negative where as Nabil found positive correlation.

He concluded that tremendously increasing non-performing loan with higher rate is one of the burning problems of Nepalese commercial banks. NBL and RBB has almost more than 50% of market share of deposit and resource, but these two banks are facing vicious circle of NPL resulting high provision. These banks have higher percentage of market share in lending too, which are the most income generating assets but operating in loss since long time. Ineffective credit policy, overvaluation of collateral in disbursement of loan are the major causes of mounting non performing assets in government owned banks NBL and RBB. In addition, leading factors of accumulating NPAs are also improper credit appraisal system; ineffective credit monitoring and supervision system, economic slowdown, borrower's misconduct etc are the major factors leading to non-performing assets. Proper classification of and close review of loans enable banks to monitor loan portfolio and take remedial step to safeguard deterioration of its credit equality. Furthermore, setting up recovery cell, hiring assets Management Company, fair and highly skilled management for lending and m monitoring of credit are some of the majors to solve the problem of nonperforming assets in Nepalese financial sector. Present NRB unified directives are more effective than previous as a result proper classification of loans and adequate provisioning for the further loss, which reduces profit in short term but can be use a cushion for future distress situation.

2.6 Research Gap

Previous researchers analyzed the lending policy in term of credit practices, credit management or lending practices. The past researches in measuring the performance of bank lending have focused on the final measures that are incapable of solving the problems of overdue loans and bad debts. Actually speaking, lending management is determined by various factors. Researchers are not properly analyzed about portfolio of lending and its impact on the profitability in Nepalese context. In this study portfolio of lending is measuring by lending practices, trend analysis and various statistical tool as well as financial tools are used for analyzing survey data. Bank's internal performance for its lending is crucial and it has great value in lending management. Other factors such banking environment, quality of management in terms of lending may be the strong determinant for lending management in banks. Clearly these are the issue in Nepalese commercial bank the previous scholar could not the present facts. This study tries to define lending management by applying lending portfolio management, priority sector lending, non-performing loan analysis and financial condition analysis. Probably this will be the new research in the area of lending management.

CHAPTER-III

RESEARCH METHODOLOGY

Research methodology is away to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. Research is the process of a systematic in –depth study or search of any particular topic, subject or area of investigation backed by the collection, complication, presentation and interpretation of relevant details or data. Methodology refers to the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind it. So that research methodology is a systematic way of conducting the research in an effective and practical so that it can explain how the research is done.

This chapter describes the employed in this study. Research methodology is a way to systematically solve the research problem. In other words, research methodology describes the methods processes applied in the entire aspect of the study. This chapter describes research design, population and sample procedure, and sources of data and analysis of data.

3.1 Research Design

This study follows the descriptive as well as analytical method of the analysis to meet the stated objectives of the study. Descriptive studies are primarily concerned to find out 'what is'. The secondary data were analyzed as the part of the analytical study. Few financial statements of selected commercial banks were tabulated using spreadsheet.

3.2 Sources of Data

The research is based on secondary source of data. Published financial statements of commercial basks were collected. Similarly, financial statement of selected banks and NRB related information were collected and tabulated in spreadsheet. Such secondary information was gathered form the concerning department of the concerned banks.

3.3 Population and Sample Survey Design

A small portion chosen form the population for studying its properties is called sample and the number of units in the sample is known as the sample size. The method of selecting for study a small portion of the population to draw conclusion about characteristics of the population is known as sampling. Sampling may be defined as the selection on part of the population on the basis of which a judgment or inference about the universe is made.

In this research only two banks are taken out of 25 commercial banks. The first bank of Nepal and first private sector joint-venture bank are taken for study. The sample organizations are follows:

Nepal Bank Limited

Nabil Bank Limited

3.4 Methods of Data Collection

The required data i.e. relevant reposts and statements for analysis are directly collected from the credit administration department, account department of NBL, annual report of Nabil collected form website of the bank, statistical bulletin published by NRB and other publication from NRB, magazine, newspaper and other relevant materials and information were collected from the Central Library, Shanker Dev Campus library and NRB library and other related website.

3.5 Data Processing Technique

First of all raw information have been received. After collection of raw information the processing has been done. Then after, all collected data have been grouped accordingly to their nature in their tabular and chart y selecting relevant data. The collected data are presented and refined for the purpose of the study. This processing procedure is required for sequential analysis of data to meet the objective of this research.

3.6 Tools and Techniques Employed

To make the study more specific and reliable, the following types of tools were used for analysis of data

a. Financial tools
b. Statistical tools

To meet the objectives of the study data were analyzed by using financial tools such as ratio analysis, percentage etc. Graph chart and table were used to support analysis. Similarly some data were analyzed through software package for social studies (SPSS) version. Statistical tools such as mean, correlation coefficient ANOVA and probable error are also used for data analysis.

Financial Tools Used

The financial tools are used to examine the financial strengths and weaknesses of the bank. The tools used in this study are as follows

i. Loan and advances to deposit ratio
ii. Non-performing loan to loan and advance ratio
iii. Priority sector lending to loan and advance ratio
iv. Total profit to loan and advance ratio

Statistical Tools Used

The statistical tools are used in this study is follows

1. Coefficient of correlation analysis (r): Correlation coefficient is used to define the relationship between deposit, NPL and LLP with loan and advance.

$$\text{Correlation (r)} = \frac{N \quad XY \; Z \quad X \mid \quad Y}{\sqrt{N \quad X2 \; Z(\quad X)2} \quad \sqrt{N \quad Y2 \; Z(\quad Y)2}}$$

2. Coefficient of determination (r^2)

3. Probable Error (P.E) = $0.6745 \mid \frac{1 Z r2}{\sqrt{n}}$

4. Regression and SPSS analysis: Regression analysis is used as a tool of determining the strength relationship between profit, deposit loan and advance and NPL.
    i. ANOVA
    ii. F and t statistics
    iii. Beta

CHAPTER-IV

DATA PRESENTATION AND ANALYSIS

Presentation and analysis of data is very important stage of research. Its main purpose is to change the unprocessed data into understandable form. It is the process of organizing the data by tabulating and then placing that data in presentable form by using carious table, figures and sources.

Lending management is one of the most important factors that have developed to facilitate effective performance of bank management. Lending management is the formal expression of the commercial banks' goals and objectives sated in financial term for specific future period. Credit is the very basic indicator for determining profit. This chapter deals with the various aspects of lending management such as financial analysis, portfolio of lending, priority sector lending, non-performing loan correlation and trend analysis.

4.1 Financial Condition Analysis of Nepal Bank Limited and Nabil Bank limited

Financial analysis assists in identifying the major strengths and weaknesses of any institutions. It indicates whether a company has enough cash to meet its obligations and ability utilize properly their available resources. Financial analysis can also be used to assess the company's liability as and ongoing and determine whether a satisfactory return is being earned for the risks return. Thus, financial condition of the banks in terms of lending management is necessary to find out the comparative credit practices between the competitors.

The financial conditions are normally examined by comparing various types of financial tools such loan deposit ratio, profitability to loan ratio, profit to total assts etc between two more forms.

Below are the comparative analysis of the NBL and Nabil.

i) Total Loan and Advance to Total Deposit Ratio

The main sources of bank's lending depend on its deposit. This ratio is calculated to find out how successfully the banks are utilizing their deposits on loan and advances for profit generating activities greater ratio indicates the better utilization of total deposits. The ratios are presented in the following table.

Table 4.1

Total Loan and Advances to Total Deposit Ratio

Year	2003/04	2004/05	2005/06	2006/07	2007/08
NBL	0.5179	0.5020	0.4694	0.3472	0.3553
Nabil	0.6034	0.6055	0.7505	0.6863	0.6813

Source: Annual Report and Concerning Department of Respective Banks.

Table 4.1 shows total deposit, total loan and lending deposit ratio of NBL and Nabil. The ratio of NBL is in decreasing trend; ratio of Nabil is in increasing trend up to 2005/06, and then has declined. It seems that Nabil has utilized the most of its collected funds in the year 2005/06.

Further Nabil has higher loan and advances to total deposit ratio than NBL. It indicates that Nabil seems to be efficient in mobilizing its total deposit in the form of loan and advances. The table indicates there are high difference in loan to total deposit ratio form 2005/06 between NBL and Nabil. From the analysis Nabil seems better performer in utilizing its collected fund in the form of loan and advances. NBL has not more utilizing its collected funds. There are many reasons like the political crisis and instability for the lesser ratio of total loan and advance and deposit. Borrower intention of not paying interest and principal in time is another reason for less utilizing collected funds of NBL.

ii) Non-Performing Loans to Total Loan and Advance Ratio

Non-performing loan is the financial burden for the financial institution. In Nepal, NRB has classified nonperforming loan as substandard, doubtful and loss. NRB has directed all commercial banks to create loan loss provision against the different types of nonperforming

loan in different ratio. The following table represents the non-performing loan to total loan ratio.``

Table 4.2

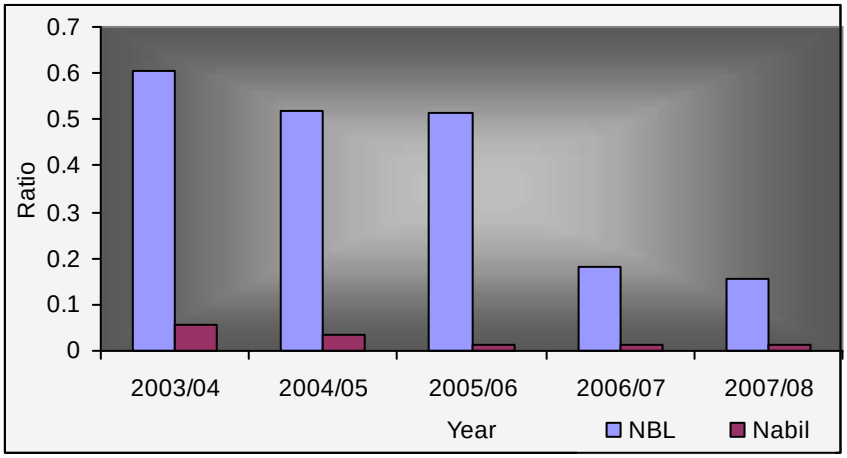
Non-performing Loan to Total Loan and Advances Ratio

Year	2003/04	2004/05	2005/06	2006/07	2007/08
NBL	0.6045	0.5198	0.5152	0.1819	0.1534
Nabil	0.0554	0.0335	0.0132	0.0138	0.0112

Source: Annual Report and Concerning Department of Respective Banks

Figure 4.1

Non-Performing Loan to Total Loan and Advances Ratio



The table 4.1 indicates the ratio of nonperforming loan of Nepal bank ltd and Nabil bank ltd. In comparison government, owned bank NBL has more proportion of NPL than private Bank Nabil. Non-performing loan of both banks seem decreasing in trend. NBL was able to decrease the ratio of NPL during the period, for instance in 2003/04 it was0.6045 NPL out of total loan but in 2007/08 it is only 0.1534. After the privatization of Management, NPL of Nepal bank has tremendously decreased. However, NPL of Nepal bank was decreased, yet it was beyond international standard ratio of 3%. Even Nabil bank had crossed it in year 2003/04 and 2004/05.

