THE POSITION OF THE NON-PERFORMING ASSETS OF THE RASTRIYA BANIJYA BANK AND THE JOINT VENTURE BANKS

A Thesis

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RECOMMENDATION

This is to Certify that the thesis

Submitted by:

Thakur Prasad Chhatkuli

Entitled:

"The position of the Non-Performing Assets of the Rastriya Banijya Bank and the Joint Venture Banks"

(With special Reference to Rastriya Banijya Bank, Himalayan Bank Limited and Standard Chartered Bank Nepal Limited)

has been prepared as approved by this department in the prescribed format of the Faculty of Management. This thesis is forwarded for examination.

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VIVA-VOCE SHEET

We have conducted the Viva-voce examination of the thesis

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DECLARATION

I hereby declare that the work reported in this thesis entitled, "**The position of the Non-Performing Assets of the Rastriya Banijya Bank and the Joint Venture Banks**" submitted to Shanker Dev Campus, Faculty of Management, Tribhuvan University, is my original work. It is done in the form of Partial fulfillment of the requirement for the Degree of Master of Business studies (M.B.S.) under the supervision and guidance of Ast. Campus Chief, Ruchila pandey Shanker Dev Campus, Kathmandu.

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ABBREVIATIONS

CV	**:**	**Coefficient of Variance**
Fig	**:**	**Figure**
HBL	**:**	**Himalayan Bank Limited**
i.e.	**:**	**That is**
JVS	**:**	**Joint Venture Banks**
MBS	**:**	**Masters of Business Studies**
NBA	**:**	**Non Banking Assets**
NPA	**:**	**Non Performing Assets**
NRB	**:**	**Nepal Rastra Bank**
P.E	**:**	**Probable Error**
RBB	**:**	**Rastriya Banijya Bank**
ROA	**:**	**Return on Assets**
ROE	**:**	**Return On Shareholder's Equity**
SCBNL	**:**	**Standard Chartered Bank Nepal Limited**
SD	**:**	**Standard Deviation**
T.U.	**:**	**Tribhuvan University**

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Development of any country is demonstrated by the development of the financial sector of the country. The financial sector of any country comprises of banks, co-operative societies, insurance companies, finance companies, stock markets, foreign exchange markets, mutual funds, provident funds etc. And stock exchanges via primary markets, banks & financial companies via short-term and other type of loans are recognized as the main sources of much needed capital input for industries and business.

Banks are those intermediaries who accept deposits and grants loan. In other words, bank may be defined as financial intermediaries accepting deposits and granting loans; offers the widest menu of services of any financial institution. Certainly banks can be identified by the functions they perform in the economy. Indeed, many financial institutions including security dealers, brokerage firms, mutual funds, and insurance companies are trying to be as similar as possible to banks in the services they offer.

Banks plays vital role in the development of the economy of any country, in other words we can't imagine trade and economic activities in the absent of bank and financial Institution. It is a resource mobilization institution which accepts deposits from various sources and invests such accumulated resources in the fields of agriculture, trade, commerce, industry, tourism and other service sector as well etc. Banking sector is largely responsible for collecting household savings in terms of different types of deposit and regulating it in the society by lending in different sectors of economy. By lending their resources in small scale industries such as micro financing which is playing a wonderful role now in the context of Nepal now also and under intensive banking program has enabled the banks to share in the economic growth of the economy activities.

Major contribution of every government of Nepal has been the development and advancement of agriculture sector. However, economic liberalization policy of Government

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has encouraged establishment and growth of financial institution in Nepal. There are so many financial institutions such as commercial banks, development banks, finance companies, micro credit development banks and saving and credit co-operatives are performing in their own way for national financial strength. In the context of Nepal there should be specific institutions are still to be promoted and encouraged.