The result showed banking sector is seriously affected by the non-performing loan. The higher volume of non-performing loan results increased in loan loss provision amount and then it eventually reduces the profit.

iii) Priority Sector Lending (PSL) to Total Loan and Advance Ratio

Commercial banks invest some part of loan to the priority and deprived sector. For example, banks grant loan on agriculture, domestic industries, services, and power sector and machine and import raw materials is called priority sector lending. There are two categories of priority sector credit such as insured and uninsured. The table 4.1 represents priority sector lending to total loan and advance ratio.

Table 4.3

Priority Sector Lending (PSL) to Total Loan and Advance Ratio

Bank	2003/04	2004/05	2005/06	2006/07	2007/08
NBL	0.0589	0.0507	0.0459	0.0590	0.0408
Nabil	0.1201	0.0991	0.0799	0.0555	0.0690

Source: Annual Report and Concerning Department of Respective Banks

Nabil has maintained higher PSL to total loan and advance ratio with compare NBL. Therefore, Nabil is more conscious about priority sector investment for the economic development of the country. It seems that both banks reduced their investment in priority sector.

iv) Total Profit to Total Loan and Advance Ratio

This ratio measures the percentage of total income against loan and advances. The high ratio indicates the more earnings. The following table represents ratio of total profit over total loan and advance.

Table 4.4

Total Profit to Loan and Advance Ratio

Bank	2003/04	2004/05	2005/06	2006/07	2007/08
NBL	(0.0139)	0.0510	0.1026	0.1067	0.0304
Nabil	0.0513	0.0570	0.0474	0.0478	0.0424

Source: Annual Report and Concerning Department of Respective Banks

In the year 2003/04 NBL suffered the loss. In the year 2004/05 to 2006/07 NBL's profit tremendously increased and in the year 2007/08 profit was diminished in high ratio. The main cause of increased in profit is collecting of NPL and due interest after privatization of management. Nabil had same trend of profit ratio during the period. Profit trend of NBL is more fluctuated than the Nabil.

4.2 Lending Portfolio Analysis

Portfolios are composition of investments in various sectors which in turn are composed of expected risk and return of their component investments. Commercial banks lending portfolio covers auto loan, bills purchase, hire purchase, constructions, productions, consumer loan, deprived sector loan, priority sector loan, margin lending, industrial overdraft, term loan etc. In this portfolio of lending means different types of loan granted by commercial banks. According to the NRB schedule there are twelve heading of portfolio of lending (sector wise lending). This include agriculture, consumable loan, service industries, wholesaler and retailer, productions, constructions, finance insurance and fixed assets, transportation communication and public services, mining, metal production machinery and electrical tools, transportation equipment production and fitting and others. The following table represents the portfolio of lending:

Table 4.5
Percentage of Portfolio of Lending of NBL and Nabil

Year	2003/04		2004/05		2005/06		2006/07		2007/08	
Portfolio of lending	NBL	Nabil	NBL	Nabil	NBL	Nabil	NBL	Nabil	NBL	Nabil
Agriculture	3.84	0.90	4.93	0.64	4.93	0.47	4.95	0.38	3.48	0.34
Consumable loan	6.21	0.64	13.86	0.63	11.09	0.71	22.09	0.65	26.49	0.53
Service industries	14.20	12.42	12.63	11.14	10.98	12.67	4.24	7.64	3.43	7.93
Wholesaler and retailers	22.50	19.97	20.91	18.12	22.63	18.18	20.52	15.58	18.60	15.46
Productions	37.00	49.54	33.84	47.55	36.39	39.97	31.48	38.46	24.85	35.85
Constructions	1.87	1.04	1.85	4.32	1.97	6.08	2.21	10.38	2.71	12.09
Finance, insurance & fixed assets	2.69	3.30	2.33	3.21	4.68	3.05	5.30	3.62	5.04	5.16
Transportation, communication & public services	2.12	4.51	2.17	2.31	1.79	2.64	5.65	5.07	6.28	5.77
Mining	0.26	0.39	0.16	0	0.07	0.26	0.10	0.16	0.05	0.09
Metal production machinery & electrical tools	0.85	0.68	1.10	0.87	1.88	1.29	1.11	0.75	0.58	1.03
Transportation equipment production & fitting	0.27	0.55	0.49	6.93	0.43	9.17	0.24	9.86	0.61	9.23
Others	8.20	6.07	5.73	4.30	3.16	5.51	2.12	7.43	7.88	6.52

Source: Annual Report and Concerning Department of Respective Banks

Table 4.5 shows the percentage of portfolio of lending of Nepal bank ltd and Nabil bank ltd. In agriculture sector investment NBL dominated Nabil. NBL invest more percentage in

agriculture where Nabil invest less than one percent in each year. NBL's investment in consumable loan is increasing each year except mid July 2005. It seems that NBL invest more amounts in consumable loan than the Nabil. Loan disbursement of NBL to service industry was higher than the Nabil. Both banks investment in service industries was in decreasing trend. NBL dominated Nabil in wholesaler and retailers loan. Nabil's investment in wholesale and retail is in decreasing trend. Both bank invested more percentage in this sector. In production lending it seems that Nabil dominated NBL. Both banks invest more than 30% in this sector except NBL in the year 2007/08. Investment made in productions sector by both banks is in decreasing trend. Both bank's investment was in constructions sector is increasing in trend year by year. Nabil invest more percentage in constructions sector than NBL. Lending granted in finances insurance and fixed assets both banks had nearly same ratio. Both banks investment trend in this sector was increasing and fluctuating. In first three year (from 2003/04 to 2005/06) Nabil was dominating NBL in transportation, communication and public sectors. In the year 2004/05 both bank's investment was diminished highly. NBL invested less percent first three years and then it invests more percent in last two years than Nabil. NBL and Nabil invested less than 1% in mining sector. Nabil was not investing in mining in the year 2004/05. NBL dominated Nabil in metal production machinery and electronic tools. Both banks granted lower volume of lending in this sector. Investment made by NBL in transportation equipment production and fitting was lower than the Nabil. It seems that Nabil's increases its loan highly in this sector.

Both banks made portfolio through investing all twelve sectors. But productions sector is the dominant sector because it covered more percent of loan out of total loan granted by both banks. Nabil invested more than 33% in this sector during the study period. Both banks have given second priority for wholesaler and retailer. It seems that NBL gives more priority than Nabil in agricultural investment. Agriculture being the back bond of the economy, Nabil is seems less contributing. Nabil invested less than one percent in consumable loan than the NBL. Both banks gave priority to the service industries but investment made in this sector was in decreasing trend. Furthermore, both banks made optimal portfolio for getting more return by minimizing the risk.

4.3 Priority Sector Lending (PSL) Analysis

All commercial banks must invest at least 3% in priority sector out of total loan and advances. The small loan amount directly and indirectly invest in agriculture, domestic industries, services, power sector and machine and import raw materials is called priority sector lending. There are two categories of priority sector loan insured and uninsured. Uninsured PSL shall need full loan loss provision. However, in case of insured loans, the provisioning requirement will be 25% of the prescribed normal rates.

The table 4.6 represents the total, insured and uninsured PSL of NBL

Table 4.6

Priority Sector Lending of NBL

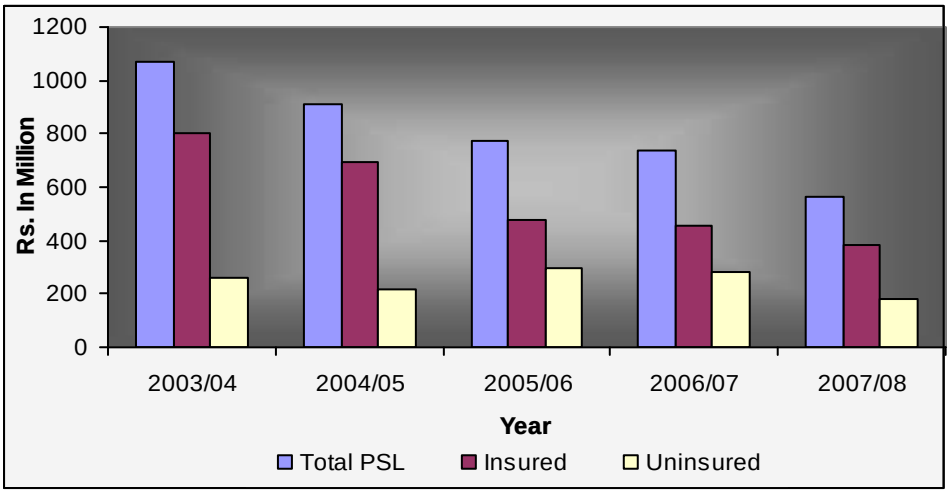
Rs in million

Year	Total PSL	Insured	Uninsured
2003/04	1067.67	804.51	263.16
2004/05	909.34	691.07	218.07
2005/06	774.24	479.28	294.96
2006/07	734.48	452.12	282.36
2007/08	560.63	382.24	178.39

Source: Annual Report and Concerning Department of Respective Banks

Figure 4.2

Priority Sector Lending of NBL



Above table and figure 4.2 shows the priority sector lending under insured and uninsured. Insured PSL is higher than uninsured in the year till 2003/04 to 2007/08. Insured PSL requires small percentage of loan loss provision i.e.0.25%, 5% 12.5%, 25% respectively for pass, substandard, doubtful and loss category Uninsured loan requires 100% loan loss provisioning. It indicates that NBL performed well while making investment in priority sector.

The table 4.7 represents the total, insured and uninsured priority sector lending of Nabil.

Table 4.7

Priority Sector Lending of Nabil

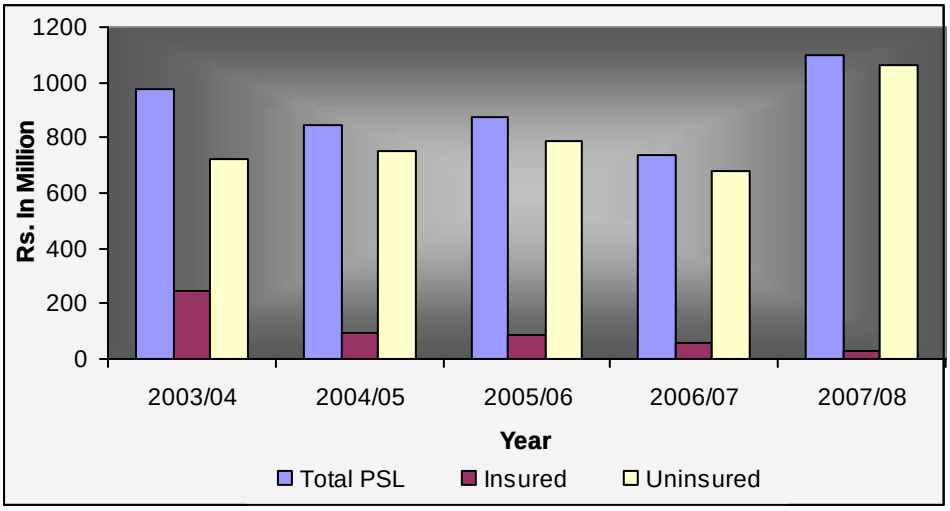
Rs in million

Year	Total PSL	Insured	Uninsured
2003/04	974.05	249.19	724.86
2004/05	848.78	95.85	752.93
2005/06	875.28	86.76	788.51
2006/07	737.26	55.07	682.19
2007/08	1096.96	32.25	1064.71

Source: Annual Report and Concerning Department of Respective Banks

Figure 4.3

Priority Sector Lending of Nabil



Above table and figure shows the PSL under insured and uninsured of Nabil. Nabil has higher volume of uninsured PSL in each of the study period. Above figure shows that Nabil's insured PSL is lesser than uninsured.

It is apparent from table and figure 4.3 and 4.7 NBL invest high volume in insured priority sector and Nabil invest high volume in uninsured priority sector. Uninsured priority sector investment reduces profit because it requires full loan loss provisioning. So, NBL performed well while making investment in PSL.

4.4 Non-Performing Loan Analysis of NBL and Nabil

Non-performing loan is one of the growing problems for the loan granting institution in Nepal as well. Due to unfair intension of borrower and the economic and political crisis in Nepal NPL has become major problem since last 10 year. In Nepal NRB has classified nonperforming loan as substandard, doubtful and loss. NRB has directed all commercial banks create loan loss provision against the types of nonperforming loan in different ratio as 25%, 50% and 100% respectively for the substandard, doubtful and bad loan.

The following table represents the NPL of NBL

Table 4.8

Non-Performing Loan Analysis of NBL

Rs in million

Year	NPL	Substandard	Doubtful	Bad
2003/04	10960.8	1290.8	3001.5	6668.5
2004/05	9324	358.1	1519.4	7386.5
2005/06	8689.3	128.1	249.9	8311.3
2006/07	2263	47.6	87.9	2127.5
2007/08	2110.1	84.4	177.7	1848

Source: Annual Report and Concerning Department of Respective Banks

Figure 4.4

Non-Performing Loan Analysis of NBL

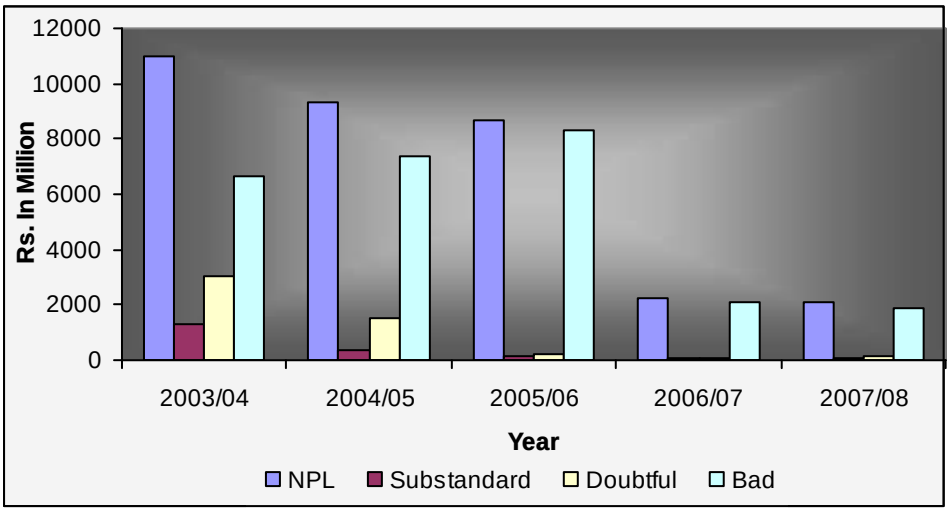


Table and figure 4.4 shows the total NPL, substandard, doubtful and bad loan. Out of total NPL, NBL has high volume of bad loan are Rs 6668.5, Rs 7386.5, Rs 8311.3, Rs 2127.5 and Rs 1848 respectively. Nepal bank ltd has higher volume of loan loss provision. Higher loan loss provision reduced the total profit because it requires 100% loan loss provision. Doubtful loan is also more than substandard in every year of the study period. NBL has lower substandard loan than Nabil. Above figure shows that total NPL of NBL is decreasing highly in year by year.

Following table represents the NPL of Nabil bank ltd

Table 4.9

NPL of Nabil Bank Ltd.

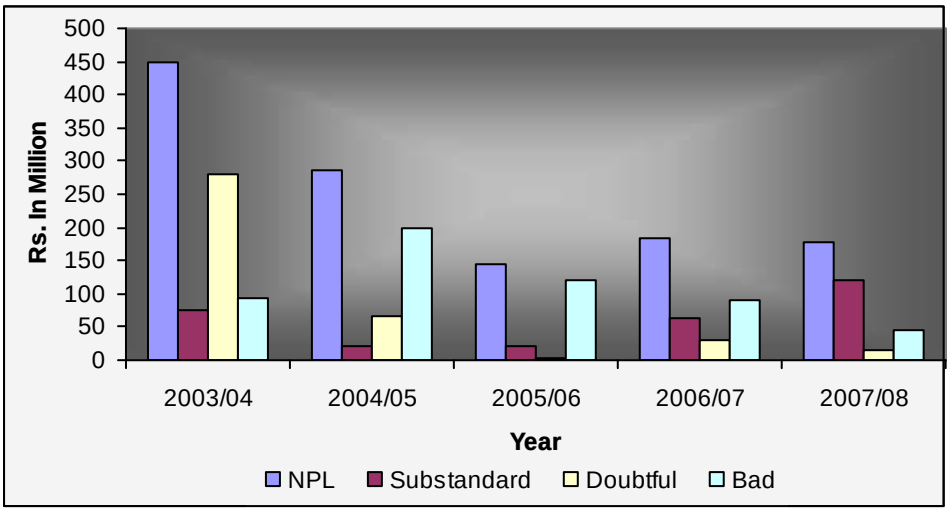
Rs in million

Year	NPL	Substandard	Doubtful	Bad
2003/04	449.6	76.3	279.1	94.2
2004/05	286.7	22.1	65.6	199
2005/06	144.5	22.1	1.93	120.5
2006/07	182.6	62.7	29.5	90.4
2007/08	178.3	119.7	14.5	44.1

Source: Annual Report

Figure 4.5

NPL of Nabil Bank Ltd.



Above table and figure shows the total nonperforming loan and substandard, doubtful and bad loan. Nabil has higher bad loan in the year 2004/05 to 2006/07. In first two of the study period Nabil has high volume of doubtful loan. In the last year of the study period it has higher substandard loan.

Form the table 4.9 and 4.5 figure analysis NBL has higher volume nonperforming loan and it has higher bad loan than others. Higher bad loan indicates that the poor performance and ineffective credit policy of the bank. In sum NPL, NBL has also more volume doubtful loan. Higher the bad and doubtful loan higher volume of loan loss provision (100% and 50% respectively). In comparison Nbail perform better while making credit policy. From the analysis, it is shows that Nabil has effective recovery system than the NBL. NBL is not taking proper legal action to recover its bad loan.

4.5 Correlation Analysis

Correlation coefficient is used to define the relationship between two or more variable. In this study it is used to see the close consistency between two banks.

4.5.1 Correlation Coefficient between Deposit and Loan and Advances of NBL

The correlation and coefficient of partial determination of NBL is presented in the table 4.9

Coefficient of correlation determination between deposit and loan and advances of NBL

Table 4.10

Correlation Coefficient between Deposit and Loan and Advances of NBL

Correlation Coefficient	Coefficient of determination	Probable error	6 P.E
-0.5398	0.2914	0.2137	1.2825

The above table shows that the correlation coefficient between deposit and loan and advances is -0.5398. There is highly negative correlation between loan and advances and deposit collection. The coefficient of determination is 0.2914 which depicts that 29.14% of loan has been explained by the deposit collection. It shows that increase in deposit does not lead to increase loan and advances. In accordance to increase in deposit NBL's loan and advances is decreasing in trend.

Probable error (P.E.) is calculated to be 0.2137 and 6 P.E. is 1.2825. Probable error of the correlation coefficient denoted by P.E. is the measure of testing the reliability of the calculated value of r. Here, 'r' is smaller than 6 P.E. then there is evidence of insignificant correlation between loan and deposit. That further reveals there is insignificant relationship between loan and advances and deposit.

4.5.2 Correlation Coefficient between Deposit and Loan and Advances of Nabil

The correlation and coefficient of determination of Nabil is presented in the table 4.10

Table 4.11

Correlation Coefficient between Deposit and Loan and Advances of Nabil

Correlation Coefficient	Coefficient of determination	Probable error	6 P.E
0.9671	0.9353	0.0195	0.1171

The table shows the correlation coefficient deposit and loan and advances are 0.9671. There is highly positive correlation between loan and advances and deposit collection. It means there is significant relationship between deposit and loan granted. The coefficient of determination is 0.9353 which depicts that 93.53% of loan has been explained by the deposit collection. It shows that increase in deposit leads to increase loan and advances. In accordance to increase in deposit Nabil's loan and advances is increasing trend.

The correlation is statistically significant. Whether it is or not probable error has been calculated too. Probable error of the correlation coefficient denoted by P.E. is the measure of testing the reliability of the calculated value of r. Here, 'r' is greater than 6 P.E. (0.9871>0.1171)) then there is evidence of significant correlation between loan and deposit. That reveals there is significant relationship between loan and advances and deposit. It indicates that credit manager of the bank consider deposit collection to determine the lending.

4.5.3 Correlation coefficient between non-performing loan and loan and advances of NBL

The table 4.11 shows represents the correlation coefficient between NPL and loan and advances

Table 4.12

Correlation coefficient between non-performing loan and loan and advances of NBL

Correlation Coefficient	Coefficient of determination	Probable error	6 P.E
0.9740	0.9487	0.0155	0.093

Table 4.11 shows that correlation coefficient between the non-performing and loan is 0.974. There is highly positive correlation between NPL and loan. That indicates the both NPL and loan decreasing simultaneously. The coefficient of determination is 0.9487 which depicts 94.87% of NPL has explained by the loan. Here "r" is greater than 6 times value P.E., meaning that the correlation coefficient is statistically significant.

4.5.4 Correlation Coefficient between Non-Performing Loan and Loan and Advance of Nabil

The correlation and coefficient of determination of NPL and loan of Nabil is presented in table 4.12

Table 4.13

Correlation Coefficient between Non-Performing Loan and Loan and Advance of Nabil

Correlation Coefficient	Coefficient of determination	Probable error	6 P.E
-0.7127	0.5079	0.1484	0.8906

The table 4.12 explains the relationship between non-performing loan and loan and advances of Nabil. The correlation coefficient of Nabil highly negative (i.e.-0.7127). It shows that there is negative relation between loan and NPL. Here correlation coefficient is lesser than 6 times value, it is not statistically significant. Coefficient of determination is 0.5079 which mean 50.79% total NPL is explained by loan and advances. This indicates that NPL of Nabil has lower volume and decreasing in trend.