Bank and financial sector is the backbones of country's economy are related with monetary and capital market. The main objective of the commercial banks is to mobilize the resources by investing the same in profitable manner. The resources include capital funds consisting of shareholder's equity, money deposited by the people, borrowing and profit capitalization. The competency of any commercial banks is referred as to utilization of the resources on most profitable manner. The profit should be adequate to meet its cost of funds as well as there should be some margin left over as the reward for risk bearing. The financial institutions are supposed to have contribution for the overall economic reforms in the country.

Although the businesses are the major sources of capital, they also have to raise capital to run business. Especially, the bank capital has significant role to play as the banks have obligations to mass people, its depositors. Thus, the banks should hold an adequate capital to secure the interest of depositors.

A huge amount of resources is being utilized on loan and advances. As the return from loan flotation is higher than the return from any other activities, commercial banks are concentrating their financial activities for the management of loans and advances. By virtue of principle of higher return higher the risk should be taken and vice versa. On the one hand, the economic condition of the country is not grooming rather remained stagnant, no any new avenue is being explored. The competition among the banks is just to share for the small and same size of the fruit.

After the restoration of multiparty democracy, the Nepalese financial system witnessed significant developments in the growth of financial institutions. Several commercial banks made a way to business in Nepal. At present, commercial bank holds a large share of

economic activities of the country. Stock market has been dominated by commercial banks since a decade. By the end of mid July 2010 altogether, 244 banks and non-bank financial institutions licensed by NRB are in operation. Out of them, 28 are 'A' class commercial banks, 63 'B' class development banks, 77 'C' class finance companies, and 15 'D' class micro credit development banks, 16 saving and credit co-operatives and 45 NGOs (micro credit transaction). In addition with the financial sector has played vital role in economic growth, incremental in income level, infrastructure development and employment generation. Despite these, the qualitative aspects of the financial system still require much improvement as reflected in the inadequacy of the banks and financial institutions in providing increased benefits to the general public and in contributing adequately to the economic development through rising income level, creating employment opportunities and building internal strength for the growth of the institutions themselves. Though various reform efforts were undertaken in the past, to create a healthy financial sector as a pre-requisite to sustained economic growth by eliminating the various institutional and structural deficiencies, still Nepalese financial sector is suffering from major problem that is Non-Performing Assets (NPA).

Non-Performing Asset literally means assets which are useless for the certain time frame or say asset that cannot be used in the productive sector and such condition the asset doesn't show any performance or positive results. In the banking term, when the borrower takes the loan, he should pay interest along with principle in the certain time that's mean the borrower is the asset for banks that's why banks must ensure that the interest and the principle amount on loans are timely recovered without much trouble but if that borrower doesn't show initiation in payment of interest and principle for long time then these types of loans fall under the category of Non-Performing Assets. (Course, H.D (1963), "Management policies for commercial banks", Prentice Hall Inc, Eagle wood cliffs).

As per the NRB provision or definition, NPA is the loan that lies in the three category of loan these are sub standard, doubtful and loss. In Nepal, non scientific or traditional technique of lending lack of internal control system, lack of timely presentation of auditing report etc all have created conducive environment to inflating NPA problem. Most of the nation all over the world is suffering from this financial disease. So, NPA initially become

the banks burden but gradually the burden of the financial system and then the burden of the whole economy. The borrower is who fail to repay the banks due virtually turn out to be very wise in the whole game of banking. It if unchecked, may lead to loss of public confidence and systematic risk. That is why every stakeholders of the economy should show initiation to eliminate the problem of NPA by the way of strong rules and regulation.

1.2. Focus of the study

The study will be based on the NPA of the commercial banks. NPA may be defined broadly as the Bad Debt. However, NPA in terms of banking sector consists of those loan and advances, which are not performing well and likely to be, turn as bad loan. NPA as per current directives of Nepal Rastra Bank (NRB) has been categorized as classified loans and advances. NPA has serve impacts on the financial institution. On the one hand, the investment becomes worthless as expected return cannot be realizable and on the other, due to the provisioning required for the risk mitigation the profitability is directly affected. The existence of the bank can be questioned on this situation. Thus, interest along with principle has to recover timely and without any obstacles.