4.5.5 Correlation Coefficient between Loan Loss Provision (LLP) and Loan and Advances of NBL and Nabil

The table 4.13 indicates the correlation and coefficient of determination of LLP and loan of NBL.

Table 4.14

Correlation coefficient between Loan Loss Provision (LLP) and Loan and Advances of NBL and Nabil

Banks	Correlation Coefficient	Coefficient of determination	Probable error	6 P.E
NBL	0.9730	0.9467	0.0161	0.0964
Nabil	-0.4178	0.1745	0.2490	1.4940

Table 4.13 shows the correlation coefficient between loan loss provision and loan and advances of NBL and Nabil. Here correlation coefficient of NBL is 0.9730 and it is higher than 6times value of P.E., the correlation coefficient is significant. The correlation coefficient

of Nabil is -0.4178 and 6 time value of P.E. is 1.494. There is negative relation between loan loss provision and loan of Nabil. Here "r" is lesser than 6 times value of P.E. the relationship is not statistically significant. It seems that Nabil has lower volume of LLP; this indicates it has lower volume of NPL.

4.6 Regression Analysis

Regression analysis is used as a tool of determining the strength relationship between two or more variables. Thus it is a statistical device that helps predicting the value of one variable when the values of other variables are known.

4.6.1 Impact of Loan and Advance and Non-Performing Loan on Net Profit

Total loan and non-performing loan have high implication for determining net profit. Effective performing loan and non-performing loan directly affects the net affects of the firm. The net profit of the firm depends on total loan and non-performing loan of the organization. Thus, it is more significance to know the impact of total loan and non-performing loan in net profit.

To find out the impact of the total loan and nonperforming loan on profit, multiple regression analysis was used. The following table represents the regression analysis of the independent variables total loan and advance and non-performing loans on dependent variable net profit of NBL.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.410	.168	-.663	999.70588

a. Predictors: (Constant), NPL, Loan

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	404544.829	2	202272.415	.202	.832
	Residual	1998823.705	2	999411.852		
	Total	2403368.534	4			

a. Predictors: (Constant), NPL, Loan

b. Dependent Variable: Profit

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6005.830	10159.281		.591	.614
	Loan	-.414	.856	-1.376	-.483	.677
	NPL	.199	.529	1.074	.377	.742

a. Dependent Variable: Profit

The calculated R was found .410 indicates that there is low positive relationship dependent variable profit on two independent variables total loan and advance and no-performing loan. After considering the error term, the adjusted R square value was found -0.663 which indicates that of total variation in the dependent variable profit has not been explained by the two independent variables.

Similarly, ANOVA table shows that the result presented above was not significant at 0.10 levels. The result of net profit volume and volume of loan and advance results relatively lower level of F statistics. The lower level of statistic resulted relatively higher level of significance. Although, it seems that the result of loan and advance and non-performing loans was not significant with regard to profit of NBL. Coefficients table indicates that the loan and NPL were not significant at 0.10 levels. It indicates that the loan and NPL were not results to increase the profit of the firm. Other factors such as investments and foreign exchange gain other income leads to increase in profit.

The table represents the regression analysis of dependent variable profit and independent variables loan and advance and NPL of Nabil.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.974(a)	.948	.897	34.24107

a. Predictors: (Constant), NPL, Loan

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42975.508	2	21487.754	18.327	.052(a)
	Residual	2344.902	2	1172.451		
	Total	45320.410	4			

a. Predictors: (Constant), NPL, Loan

b. Dependent Variable: Profit

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	261.402	125.042		2.091	.172
	Loan	.028	.007	.860	3.750	.064
	NPL	-.130	.196	-.152	-.661	.576

a. Dependent Variable: Profit

The R was found to be 0.974 indicates that there is high positive relationship between dependent and independent variables. The adjusted R square was found to be 0.897 considering independent variables outstanding loan and advance, non-performing loan and dependent variable profit. It means that 89.7% of total variation in dependent variable profit has been explained by independents variables loan and advance and NPL. Thus loan and NPL high influence on profit volume. Loan and nonperforming loan can be described as strong determinant for determining of profit.

Similarly, ANOVA table show that the result presented above was significant at 0.10 levels. The result of profit, loan and advance and non-performing loan resulted relatively higher level of F statistic resulted relatively higher level of significance. Although coefficients table shows, it was significantly at overall evaluation, t statistics indicates that the result of loan and advance was significant and NPL was not significant with regard of profit Nabil at 0.10 levels of significance. It can be concluded that loan and advances leads to increased in the profit.

4.6.2 Impact of Total Loan and Advance and Deposit on Net Profit

Total deposit and loan and advance are the strong determinants of profit. Amount deposit and loan and advance directly affect on the profitability of the firm. In the form of loan and advance, efficient mobilization of deposit results to increased profitability of the firm. Therefore, profit of firm depends upon deposit and loan. The table represents the regression analysis between dependent variable profit and independent variables deposit and loan and advances of NBL.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.410(a)	.168	-.664	999.97586

a. Predictors: (Constant), Loan, Deposit

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	403465.082	2	201732.541	.202	.832(a)
	Residual	1999903.452	2	999951.726		
	Total	2403368.534	4			

a. Predictors: (Constant), Loan, Deposit

b. Dependent Variable: Profit

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8760.783	17333.351		.505	.663
	Deposit	-.156	.416	-.288	-.375	.743
	Loan	-.146	.230	-.486	-.634	.591

a. Dependent Variable: Profit

The R 0.41 indicates that there was low degree of positive relationship between the dependent variable profit and independent variables deposit and total loan and advance. The adjusted R square was found to be – 0.664 considering independent variables deposit and loan and advance and dependent variable profit. It means that the variation on profit has not been explained by loan and advance and deposit. It can be concluded that deposit and loan and advance has not high influenced on profit volume and deposit and loan and advance are not strong determinant for determining of profit.

Similarly, ANOVA table shows there was not significant difference in profit due to deposit and loan and advance. F statistic was lower level and it seems that there was lower level of significance. Coefficients table indicates that the results of loan and deposit were not significant at 0.10 levels of significance. This mean there is no sufficient evidence that the profit has caused form the two independent variables. So, deposit and loan and advance was not significance with regard of the profit.

The following table represents the regression analysis between dependent variable profit and independent variables deposit and loan and advances of Nabil.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.969(a)	.938	.877	37.34847

a. Predictors: (Constant), Loan, Deposit

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42530.593	2	21265.297	15.245	.062(a)
	Residual	2789.817	2	1394.908		
	Total	45320.410	4			

a. Predictors: (Constant), Loan, Deposit

b. Dependent Variable: Profit

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	179.065	81.446		2.199	.159
	Deposit	.004	.017	.152	.221	.846
	Loan	.027	.022	.821	1.190	.356

a. Dependent Variable: Profit

The R 0.969 indicates that there was high degree of positive relationship between the dependent variable profit and independent variables deposit and total loan and advance. The adjusted R square was found to be 0.877 considering independent variables deposit and loan and advance and dependent variable profit. It means that 87.7% the variation on profit has been explained by loan and advance and deposit. Therefore, deposit and loan and advance has highly influenced on profit volume. Deposit and loan and advance are strong determinant for determining of profit.

The result of ANOVA shows there was significance difference in profit due to the deposit and loan and advances at 0.1 levels. The higher level of F statistic means relatively higher

level of significance. This mean profit is highly depend on the deposit collection and loan and advances. T statistic deposit and loan and advance were not significance difference with regard to profit in 0.10 levels of significance. This mean there was no sufficient evidence that the profit has caused form the two independent variables.

4.7 Major Findings

The major findings of the study are as follows:

- The deposit collected of both banks during the five year period is in increasing but fluctuating trend. The lending deposit ratio of NBL is in decreasing trend; ratio of Nabil is in increasing trend up to 2005/06, and then falls. It seems that Nabil has utilized the most of its collected funds in the year 2005/06.
- Nabil seems to be efficient in mobilizing its total deposit in the form of loan and advances. Nabil seems to be the best performer in utilizing its collected fund in the form of loan and advances efficiently where as NBL has not more utilizing its collected funds.
- The ratio of nonperforming loan to loan and advances of Nepal bank ltd is higher than that of Nabil bank ltd. In the year 2003/04 to 2005/06 more than 50% of loan of NBL was NPL. Non-performing loan of both banks seem decreasing in trend. NBL was able to decrease the ratio of NPL during the period, in 2003/04 it has 0.6045 NPL out of total loan but in 2007/08 it is only 0.1534. After the privatization of Management, NPL of Nepal bank has tremendously decreased. The result showed banking sector is seriously affected by the non-performing loan.
- The ratio of priority sector to loan and advances, Nabil has maintained higher PSL to total loan and advance ratio as compare NBL. Therefore, Nabil is more conscious about priority sector investment for the economic development of the country. It seems that both banks reduced their investment in priority sector in year by year.
- While analyzing of total profit to loan and advance ratio, in the year 2003/04 NBL suffered from the loss. In the year 2004/05 to 2006/07 NBL's profit tremendously increased and in the year 2007/08 profit was diminished in high ratio. Nabil had same trend of profit ratio in the research period. Nbail has the best profit earning ration in the study period.

- In lending portfolio analysis, both bank invested in different sector. Productions sector is the dominant sector because it covered more percent of loan out of total loan granted by both banks. Nabil invested more than 33% in this sector every year of the research period. Production represents industry and more investment in industrial sector helps to economic development of the nation. Both banks give second priority for wholesaler and retailer. It seems that NBL gives more priority than Nabil in agricultural investment. Agriculture is the back bond of the economy; Nabil invested less than one percent in consumable loan than the NBL in this study period. Both banks give priority to the service industries but investment made in this sector is in decreasing trend. Furthermore, both banks made optimal portfolio for getting more return from then by minimizing the risk.
- While analyzing the priority sector lending, Insured PSL is higher than every year till 2003/04 to 2007/08 of NBL and Nabil has higher volume of uninsured PSL. NBL invest high volume in insured priority sector and Nabil invest high volume in uninsured priority sector. Uninsured priority sector investment reduces profit because it requires full loan loss provisioning. So, NBL performed well while making investment in PSL
- The analysis of non-performing loan in categorized NBL has high volume of bad loan in every year of the study period and Nabil has higher bad loan in the year 2004/05 to 2006/07. NBL has higher volume nonperforming loan and it has higher bad loan than others. Higher bad loan indicates that the poor performance and ineffective credit policy of the bank. In total NPL, NBL has also more volume doubtful loan. Higher the bad and doubtful loan higher volume of loan loss provision (100% and 50% respectively). In comparison Nbail perform good while making credit policy. From above analysis, it is shows that Nabil has effective recovery system than the NBL.
- The correlation coefficient deposit and loan and advances of NBL and Nabil are -0.5398 and 0.9671 respectively. There is highly negative correlation between loan and advances and deposit collection of NBL. Nabil has high positive correlation between loan and advances and deposit collection. After the correlation analysis, NBL shows that increase in deposit does not lead to increase loan and advances.

- The correlation coefficient between the non-performing and loan of NBL 0.974 and.-0.7127 respectively. The correlation coefficient of Nabil highly negative and NBL has highly positive between NPL and loan. This mean both NPL and loan of advance of NBL is in decreasing trend.
- Correlation between loan loss provision and loan and advances of NBL and Nabil are 0.9730 and -0.4178 respectively. There is negative relation between loan loss provision and loan of Nabil. This mean Nabil has lower volume of NPL and loan and advances.
- The value of adjusted R square value was found to be -0.663 and 0.897 of NBL and Nabil considering independent variables loan and advance and non-performing loan and dependent variable profit. It was found to be total variation in the dependent variable profit has not been explained by the two independent variables whereas 89.7% variation has been explained by two independent variables. In the analysis of variance shows that the result of NBL was not found significant at 0.1 level of significance but Nabil‘s result was found significant at same level. In compare in coefficients, loan was found significant at 0.1 levels of Nabil. This means, there was evidence that loan has significantly changed the profitability of the firm.
- The adjusted R square was found to be – 0.664 and 0.877 of NBL and Nabil respectively considering independent variables deposit and loan and advance and dependent variable profit. It means that the variation on profit of NBL has not been explained by loan and advance and deposit and 87.7% the variation on profit of Nabil has been explained by loan and advance and deposit. ANOVA shows Nabil and NBL results shows that there was not significance difference in profit due to the deposit and loan and advances at 10% level. Although, t statistic shows there was significance difference in profit due the deposit and loan and advance of Nabil.

CHAPTER-V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Banks & financial institutions are the backbone of the economic development of a country. They have promoted industrialization & economic development by channeling the public deposit into industrial as well as agricultural sector. Commercial banks play an important role in the economic development of the country as they provide capital for the development of industry, trade as well as agriculture by disbursing the saving collected as deposits from the people. Commercial banks investment strongly support for the economic condition of the country. Loan granted to small sector and agricultural sector support to increment of per capita income of the rural people. Banks loans help the growth of trade and commerce, energy sector as well as agriculture and empower the economic activities of the country.

The research is about the lending management of commercial banks with reference to NBL and Nabil. The first chapter of the study deals about basic assumption. Basically it highlighted the concept, problems, significance, objectives of the study. Second chapter help the researcher to provide the knowledge about the conceptual review and national and international researches review. Third chapter deals with various methodology used for the study such as sources of data, population and sample of data, data collection technique and procedure and tools used.

Fourth chapter deals with data presentation and analysis. In this chapter financial condition, nonperforming loan, portfolio of lending, correlation and regression are analyzed.The analysis is conducted with the data collected form various sectors. The cursory looking for the two banks in terms of lending deposit ratio Nabil seems dominant. Out of total deposit collection Nabil has disbursed more than 66% as loan where as NBL has disbursed around 44% of its deposit collection as a loan. It seems that Nabil is the best performer while utilizing its collected fund. NBL is hugely suffering form the high NPL. This would be the one reason of least ratio of lending to deposit. In the first three year of the study period, more

than 50% of loan out of total was nonperforming loan of NBL. It means that Nepal bank did not take any action to its lending customers. In comparison Nabil has lower ratio of NPL and Nabil meet international standard after the year 2004/05. Political crisis of the nation, political leader famousness to the borrower, borrower intention, trade deficit, owner worker worse relationship for industry failure are the main causes for the increment of the NPL.

Form analyzing PSL to lending ratio Nabil is more conscious about the development of small industrial sector because it has more lending ratio in priority sector. In the analysis of profitability ratio Nabil is the best income generator than NBL.

Both banks made optimal portfolio for getting more return from then by minimizing the risk. It seems that both banks invest more than 33% as production loan out of total. For the development of nation banks must be investment their fund in the rural area. But in the analysis of the portfolio of lending both banks invest lower percentage in agriculture which represents rural investments. Private sector banks are not interested to open their branch in the rural area.

The correlation coefficient deposit and loan and advances of NBL is -0.5398. There is highly negative correlation between loan and advances and deposit collection. The correlation coefficient deposit and loan and advances are 0.9671. The correlation coefficient between the non-performing and loan is 0.974 of NBL. The correlation coefficient of Nabil highly negative (i.e.-0.7127). Correlation between loan loss provision and loan and advances of NBL and Nabil are 0.9730 and -0.4178 respectively. From the correlation analysis Nabil manage its lending effectively and efficiently.

The value of adjusted R square value was found to be -0.663 and 0.897 of NBL and Nabil considering independent variables loan and advance and non-performing loan and dependent variable profit. It was found to be total variation in the dependent variable profit has not been explained by the two independent variables whereas 89.7% variation has been explained by two independent variables. In the analysis of variance NBL's result was not seems to be significant but Nabil's was significant at 0.1 levels. The adjusted R square was found to be –

0.664 and 0.877 of NBL and Nabil respectively considering independent variables deposit and loan and advance and dependent variable profit. ANOVA shows Nabil was significance difference in profit due to the deposit and loan and advance at 0.1 levels. Although, t statistic shows there was not significance difference in profit due the deposit and loan and advance of Nabil and NBL at 0.1 levels.

An overall analysis Nabil bank manages its lending effectively and efficiently and it recovers its bad loan taking necessary action in time. NBL is not manage its lending properly and suffered form the high volume of nonperforming loan.

5.2 Conclusion

Banks & financial institutions in Nepal will have to benchmark themselves against some of the best in the world, for a strong and resilient banking and financial system. Therefore, banks need to go beyond peripheral issues and tackle significant issues like improvements in profitability, efficiency and technology, while achieving economies of scale through available cost effective solutions. These are some of the major issues that need to be addressed by banks in recent scenario, for their success and not just survival, in the changing milieu.

Lending function is considered by the banking industry as the most important function for the utilization of funds. Since, banks earn their highest gross profits from loans; the administration of loan portfolios seriously affects the profitability of banks. Indeed, the large number of non-performing loans is the main cause of bank failure. Non-performing loan is seems to be major problems for Nepalese commercial banks. Banks are learning to review their risk portfolios. Lending is the most income-generating sources for Nepalese commercial bank but there is risk inherent in bank's lending portfolio. In order to cover the risk inherent in the lending portfolio, banks have to make loan loss provision by categorizing the loans into different category as per the NRB directives.

It has been found that NBL has high portion of non-performing loan need higher provision results lower profit. Out of total NPL, NBL has more volume of loss loan. Analysis of

variance indicated that all indicators are not found significant difference at 0.1 levels of significance of NBL. Form these indicators it can be said that to preserve its position as a successful and dominant commercial bank NBL has to give attention on its lending and recovery device. It can be concluded that government owned bank NBL is not able to manage lending efficiently. After conducting this study, private sector bank Nabil perform better in managing lending. It indicates most of the private sector banks of Nepal bitterly manage their lending.

5.3 Recommendations

The high portion of non-performing loan accompanied by higher provision of these banks which reduced the profitably and competency of the bank in this competitive environment. NPL of NBL is higher in the ratio and recommended to take remedial actions for recovering bad loans. To reduce the NPL they are also recommended take following action while granting the loan.

- The bank analyzes the borrower's strategies and organizational architecture to be the most important determinants of firm profitability and the firm's ability to repay the banking loan. So, banks have constructed a comprehensive analytical framework that will improve the accuracy of analyzing a borrower's capacity and condition.
- The bank should provide more training programs in business strategy and organizational management to the employees in the lending department. Training is the most important for the employees to make them efficient and professional in credit appraisal, monitoring and proper risk management.
- The efficient employees properly evaluate proposal of borrower and monitor his or capacity and condition. So it is recommended for the banks to evaluate the job performance of employees of lending department.
- Bank should measures internal performance. The major benefit of using an internal measure to monitor the output quality of the employees in a lending department is a reduction in the likelihood of employee moral hazard behaviors. To effectively use local knowledge about possible fraud from a particular employee, assigning loan decision rights to teams might effectively prevent individual fraud. The final decision

for a loan should be made through consensus or some type of voting mechanism among any team members who have participated in the evaluation process for the loan. To reduce the individual fraud, team decision is more effective. So, it is recommended that team decision should be followed while the loan should be disbursed.

Following the directives of NRB is also reduces many of credit risks. Hence both banks are recommended to adhere to the directives and they are also suggested to come up with a stronger internal audit department to ensure that the directives are properly implemented.

Portfolios are composition of investments in various sectors which in turn are composed of expected risk and return of their component investments. It helps an investor to make optimal investment decision minimizing overall risk and maximizing overall return. So, both banks make optimal lending portfolio to reduce its bad loan risk, maximizing profit and development of economy of the nation.

NBL's contribution to loan and advance is relatively low. Entire economy is largely dependent upon the proper execution of lending function by commercial banks. Low level of lending means, low level of investment resulting to low level of productivity, which may ultimately affect negatively on the national economy. Loan and advance on one hand is the highest income generating asset and on the other hand it also helps to upgrade the economic position of the country. Hence NBL increase its in productive sector in the form of loan and advance.

Nabil is concentrating its operation in urban areas. Most of the people who live in rural areas are not benefited form it. To making investment in agricultural sector which is need to development for the economic growth of the nation Nabil strengthen its branches in rural areas. Financial support form the bank helps to improve the financial condition of the rural people. To meet the poverty alleviation objectives the banks helps by expanding their branches in rural areas.

The government has to encourage the coming up new entrepreneurs, encourage the small-scale industries, give priority to export business, encourage foreign investors. The bank in turn should extend support form their side in every possible way.