NPA has categorized by NRB are classified loans and advances. For the probable loss on lending that cannot be recovered even after liquidation of security held with banks NRB has directed to maintain loan loss provisioning according to ageing basis for risk mitigation. The loan loss provision is to be maintained by debiting profit account. Thus as the quality of loan degrades the ratio of loan loss provision is increased affecting the profitability of the banks. This study will have effort to find out the relationship of NPA on profitability of the commercial banks.

Management of NPA has necessitates banks towards taking the rigorous action which ultimately may cause auctioning of the security held with banks custody. Due to adverse economic situation of the country and perception, build up among the people that the properties under auction are always over evaluated there is less participation of the bidder during auction. Such situation compels the banks to accept the security on its own name continuous acceptance of the ownership has now created another problem by pilling up the

volume of Non Banking Assets (NBA). As the major chunk of NBA are fixed in nature the fund supposed to be rated over are being tied upon fixed asset which is heating the liquidity of the banks. Present study is confined to evaluate the relationship of NPA and NBA.

It is confined to analyze the implication of NPA on the profitability of the banks. Further, it will be an effort to assess the relationship of NPA and NBA, credit concentration risk and its implication on NPA increment shall be considered. Affecting Internal and external factors for the conversion of NPA shall be another area to be intended to focus under this study. For the analyzing of the cause and consequences, the NPA level of three banks shall be taken in to consideration.

1.3   Banking Today

Nepal Rastra Bank (NRB), the Central Bank of the Kingdom of Nepal, It Provides the responsibilities including guiding the development of the embryonic domestic financial sector. Since then, there has been a huge growth in both the number and the activities of the domestic financial institutions.

To reflect this dynamic environment, the functions and objectives of the Bank have been recast by the new NRB Act of 2002,the preamble of which lays down the primary functions of the Bank as: to formulate necessary monetary and foreign exchange policies to maintain the stability in price and consolidate the balance of payments for sustainable development of the economy of the Kingdom of Nepal to develop a secure, healthy and efficient system of payments; to make appropriate supervision of the banking and financial system in order to maintain its stability and foster its healthy development; and to further enhance the public confidence in Nepal's entire banking and financial system.The Bank is eminently aware that, for the achievement of the above objectives in the present dynamic environment, sustained progress and continued reform of the financial sector is of utmost importance. Continuously aware of this great responsibility, NRB is seriously pursuing various policies, strategies and actions, all of which are conveyed in the annual report on monetary policy which provides a comprehensive review and evaluation of the previous monetary policy and justification and the analysis of the following year's monetary policy. The re-engineering of

the NRB itself is one of the critical components of the reform agenda. To improve the financial sector legislative framework, some new Acts have already come out and there have been amendments to some existing Acts. Enactments of the draft legislations on bank and financial institutions, secured transactions, insolvency, Assets Management Company and anti-money laundering are expected to be soon materialized, all with the goal of strengthening the financial sector through building on its healthy development and improved stability.These activities convey the commitment of the NRB for addressing the present and future challenges of the financial system more competently. This dynamic and proactive approach to the financial system, especially with its increasing openness and competitive process in the context of growing global financial environment, should ensure a sustained progress and stability of the financial system under NRB's guidance and leadership, for contributing substantially to the sustained development of the economy of Nepalese that Rastriya Banijya bank, NIDC capital Market, Agricultural development bank and other Joint venture and private owned bank have been playing the significant role to develop the nation and banking sector in Nepal.

1.4   Profile of Sample Banks

1.4.1 Rastriya Banijya Bank (RBB)

To develop the banking sector in Nepal and to make the financial system more competent, competitive and strong Rastriya Banijya Bank was established on January 23, 1966 (2022 Magh 10 BS) under the RBB act. RBB provides various banking services to a wide range of customers including banks, insurance companies, industrial trading houses, airlines, hotels and many other sectors. Rastriya Banijya Bank (RBB) is fully government owned, and is the largest commercial bank in Nepal.

RBB has Nepal's most extensive banking network with over 125 branches (as at July 2009). Under five regional offices (Kathmandu-34 branches, Biratnagar-28 branches, Birgunj-15 branches, Pokhara-23 branches, and Nepalgunj-25). Through its branch network, RBB has been contributing to Nepal's economic development by providing banking services throughout the country.

RBB's main objectives are to provide banking services throughout Nepal and contribute in the socio economic development of the country. The bank's major activities include accepting deposits, investment in government securities, lending to productive sectors, dealing with foreign currency, processing domestic and foreign remittances, merchant banking and correspondent banking services etc.

RBB has many correspondent arrangements with major international banks all over the world that facilitate trade finance, bank-originated personal funds transfer and interbank funds transfer via SWIFT. In a bid to promote remittance business, RBB works with Western Union and International Money Express, two leading person-to-person funds transfer networks.

RBB is committed towards the satisfaction of its customers by providing modern banking facilities. At the same time, the bank is equally committed to the economic growth and development of the country. The bank aims to reach every rural and urban corner of Nepal to accommodate the requirement of the people.

1.4.2 Himalayan Bank Limited (HBL)

Himalayan Bank was established in 1993 in joint venture with Habib Bank Limited of Pakistan. It is the first commercial bank of Nepal whose maximum shares are held by the Nepalese private sector. Despite the cut-throat competition in the Nepalese Banking sector, Himalayan Bank has been able to maintain a lead in the primary banking activities-Loans and Deposits. Legacy of Himalayan lives on in an institution that's known throughout Nepal for its innovative approaches to merchandising and customer service. Product such as premium Savings Account, HBL Proprietary Card and Millionaire Deposit Scheme besides services such as ATMs and Tele-banking were first introduced by HBL. Other financial institutions in the country have been following their lead by introducing similar products and services. Therefore they stand for the innovations that they bring about in this country to help their customers besides modernizing the banking sector. With the highest deposit base and loan portfolio amongst private sector banks and extending guarantees to correspondent banks covering exposure of other local banks under their credit standing with foreign correspondent banks, they believe they obviously lead the banking sector of Nepal. The

bank holds of a vision to become a Leading **Bank of the country** by providing premium products and services to the customers, thus ensuring attractive and substantial returns to the stakeholders of the bank.

Within 17 years of commencing business, the bank has grown rapidly with 32 branches throughout the country among of them 23 branches with card centre in Kathmandu valley, 9 branches outside Kathmandu valley. The bank also has 52 points of ATM s representation across the kingdom (31 ATMs in Kathmandu valley and 21 in outside Kathmandu). The bank is going to install 3 ATMs in near future.

All branches of HBL are integrated in to Globus (developed by Temenos), the single banking software where the bank has made substantial investments. This has helped the bank provide services like 'Any Branch Banking Facility', internet and SMS banking. HBL very recently introduced several new products and services. Millionaire deposit scheme, small business enterprises loan, pre-paid visa card, international travel quota credit card, consumer finance through credit card and online TOEFL, SAT, IELTS, etc. Fee payment facilities are some of products and services. Looking at the number of Nepalese workers abroad and their need for formal money transfer channel, HBL has developed exclusive and proprietary online money transfer software-Himal Remit TM. By deputing their own staff with technical tie-ups with local exchange houses and banks, in the Middle East and Gulf region, HBL is the biggest inward remittance handling bank in Nepal. All this only reflects that HBL has an outside-in rather than inside-out approach where customers' needs and wants stand first. (Source: Annual Financial report of HBL).