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ANNEX

Financial ratios

Annex: 4.1.1

Total loan and advances to total deposit ratio

Rs. in million

Year	Total loan		Total deposit		Ratio	
	NBL	Nabil	NBL	Nabil	NBL	Nabil
2003/04	18132.33	8113.68	35014	13447.66	0.5179	0.6034
2004/05	17937.66	8548.66	35735.04	14119.03	0.5020	0.6055
2005/06	16866.55	10946.74	35934.16	14586.61	0.4694	0.7505
2006/07	12441.55	13278.78	35829.77	19347.4	0.3472	0.6863
2007/08	13756.62	15903.02	38715.2	23342.28	0.3553	0.6813

Source: Annual Report and concerning department of respective banks

Annex: 4.1.2

Total nonperforming loan (NPL) to total loan and advances ratio

Rs in million

Year	Total NPL		Total Loan		Ratio	
	NBL	Nabil	NBL	Nabil	NBL	Nabil
2003/04	10960.8	449.63	18132.33	8113.68	0.6045	0.0544
2004/05	9324	286.68	17937.66	8548.66	0.5198	0.0335
2005/06	8689.3	144.51	16866.55	10946.74	0.5152	0.0132
2006/07	2263	182.62	12441.55	13278.78	0.1819	0.0138
2007/08	2110.1	178.29	13756.62	15903.02	0.1534	0.0112

Source: Annual Report and concerning department of respective banks

Annex: 4.1.3

Priority sector lending (PSL) to total loan and advances ratio

Rs in million

Year	PSL		Total Loan		Ratio	
	NBL	Nabil	NBL	Nabil	NBL	Nabil
2003/04	1067.67	974.05	18132.33	8113.68	0.0589	0.1201
2004/05	909.34	848.78	17937.66	8548.66	0.0507	0.0991
2005/06	774.24	875.28	16866.55	10946.74	0.0459	0.0799
2006/07	734.48	737.26	12441.55	13278.78	0.0590	0.0555
2007/08	560.63	1096.96	13756.62	15903.02	0.0408	0.0690

Source: Annual Report and concerning department of respective banks

Annex: 4.1.4

Total profit to total loan and advances ratio

Rs in millions

Year	Total Profit/Loss		Total Loan		Ratio (R)	
	NBL	Nabil	NBL	Nabil	NBL	Nabil
2003/04	(251.73)	416.24	18132.33	8113.68	(0.0139)	0.0513
2004/05	710.39	487.07	17937.66	8548.66	0.0510	0.0570
2005/06	1730.13	520.11	16866.55	10946.74	0.1026	0.0474
2006/07	1327.99	635.26	12441.55	13278.78	0.1067	0.0478
2007/08	417.71	673.96	13756.62	15903.02	0.0304	0.0424

Source: Annual Report and concerning department of respective banks

Portfolio of lending

Annex: 4.2.1

Portfolio/sector wise of lending of Nepal Bank Ltd

Rs in million

Portfolio of lending	2003/04		2004/05		2005/06		2006/07		2007/08	
	Rs	%	Rs	%	Rs	%	Rs	%	Rs	%
Agriculture	697	3.84	884.2	4.93	831.1	4.93	615.9	4.95	478.3	3.48
Consumable loan	1126	6.21	2487	13.86	1871.2	11.09	2748.3	22.09	3644.1	26.49
Services industries	2574	14.20	2265	12.63	1852.3	10.98	527.5	4.24	470.1	3.43
Wholesaler and retailers	4079	22.50	3751	20.91	3817.7	22.63	2553.3	20.52	2558.6	18.60
Productions	6708.2	37.00	6070.1	33.84	6137.9	36.39	3916	31.48	3419.1	24.85
Constructions	339	1.87	331	1.85	332.4	1.97	275.3	2.21	372.9	2.71
Finance, insurance & fixed assets	487.4	2.69	418.4	2.33	788.4	4.68	659.1	5.30	693.3	5.04
Transportation, communication & public services	384	2.12	389	2.17	301.7	1.79	703	5.65	864.2	6.28
Mining	47.6	0.26	29.2	0.16	11.9	0.07	12.3	0.10	7.4	0.05
Metal production machinery & electrical tools	154.2	0.85	197.9	1.10	316.3	1.88	137.6	1.11	80.2	0.58
Transportation equipment production & fitting	49	0.27	87	0.49	73.1	0.43	29.9	0.24	84	0.61
Others	1486.9	8.20	1027.9	5.73	532.6	3.16	263.4	2.12	1084.4	7.88
Total	**18132.3**	**100**	**17937.7**	**100**	**16866.6**	**100**	**12441.6**	**100**	**13756.6**	**100**

Source: Concerning department of respective banks and banking and financial statistics of NRB

Annex: 4.2.1

Portfolio/sector wise of lending of Nabil Bank Ltd

Rs in million

Portfolio of lending	**2003/04**		**2004/05**		**2005/06**		**2006/07**		**2007/08**	
	Rs	%	Rs	%	Rs	%	Rs	%	Rs	%
Agriculture	73.1	0.90	54.4	0.64	51.9	0.47	51.1	0.38	54.5	0.34
Consumable loan	52.2	0.64	54.1	0.63	77.2	0.71	86.7	0.65	84.6	0.53
Services industries	1007.4	12.42	952.1	11.14	1387.3	12.67	1014.3	7.64	1260.7	7.93
Wholesaler and retailers	1620.2	19.97	1548.8	18.12	1990.1	18.18	2068.5	15.58	2458.5	15.46
Productions	4019.4	49.54	4064.6	47.55	4375.8	39.97	5107.1	38.46	5701.5	35.85
Constructions	84	1.04	369.4	4.32	665.2	6.08	1378.8	10.38	1923.3	12.09
Finance, insurance & fixed assets	267.9	3.30	274	3.21	333.5	3.05	480.2	3.62	821.1	5.16
Transportation, communication & public services	366.1	4.51	197.4	2.31	289.3	2.64	673.7	5.07	917.7	5.77
Mining	31.8	0.39	0	0	28.9	0.26	21.9	0.16	13.9	0.09
Metal production machinery & electrical tools	54.9	0.68	74.2	0.87	140.9	1.29	100	0.75	163.2	1.03
Transportation equipment production & fitting	44.4	0.55	592	6.93	1003.7	9.17	1309.6	9.86	1467.9	9.23
Others	492.4	6.07	367.7	4.30	602.9	5.51	986.8	7.43	1036.1	6.52
Total	**8113.7**	**100**	**8548.7**	**100**	**10946.7**	**100**	**13278.7**	**100**	**15903**	**100**

Source: Concerning department of respective banks and banking and financial statistics of NRB

Correlation

Correlation coefficient between deposit and loan and advances of Nepal Bank Ltd

Annex: 4.5.1

Rs in million

Year	Deposit (X)	Loan (Y)	X^2	Y^2	XY
2003/04	35014	18132.3	1225980196	328780303	634884352
2004/05	35735.	17937.7	1276990225	321761080	641003710
2005/06	35934.1	16866.6	1291259543	284482196	606086091
2006/07	35829.8	12441.6	1283774568	154793411	445780040
2007/08	38715.2	13756.6	1498866711	189244044	532589520
Total	**181228.1**	**79134.8**	**6576871243**	**1279061034**	**2860343713**

$$\text{Correlation (r)} = \frac{N \quad XY \; Z \quad X \mid \quad Y}{\sqrt{N \quad X2 \; Z(\quad X)2} \quad \sqrt{N \quad Y2 \; Z(\quad Y)2}}$$

$$= \frac{5 \mid 2860343713 \;\; Z181228.1 \mid 79134.8}{\sqrt{5 \mid 6576871243 \, Z(18228.1)2}\sqrt{5 \mid 127906134 \, Z(79135)2}}$$

= -0.5398253

Coefficient of determination (r^2) = $(-0.5398253)^2$ = 0.2914114

$$\text{Probable Error (P.E)} = 0.6745 \mid \frac{1 \, Z \, r2}{\sqrt{n}} = 0.2137426$$

6 P.E. = 6 | 0.2137426 = 1.2824556

Correlation coefficient between deposit and loan and advances of Nabil

Annex: 4.5.2

Year	Deposit (X)	Loan (Y)	X^2	Y^2	XY
2003/04	13447.7	8113.7	180840635.3	65832127.69	109110603.5
2004/05	14119	8548.7	199346161	73080271.69	120699095.3
2005/06	14586.6	10946.7	212768899.6	119830240.9	159675134.2
2006/07	19347.4	13278.8	374321886.8	176326529.4	256910255.1
2007/08	23342.3	15903	544862969.3	252905409	371212596.9
Total	84843	56790.9	1512140552	687974578.7	1017607685

Correlation= 0.967094676

Coefficient of determination (r^2) = 0.9352721

Probable Error (P.E) = 0.6745 | $\frac{1 Z r 2}{\sqrt{n}}$ = 0.0195249

6 P.E. = 6 | 0.0195249 = 0.117149

Correlation coefficient between loan and advances and NPL of NBL

Annex: 4.5.3

Year	Loan (X)	NPL (Y)	X^2	Y^2	XY
2003/04	18132.3	10960.8	328780303.3	120139136.6	198744513.8
2004/05	17937.7	9324	321761081.3	86936976	167251114.8
2005/06	16866.6	8689.3	284482195.6	75503934.49	146558947.4
2006/07	12441.6	2263	154793410.6	5121169	28155340.8
2007/08	13756.6	2110.1	189244043.6	4452522.01	29027801.66
Total	79134.8	33347.2	1279061034	292153738.1	569737718.5

Correlation= 0.9740438

Coefficient of determination (r^2) = 0.9487613

Probable Error (P.E) = 0.6745 | $\frac{1 - Zr2}{\sqrt{n}}$ = 0.0154559

6 P.E. = 6 | 0.0154559 = 0.0927356

Correlation between loan and advance and NPL of Nabil

Annex: 4.5.4

Year	Loan (X)	NPL (Y)	X^2	Y^2	XY
2003/04	8113.7	449.6	65832127.69	202140.16	3647919.52
2004/05	8548.7	286.7	73080271.69	82196.89	2450912.29
2005/06	10946.7	144.5	119830240.9	20880.25	1581798.15
2006/07	13278.8	182.6	176326529.4	33342.76	2424708.88
2007/08	15903	178.3	252905409	31790.89	2835504.9
Total	**56790.9**	**1241.7**	**687974578.7**	**370350.95**	**12940843.74**

Correlation =-0.7126648

Coefficient of determination (r^2) = 0.5078912

Probable Error (P.E) = 0.6745 | $\frac{1 - Zr2}{\sqrt{n}}$ = 0.1484424

6 P.E. = 6 | 0.1484424 = 0.8906546

Correlation between LLP and loan and advances of NBL

.5Annex: 4.5

Year	Loan (X)	LLP (Y)	X^2	Y^2	XY
2003/04	18132.3	10161.2	328780303.3	103249985.4	184245926.8
2004/05	17937.7	9055.8	321761081.3	82007513.64	162440223.7
2005/06	16866.6	8647.6	284482195.6	74780985.76	145855610.2
2006/07	12441.6	2685.4	154793410.6	7211373.16	33410672.64
2007/08	13756.6	2451.7	189244043.6	6010832.89	33727056.22
Total	**79134.8**	**33001.7**	**1279061034**	**273260690.9**	**559679489.4**

Correlation= 0.973001829

Coefficient of determination (r^2) = 0.9467326

Probable Error (P.E) = $0.6745 \mid \frac{1 Z r 2}{\sqrt{n}} = 0.0160679$

6 P.E. = $6 \mid 0.0160679 = 0.0964073$

Correlation between LLP and loan and advances of Nabil

Annex: 4.5.5

Year	Loan (X)	LLP (Y)	X^2	Y^2	XY
2003/04	8113.7	357.7	65832127.69	127949.29	2902270.49
2004/05	8548.7	358.7	73080271.69	128665.69	3066418.69
2005/06	10946.7	360.6	119830240.9	130032.36	3947380.02
2006/07	13278.8	356.2	176326529.4	126878.44	4729908.56
2007/08	15903	357.2	252905409	127591.84	5680551.6
Total	**56790.9**	**1790.4**	**687974578.7**	**641117.62**	**20326529.36**

Correlation= -0.41777039

Coefficient of determination (r^2) = 0.1745321

Probable Error (P.E) = $0.6745 \mid \frac{1 - Zr2}{\sqrt{n}} = 0.2489987$

6 P.E. = $6 \mid 0.2489987 = 1.4939924$

Regression and SPSS analysis

Multiple regression analysis between loan NPL and Profit of NBL

Annex: 4.6.1

Year	Loan	NPL	Profit
2003/04	18132.3	10960.8	-251.73
2004/05	17937.7	9324	710.39
2005/06	16866.6	8689.3	1730.13
2006/07	12441.6	2263	1327.99
2007/08	13756.6	2110.1	417.71
Total	**79134.8**	**33347.2**	**3934.49**

Regression

Variables Entered/Removed (b)

Model	Variables Entered	Variables Removed	Method
1	NPL, Loan(a)	.	Enter

a. All requested variables entered.

b. Dependent Variable: Profit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.410(a)	.168	-.663	999.70588

a. Predictors: (Constant), NPL, Loan

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	404544.829	2	202272.415	.202	.832(a)
	Residual	1998823.705	2	999411.852		
	Total	2403368.534	4			

a. Predictors: (Constant), NPL, Loan

b. Dependent Variable: Profi

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6005.830	10159.281		.591	.614
	Loan	-.414	.856	-1.376	-.483	.677
	NPL	.199	.529	1.074	.377	.742

a. Dependent Variable: Profit

Multiple regression analysis between loan NPL and Profit of Nabil

Annex: 4.6.1

Year	Loan	NPL	Profit
2003/04	8113.7	449.6	416.24
2004/05	8548.7	286.7	487.07
2005/06	10946.7	144.5	520.11
2006/07	13278.8	182.6	635.26
2007/08	15903	178.3	673.96
Total	**56790.9**	**1241.7**	**2732.64**

Regression

Variables Entered/Removed (b)

Model	Variables Entered	Variables Removed	Method
1	NPL, Loan(a)	.	Enter

a. All requested variables entered.

b. Dependent Variable: Profit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.974(a)	.948	.897	34.24107

a. Predictors: (Constant), NPL, Loan

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42975.508	2	21487.754	18.327	.052(a)
	Residual	2344.902	2	1172.451		
	Total	45320.410	4			

a. Predictors: (Constant), NPL, Loan

b. Dependent Variable: Profit

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	261.402	125.042		2.091	.172
	Loan	.028	.007	.860	3.750	.064
	NPL	-.130	.196	-.152	-.661	.576

a. Dependent Variable: Profit

Multiple regression line between Deposit, loan and advance and profit of NBL

Annex: 4.6.2

Year	Deposit	Loan	Profit
2003/04	35014	18132.3	-251.73
2004/05	35735.	17937.7	710.39
2005/06	35934.1	16866.6	1730.13
2006/07	35829.8	12441.6	1327.99

2007/08	38715.2	13756.6	417.71
Total	**181228.1**	**79134.8**	**3934.49**

Regression

Variables Entered/Removed (b)

Model	Variables Entered	Variables Removed	Method
1	Loan, Deposit(a)	.	Enter

a. All requested variables entered.

b. Dependent Variable: Profit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.410(a)	.168	-.664	999.97586

a. Predictors: (Constant), Loan, Deposit

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	403465.082	2	201732.541	.202	.832(a)
	Residual	1999903.452	2	999951.726		
	Total	2403368.534	4			

a. Predictors: (Constant), Loan, Deposit

b. Dependent Variable: Profit

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8760.783	17333.351		.505	.663
	Deposit	-.156	.416	-.288	-.375	.743
	Loan	-.146	.230	-.486	-.634	.591

a. Dependent Variable: Profit

Multiple regression line between Deposit, loan and advance and profit of Nabil

Annex: 4.6.2

Year	Deposit	Loan	Profit
2003/04	13447.66	8113.68	416.24
2004/05	14119.03	8548.66	487.07
2005/06	14586.61	10946.74	520.11
2006/07	19347.4	13278.78	635.26
2007/08	23342.28	15903.02	673.96
Total	**84842.98**	**56790.88**	**2732.64**

Regression

Variables Entered/Removed (b)

Model	Variables Entered	Variables Removed	Method
1	Loan, Deposit(a)	.	Enter

a. All requested variables entered.

b. Dependent Variable: Profit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.969(a)	.938	.877	37.34847

a. Predictors: (Constant), Loan, Deposit

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42530.593	2	21265.297	15.245	.062(a)
	Residual	2789.817	2	1394.908		
	Total	45320.410	4			

a. Predictors: (Constant), Loan, Deposit

b. Dependent Variable: Profit

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	179.065	81.446		2.199	.159
	Deposit	.004	.017	.152	.221	.846
	Loan	.027	.022	.821	1.190	.356

a. Dependent Variable: Profit

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ANNEX
Financial Ratios

Annex: 4.1.1
Total Loan and Advances to Total Deposit Ratio

Rs. in million

Year	Total loan		Total deposit		Ratio	
	NBL	Nabil	NBL	Nabil	NBL	Nabil
2003/04	18132.33	8113.68	35014	13447.66	0.5179	0.6034
2004/05	17937.66	8548.66	35735.04	14119.03	0.5020	0.6055
2005/06	16866.55	10946.74	35934.16	14586.61	0.4694	0.7505
2006/07	12441.55	13278.78	35829.77	19347.4	0.3472	0.6863
2007/08	13756.62	15903.02	38715.2	23342.28	0.3553	0.6813

Source: Annual Report and Concerning Department of Respective Banks

Annex: 4.1.2
Total Nonperforming Loan (NPL) to Total Loan and Advances Ratio

Rs in million

Year	Total NPL		Total Loan		Ratio	
	NBL	Nabil	NBL	Nabil	NBL	Nabil
2003/04	10960.8	449.63	18132.33	8113.68	0.6045	0.0544
2004/05	9324	286.68	17937.66	8548.66	0.5198	0.0335
2005/06	8689.3	144.51	16866.55	10946.74	0.5152	0.0132
2006/07	2263	182.62	12441.55	13278.78	0.1819	0.0138
2007/08	2110.1	178.29	13756.62	15903.02	0.1534	0.0112

Source: Annual Report and Concerning Department of Respective Banks

Annex: 4.1.3
Priority sector lending (PSL) to total loan and advances ratio

Rs in million

Year	PSL		Total Loan		Ratio	
	NBL	Nabil	NBL	Nabil	NBL	Nabil
2003/04	1067.67	974.05	18132.33	8113.68	0.0589	0.1201
2004/05	909.34	848.78	17937.66	8548.66	0.0507	0.0991
2005/06	774.24	875.28	16866.55	10946.74	0.0459	0.0799
2006/07	734.48	737.26	12441.55	13278.78	0.0590	0.0555
2007/08	560.63	1096.96	13756.62	15903.02	0.0408	0.0690

Source: Annual Report and Concerning Department of Respective Banks

Annex: 4.1.4
Total Profit to Total Loan and Advances Ratio

Rs in millions

Year	Total Profit/Loss		Total Loan		Ratio (R)	
	NBL	Nabil	NBL	Nabil	NBL	Nabil

2003/04	(251.73)	416.24	18132.33	8113.68	(0.0139)	0.0513
2004/05	710.39	487.07	17937.66	8548.66	0.0510	0.0570
2005/06	1730.13	520.11	16866.55	10946.74	0.1026	0.0474
2006/07	1327.99	635.26	12441.55	13278.78	0.1067	0.0478
2007/08	417.71	673.96	13756.62	15903.02	0.0304	0.0424

Source: Annual Report and concerning department of respective banks

Portfolio of lending

Annex: 4.2.1

Portfolio/sector wise of Lending of Nepal Bank Ltd

Rs in million

Portfolio of lending	2003/04		2004/05		2005/06		2006/07		2007/08	
	Rs	%	Rs	%	Rs	%	Rs	%	Rs	%
Agriculture	697	3.84	884.2	4.93	831.1	4.93	615.9	4.95	478.3	3.48
Consumable loan	1126	6.21	2487	13.86	1871.2	11.09	2748.3	22.09	3644.1	26.49
Services industries	2574	14.20	2265	12.63	1852.3	10.98	527.5	4.24	470.1	3.43
Wholesaler and retailers	4079	22.50	3751	20.91	3817.7	22.63	2553.3	20.52	2558.6	18.60
Productions	6708.2	37.00	6070.1	33.84	6137.9	36.39	3916	31.48	3419.1	24.85
Constructions	339	1.87	331	1.85	332.4	1.97	275.3	2.21	372.9	2.71
Finance, insurance & fixed assets	487.4	2.69	418.4	2.33	788.4	4.68	659.1	5.30	693.3	5.04
Transportation, communication & public services	384	2.12	389	2.17	301.7	1.79	703	5.65	864.2	6.28
Mining	47.6	0.26	29.2	0.16	11.9	0.07	12.3	0.10	7.4	0.05
Metal production machinery & electrical tools	154.2	0.85	197.9	1.10	316.3	1.88	137.6	1.11	80.2	0.58
Transportation equipment production & fitting	49	0.27	87	0.49	73.1	0.43	29.9	0.24	84	0.61
Others	1486.9	8.20	1027.9	5.73	532.6	3.16	263.4	2.12	1084.4	7.88
Total	**18132.3**	**100**	**17937.7**	**100**	**16866.6**	**100**	**12441.6**	**100**	**13756.6**	**100**

Source: Concerning Department of Respective Banks and Banking and Financial Statistics of NRB

Annex: 4.2.1
Portfolio/sector wise of lending of Nabil Bank Ltd

Rs in million

Portfolio of lending	**2003/04**		**2004/05**		**2005/06**		**2006/07**		**2007/08**	
	Rs	%	Rs	%	Rs	%	Rs	%	Rs	%
Agriculture	73.1	0.90	54.4	0.64	51.9	0.47	51.1	0.38	54.5	0.34
Consumable loan	52.2	0.64	54.1	0.63	77.2	0.71	86.7	0.65	84.6	0.53
Services industries	1007.4	12.42	952.1	11.14	1387.3	12.67	1014.3	7.64	1260.7	7.93
Wholesaler and retailers	1620.2	19.97	1548.8	18.12	1990.1	18.18	2068.5	15.58	2458.5	15.46
Productions	4019.4	49.54	4064.6	47.55	4375.8	39.97	5107.1	38.46	5701.5	35.85
Constructions	84	1.04	369.4	4.32	665.2	6.08	1378.8	10.38	1923.3	12.09
Finance, insurance & fixed assets	267.9	3.30	274	3.21	333.5	3.05	480.2	3.62	821.1	5.16
Transportation, communication & public services	366.1	4.51	197.4	2.31	289.3	2.64	673.7	5.07	917.7	5.77
Mining	31.8	0.39	0	0	28.9	0.26	21.9	0.16	13.9	0.09
Metal production machinery & electrical tools	54.9	0.68	74.2	0.87	140.9	1.29	100	0.75	163.2	1.03
Transportation equipment production & fitting	44.4	0.55	592	6.93	1003.7	9.17	1309.6	9.86	1467.9	9.23
Others	492.4	6.07	367.7	4.30	602.9	5.51	986.8	7.43	1036.1	6.52
Total	**8113.7**	**100**	**8548.7**	**100**	**10946.7**	**100**	**13278.7**	**100**	**15903**	**100**