1.4.3 Standard Chartered Bank Nepal Limited (SCBNL)

Standard Chartered Bank Nepal Limited has been in operation in Nepal since 1987 when it was initially registered as a joint-venture operation with Grind Lays Bank, London under commercial bank act 2031 BS. Today the Bank is an integral part of Standard Chartered Group who has 75% ownership in the company with 25% shares owned by the Nepalese public. The bank enjoys the status of the largest international bank currently operating in Nepal. The shares of the bank are actively traded in Nepal Stock Exchange with leading price in comparison to other commercial bank in the current market.

Within 23 years of commencing business, the bank has grown rapidly with 13 branches throughout the country among of them 4 branches in Kathmandu valley, 9 branches outside Kathmandu valley and 4 extension counters with few more in the pipeline. The bank also has 21 points of ATM s representation across the kingdom (14 ATMs in Kathmandu and Lalitpur, 3 in Pokhara, 1 in Bhairawa, 1 in Itahari sunsari,1 in Narayangadh and 1 in Dharan). All branches are inter-connected through V-Sat and capable of providing online, real time transactions.

An integral part of the international banking Group currently operating in Nepal, the bank enjoys an impeccable reputation of a leading financial institution in the country with around 450 local staff which is the part of almost 70000 people employs by Standard Chartered Group representing over 100 nationalities in over 50 countries. Standard Chartered Bank Nepal Limited (SCBNL) is in a position to serve its customer through a largest domestic network. In addition to which the global network of Standard Chartered Group gives the Bank a unique opportunity to provide truly international banking in Nepal.

The bank offers the full range of banking products and services in wholesale and consumer banking, catering to a wide range of customers encompassing individuals, mid-market local corporate, multinationals, large public sector companies, government corporations, airlines companies, hotel as well as the segments comprising of embassies, aid, agencies, NGOs and INGOs.

The bank has been the pioneer in introducing customer focused products and services in the country apprises to continue to be a leader in introducing new products in delivering superior services. It is the first bank in Nepal that has implemented the anti-money laundering policy and applied the 'Know Your Customer' procedure on all the customers' accounts. The bank got the best bank award in the year 2009.

1.5   Importance of the study

The increase of NPA has become a major problem of all commercial banks of Nepal. This is a serious problem of all commercial banks so this study will contribute by investing the issues more systematically. The conclusion and findings of this study will be very useful for the literature of NPA in general and review the previous findings. The study will be helpful for the banking industry to identify and to trace out the contributing factors causing NPA and to reduce its level. This helpful for the finding out the cause and effect of NPA in commercial banks and to give some suggestions for the modification on directives, laws and other proceedings for the better performance of the banks.

1.6   Statement of the problem:

When the bank provide loan to the public, at that period it expects that interest and principal will be recovered on time. Bank collects fund in term of deposit capital e.t.c. from savers and gives loan to the user of money so in principle, loan and advances extended by banks are repayable on demand. However, in practice all loans are not recovered as per the terms of sanction or within the expiry of repayment period granted in normal courses. When the interest and principle cannot be recovered in time, the loan is considered as a classified loan or NPA. Private sectors banks are also suffering from the NPA burden but it is the major problem of the government owned banks because of the poor loan categorization, diversification, risk analysis or in other words the overall performance if the government banks are poor. This study has the following questions regarding to NPA with special question regarding to NPA with special reference to RBB, SCBNL and HBL.

  a) What is the present condition of NPA in sample banks?
  b) What is the overall impact of NPA on the profitability of the banks?
  c) What is the Impact of NPA and total loan of sample banks?

1.7 Objectives of the study:

Every bank has now put the NPA management under top priority because increasing NPA is more or less being faced by every commercial bank. This study shall be useful for banking sector. The basic objectives of this study are to analyze and identify the impact, cause and consequences of NPA. The following are the specific objectives.

i. To analyze the present condition of NPA on sample banks.

ii. To assess the relationship of NPA with total loan and advances of sample banks.

iii. To evaluate the impact of NPA on profitability of the banks.

iv. To analyze the trend of total deposits, loan and advances, non-performing assets and loan loss provision of sample banks.

v. To make recommendation of overcome the difficulties in managing non-performing assets of the banks with high level of NPA.

1.8 Limitations of the study:

This research study is very useful in searching the NPA problems and its solutions in Nepalese financial sector. This study suffers from many limitations which are as follows:

i. First of all this study is concerned only with non-performing assets of the sample banks.

ii. The study is based on secondary data, which consist of banks publications, audited reports and other secondary sources. Bank publications may not be always reliable or in other words, it may not provide exact vision of the field because they may publish the reports according to their profit policy and market situation. The personal interviews and interactions may not be factual. However, the audited data, which are used, are more reliable.

iii. The study covers the data of only five fiscal years from 2004/05 to 2008/09

iv. The basic purpose of the study is to fulfill the requirement for the masters in business study, but the limited time and resources are other limitations of the study to reach into the specific aspects of the issues.

v. The study is focused on the Nepalese commercial banks only. Hence, the finding may not be applicable to other banks (i.e. development banks finance companies and other companies of Nepal).

CHAPTER 2

REVIEW OF LITERATURE

After a long period of establishment of Nepal Rastra Bank as the Central Bank of Nepal, the second commercial bank namely Rastriya Banijya Bank (RBB) has been established on January 23, 1965 (2022 Magh 10 BS) with cent percent government ownership. This bank has been established under the Rastriya Banijya Bank Act 2021 BS both Nepal Bank Limited (NBL) and Rastriya Banijya Bank (RBB) have made a remarkable contribution by providing reliable banking services to the Nepalese people. Its contribution is well noted in terms of capital formation to the small dispersed saving into meaningful capital investment in order to flourish industry, agriculture, trade and commercial sector in the country.

In the Nepalese context, a commercial bank is one, which exchange money, deposits money, accepts deposits, grants loans and performs commercial bank functions (Commercial bank act, 1974). When the government got some rays of hope in the banking sector than they decided to allow foreign banks to operate their activities in Nepal as "Joint-Venture Model", joint venture banks can be defined as an association of two or more parties of abroad and in country having common objectives and goals so as to get maximum satisfaction. As that time, it was hoped that joint venture banks (JVBS) would support the country in various ways.

2.1 Conceptual Framework

Review of literature is useful to explore the relevant and true facts for the research purpose. The main purpose of literature reviews is to find out what research studies have been conducted in ones chosen field of study and what remains to be done. Thus, the previous studies cannot be ignored because they provide the foundation of the present studies. In other word there has to be continuity in research. This continuity in research is ensured by linking the present study with the past research studies.

Thus, the review of literature is an essential and important part of all studies. For review study, an attempt has been made to look in to bank publications, periodicals and central banks rules and

regulation. In addition, informal interviews with bank personnel and a few customers/ borrowers have been made to receive. Further different books, reports, journals and research studies published by various institutions interaction programs related with the financial issues transmitted by the various television channels will be taken as a supportive concept.

2.1.1 Conceptual Review

<u>Origin and Development of Banks</u>

The economic activities existed in every civilization of mankind in all over the world. However, the modern banking practice was originated from Europe. The first bank called 'Bank of Venice' was established in Venice in 1157. Then 'Bank of Barcelona' was established in 1401 and 1407 'Bank of Genoa' was established.n1694 the 'Bank of England' was established as a joint stock bank.

Nepal has a long history of using money. History unveils that the first Nepali coins to be introduced were *Manank* during the reign of the King Mandev and *Gunank* during the reign of the King Gunakamdev. Afterwards the coins were reintroduced during the reign of Amshuverma. After the unification of Nepal, the great King Prithivi Narayan Shah started the coin *Mohar.* The *Taksar* was established in 1789 to issue coins scientifically. In 1876, during Rana Regime an office named *Tejarath Adda* was established in Kathmandu to provide loans against deposit of gold and silver. But the office did not have right to accept deposits.