Source: Concerning Department of Respective Banks and Banking and Financial Statistics of NRB

Correlation

Annex: 4.5.1

Correlation Coefficient between Deposit and Loan and Advances of Nepal Bank Ltd

Rs in million

Year	Deposit (X)	Loan (Y)	X^2	Y^2	XY
2003/04	35014	18132.3	1225980196	328780303	634884352
2004/05	35735.	17937.7	1276990225	321761080	641003710
2005/06	35934.1	16866.6	1291259543	284482196	606086091
2006/07	35829.8	12441.6	1283774568	154793411	445780040
2007/08	38715.2	13756.6	1498866711	189244044	532589520
Total	**181228.1**	**79134.8**	**6576871243**	**1279061034**	**2860343713**

$$\text{Correlation (r)} = \frac{N \quad XY \; Z \quad X \mid \quad Y}{\sqrt{N \quad X2 \; Z(\quad X)2} \quad \sqrt{N \quad Y2 \; Z(\quad Y)2}}$$

$$= \frac{5 \mid 2860343713 \; Z181228.1 \mid 79134.8}{\sqrt{5 \mid 6576871243 Z(18228.1)2}\sqrt{5 \mid 127906134 Z(79135)2}}$$

= -0.5398253

Coefficient of determination (r^2) = $(-0.5398253)^2$ = 0.2914114

$$\text{Probable Error (P.E)} = 0.6745 \mid \frac{1 Z r2}{\sqrt{n}} = 0.2137426$$

6 P.E. = 6 | 0.2137426 = 1.2824556

Annex: 4.5.2

Correlation coefficient between deposit and loan and advances of Nabil

Year	Deposit (X)	Loan (Y)	X^2	Y^2	XY
2003/04	13447.7	8113.7	180840635.3	65832127.69	109110603.5
2004/05	14119	8548.7	199346161	73080271.69	120699095.3
2005/06	14586.6	10946.7	212768899.6	119830240.9	159675134.2
2006/07	19347.4	13278.8	374321886.8	176326529.4	256910255.1
2007/08	23342.3	15903	544862969.3	252905409	371212596.9
Total	84843	56790.9	1512140552	687974578.7	1017607685

Correlation= 0.967094676

Coefficient of determination (r^2) = 0.9352721

Probable Error (P.E) = $0.6745 \mid \frac{1 Z r 2}{\sqrt{n}} = 0.0195249$

6 P.E. = $6 \mid 0.0195249 = 0.117149$

Annex: 4.5.3

Correlation coefficient between loan and advances and NPL of NBL

Year	Loan (X)	NPL (Y)	X^2	Y^2	XY
2003/04	18132.3	10960.8	328780303.3	120139136.6	198744513.8
2004/05	17937.7	9324	321761081.3	86936976	167251114.8
2005/06	16866.6	8689.3	284482195.6	75503934.49	146558947.4
2006/07	12441.6	2263	154793410.6	5121169	28155340.8
2007/08	13756.6	2110.1	189244043.6	4452522.01	29027801.66
Total	79134.8	33347.2	1279061034	292153738.1	569737718.5

Correlation= 0.9740438

Coefficient of determination (r^2) = 0.9487613

Probable Error (P.E) = $0.6745 \mid \frac{1 Z r 2}{\sqrt{n}} = 0.0154559$

6 P.E. = $6 \mid 0.0154559 = 0.0927356$

Annex: 4.5.4

Correlation between loan and advance and NPL of Nabil

Year	Loan (X)	NPL (Y)	X^2	Y^2	XY
2003/04	8113.7	449.6	65832127.69	202140.16	3647919.52
2004/05	8548.7	286.7	73080271.69	82196.89	2450912.29
2005/06	10946.7	144.5	119830240.9	20880.25	1581798.15
2006/07	13278.8	182.6	176326529.4	33342.76	2424708.88
2007/08	15903	178.3	252905409	31790.89	2835504.9
Total	**56790.9**	**1241.7**	**687974578.7**	**370350.95**	**12940843.74**

Correlation =-0.7126648

Coefficient of determination (r^2) = 0.5078912

Probable Error (P.E) = $0.6745 \mid \frac{1 Z r 2}{\sqrt{n}} = 0.1484424$

6 P.E. = $6 \mid 0.1484424 = 0.8906546$

Annex: 4.5
Correlation between LLP and loan and advances of NBL

Year	Loan (X)	LLP (Y)	X^2	Y^2	XY
2003/04	18132.3	10161.2	328780303.3	103249985.4	184245926.8
2004/05	17937.7	9055.8	321761081.3	82007513.64	162440223.7
2005/06	16866.6	8647.6	284482195.6	74780985.76	145855610.2
2006/07	12441.6	2685.4	154793410.6	7211373.16	33410672.64
2007/08	13756.6	2451.7	189244043.6	6010832.89	33727056.22
Total	**79134.8**	**33001.7**	**1279061034**	**273260690.9**	**559679489.4**

Correlation= 0.973001829

Coefficient of determination (r^2) = 0.9467326

Probable Error (P.E) = 0.6745 $| \frac{1 - r^2}{\sqrt{n}}$ = 0.0160679

6 P.E. = 6 | 0.0160679 = 0.0964073

Annex: 4.5.5
Correlation between LLP and loan and advances of Nabil

Year	Loan (X)	LLP (Y)	X^2	Y^2	XY
2003/04	8113.7	357.7	65832127.69	127949.29	2902270.49
2004/05	8548.7	358.7	73080271.69	128665.69	3066418.69
2005/06	10946.7	360.6	119830240.9	130032.36	3947380.02
2006/07	13278.8	356.2	176326529.4	126878.44	4729908.56
2007/08	15903	357.2	252905409	127591.84	5680551.6
Total	**56790.9**	**1790.4**	**687974578.7**	**641117.62**	**20326529.36**

Correlation= -0.41777039

Coefficient of determination (r^2) = 0.1745321

Probable Error (P.E) = 0.6745 $| \frac{1 - r^2}{\sqrt{n}}$ = 0.2489987

6 P.E. = 6 | 0.2489987 = 1.4939924

Regression and SPSS analysis

Annex: 4.6.1
Multiple regression analysis between loan NPL and Profit of NBL

Year	Loan	NPL	Profit

2003/04	18132.3	10960.8	-251.73
2004/05	17937.7	9324	710.39
2005/06	16866.6	8689.3	1730.13
2006/07	12441.6	2263	1327.99
2007/08	13756.6	2110.1	417.71
Total	**79134.8**	**33347.2**	**3934.49**

Regression

Variables Entered/Removed (b)

Model	Variables Entered	Variables Removed	Method
1	NPL, Loan(a)	.	Enter

a. All requested variables entered.
b. Dependent Variable: Profit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.410(a)	.168	-.663	999.70588

a. Predictors: (Constant), NPL, Loan

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	404544.829	2	202272.415	.202	.832(a)
	Residual	1998823.705	2	999411.852		
	Total	2403368.534	4			

a. Predictors: (Constant), NPL, Loan
b. Dependent Variable: Profi

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6005.830	10159.281		.591	.614
	Loan	-.414	.856	-1.376	-.483	.677
	NPL	.199	.529	1.074	.377	.742

a. Dependent Variable: Profit

Multiple regression analysis between loan NPL and Profit of Nabil

Annex: 4.6.1

Year	Loan	NPL	Profit
2003/04	8113.7	449.6	416.24
2004/05	8548.7	286.7	487.07
2005/06	10946.7	144.5	520.11
2006/07	13278.8	182.6	635.26
2007/08	15903	178.3	673.96
Total	**56790.9**	**1241.7**	**2732.64**

Regression

Variables Entered/Removed (b)

Model	Variables Entered	Variables Removed	Method
1	NPL, Loan(a)	.	Enter

a. All requested variables entered.
b. Dependent Variable: Profit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.974(a)	.948	.897	34.24107

a. Predictors: (Constant), NPL, Loan

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42975.508	2	21487.754	18.327	.052(a)
	Residual	2344.902	2	1172.451		
	Total	45320.410	4			

a. Predictors: (Constant), NPL, Loan
b. Dependent Variable: Profit

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	261.402	125.042		2.091	.172
	Loan	.028	.007	.860	3.750	.064
	NPL	-.130	.196	-.152	-.661	.576

a. Dependent Variable: Profit

Multiple regression line between Deposit, loan and advance and profit of NBL

Annex: 4.6.2

Year	Deposit	Loan	Profit
2003/04	35014	18132.3	-251.73
2004/05	35735.	17937.7	710.39
2005/06	35934.1	16866.6	1730.13
2006/07	35829.8	12441.6	1327.99
2007/08	38715.2	13756.6	417.71
Total	**181228.1**	**79134.8**	**3934.49**

Regression

Variables Entered/Removed (b)

Model	Variables Entered	Variables Removed	Method
1	Loan, Deposit(a)	.	Enter

a. All requested variables entered.
b. Dependent Variable: Profit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.410(a)	.168	-.664	999.97586

a. Predictors: (Constant), Loan, Deposit

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	403465.082	2	201732.541	.202	.832(a)
	Residual	1999903.452	2	999951.726		
	Total	2403368.534	4			

a. Predictors: (Constant), Loan, Deposit
b. Dependent Variable: Profit

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8760.783	17333.351		.505	.663
	Deposit	-.156	.416	-.288	-.375	.743
	Loan	-.146	.230	-.486	-.634	.591

a. Dependent Variable: Profit

Annex: 4.6.2

Multiple regression line between Deposit, loan and advance and profit of Nabil

Year	Deposit	Loan	Profit
2003/04	13447.66	8113.68	416.24
2004/05	14119.03	8548.66	487.07
2005/06	14586.61	10946.74	520.11
2006/07	19347.4	13278.78	635.26
2007/08	23342.28	15903.02	673.96
Total	**84842.98**	**56790.88**	**2732.64**

Regression

Variables Entered/Removed (b)

Model	Variables Entered	Variables Removed	Method
1	Loan, Deposit(a)	.	Enter

a. All requested variables entered.

b. Dependent Variable: Profit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.969(a)	.938	.877	37.34847

a. Predictors: (Constant), Loan, Deposit

ANOVA (b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42530.593	2	21265.297	15.245	.062(a)
	Residual	2789.817	2	1394.908		
	Total	45320.410	4			

a. Predictors: (Constant), Loan, Deposit
b. Dependent Variable: Profit

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	179.065	81.446		2.199	.159
	Deposit	.004	.017	.152	.221	.846
	Loan	.027	.022	.821	1.190	.356

a. Dependent Variable: Profit