To begin to the modern banking system, Nepal Bank Limited was established in 1937 as the first bank of the country. Nepal Bank Limited dominated the financial sector of the country for almost 30 years without any competitor. This bank played a major role to boost up the Nepalese economy during that period. Nepal Rastra Bank was established in 1955 as central bank of Nepal, which was very essential for Nepalese economy. The second commercial bank, Rastriya Banijya Bank was established in 1965 under the Rastriya Banijya Bank Act, 2022 with full ownership of the Government of Nepal.

Development of Central Bank

In 1894, the Bank of England was converted into the central bank of England. This was done by establishing the Governor and the Company of the Bank of England. At present, this bank is known as the Central Bank of England.

Shekhar & Shekhar (1998) have stated that after the World War I and the consequent chaotic monetary conditions brought home to many countries the imperative necessity of establishing a centralized institution capable of creating and maintaining equilibrium in the monetary sphere.

In September 1920, an International Financial Conference was held at Brussels, which pointed out that those countries, which had not yet established a central bank, and were the spring of 1922, the Genoa Conference indicated the need of central bank. Then after, there came a wave of establishing central banks by several countries.

Meaning of Central Bank

Central bank is the national institution that monitors all financial and monetary procedures and policies. **Vaidya (1997)** has stated that the central bank is the apex bank in a country that controls all monetary system and banking structure.

Rosenberg (1982) has defined the central bank as a banker's bank and a bank holding the main body of bank reserves of a nation and the prime reservoir of credit. (e.g. Bank of England, Bank of France)

Clark (1999) has expressed the central bank as bank that often carries out government economic policy, influences interest and exchange rates and monitors the activities of commercial and merchant banks. In this way it functions as the government's banker and is the lender of the last resort to the banking system.

Encyclopaedia Britannica (2002) defines Central Bank as an institution that is charged with regulating the size of a nation's money supply, the availability and cost of credit, and the foreign-exchange value of its currency. Regulation of the availability and cost of credit may be non-selective or may be designed to influence the distribution of credit among competing uses. The

principal objectives of a modern central in carrying out these functions are to maintain monetary and credit conditions conducive to a high level of employment and production, a reasonably stable level of domestic prices, and an adequate level of international reserves.

Central bank is an institution, which is charged with the responsibility of managing the expansion and contraction of the volume of money in the interest of the general public welfare. It is also a banker's bank and holding reserves of the country and ultimate reservoir of credit. Hence, central bank is the regulating authority for commercial banks, and other banks and financial institutions.

Importance & Functions of Central Banks

It is a difficult task to put aside the importance and functions of a central bank. **Shekhar& Shekhar (1998)** comment that it is difficult to lay down any hard and fast rule regarding the functions of a central bank. The powers and the range of functions of central banks vary from country to country.

The most important and the earliest functions to be discharged by a central bank is that of acting as a bank of issue. As well as it is a banker's bank. The central bank also acts as a lender of the last resort. In case of any problems and emergency to any of the banks operating under it, central bank comes forward to rescue them temporarily from such problems. It also plays the role of an agent, an advisor and banker to the Government. Central bank is a custodian of the nation's metallic reserves and controller of currency.

A central bank has sole right to issue national currency notes. It controls money flow in the market by imposing monetary policy. It issues notes after full analysis of unemployment, inflation, economic growth, etc. of the country. Central bank is the holder of all the Government balances. It is the holder of all the reserves of the other banks and financial institutions in the country.

Objectives between a central bank and other commercial banks are different. The main objective of a central bank is to assist the government to implement economic politics without any profit motive, where as the main objectives of other banks is to earn profit by mobilizing funds

collected from the public. As well, as the central bank plays the role of guardian and parents to other commercial banks.

As a regulatory body of all other banks and financial institutions, a central bank is the origin of all banking policies under which all the banks are suppose to operate. Therefore, a central bank guides and assists in operating banking system as a whole. A central bank has full authority to interfere in the banking market i.e. to all banks in terms of implementing its policies. It can penalize the banks in case they go out of the central bank's policy or the termination of the license and can restrict their working dimensions largely.

A central bank is also important in the context to co-ordinate with different international institutions such as International Monetary Fund (IMF) etc. It works under the supervision and guidance of such institution to develop the monetary system of a country.

Meaning of Commercial Banks

Commercial bank Act 2031 BS of Nepal; has defined that "A commercial bank is one which exchanges money, deposits money, accepts deposits, grants loans and performs commercial banking functions and which is not a bank mean for cooperative, agriculture, industries for such specific purpose.

However, the bank and financial development institutions ordinance, 2060 has accumulated the five banking acts including Commercial Bank Act 2031, which defines the bank with respect to their transaction. This act is trying to categories the banking institutions in two ways that is based on their transactions. According to this Act, "Bank is the institution which performs its transaction under the provision mentioned on section 47 of this act".

Rosenberg (1982) has stated commercial bank as an organization chartered either by the Comptroller of the Currency and known as` a national bank or chartered by the state in which it will conduct the business of banking. A commercial bank generally specializes in demand deposits; commercial loans.Clark (1999) has defined commercial bank as bank that concentrates on cash deposit, and transfer services to the public, often to be found on the High Street. It may be joint-venture bank or a private bank.

"Bank is an institution that deals in money and substitutes and provides other financial services. Banks accept deposits, make loans, and derive a profit from the difference in the interest rates paid and charged, respectively. Some banks also have the power to create money. Commercial bank is a bank with the power to make loans that, at least in part, eventually become new demand deposits. Because a commercial bank is required to hold only a fraction of its deposits as reserves, it can use some of the money on deposit to extend loans. When a borrower receives a loan, his checking account is credited with the amount of the loan; total demand deposits are thus increased until the loan is repaid. As a group, then, commercial banks are able to expand or contract the money supply by creating new demand deposits." (Encyclopedia Britannica, 2002)

"Banking, the business of providing financial services to consumers and businesses. The basic services a bank provides are checking accounts, which can be used like money to make payments and purchase goods and services; savings accounts and time deposits that can be used to save money for future use; loans that consumers and businesses can use to purchase goods and services; and basic cash management services such as check cashing and foreign currency exchange. Commercial banks specialize in loans to commercial and industrial businesses. Commercial banks are owned by private investors, called stockholders, or by companies called bank holding companies." (Microsoft Encarta Reference Library, 2003)

The main objective of a commercial bank is to earn profit by collecting the fund scattered around the public, and mobilizing it. Therefore, the main functions of commercial banks happen to be collecting deposits from public and lending loans to various economic sectors that require financing. Commercial banks make profit by charging a bit higher interest rate in loans than they pay to depositors. Therefore, the main source of income of commercial banks is interest income.

2.1.2 Definition of NPA

When the borrower takes loan, he should pay interest along with principle in certain time that's mean the borrower is the assets for banks that's why banks most ensure that the interest and the principle amount an loans are timely recovered without much trouble but if that borrower does not show initiation in payment of interest and principle for long time then these types of loans fall under the category of nonperforming assets (NPA). That is why from the viewpoint of security, banks and financial institutions should gather the sufficient information about the firm/

client to which supposed to be invested, these information include as financial background, nature of business as well as its ability to pay loan back.

Now-a-days, we have seen that Nepalese Commercial banks have now started to give proper attention on NPA. Some banks have recently introduced the NPA management policy for the recovery and regularization of the dues.

Commercial banks as financial institutions perform a member of internal functions. Among them, providing credit is considered as most important one. "Commercial banks bring into being the most important ingredient of the money supply, Demand deposit through the creation of credit in the form of loan and investment." , (Course, H.D (1963), "Management policies for commercial banks", Prentice Hall Inc, Eagle wood cliffs).

2.1.3 Classification of NPA

As per the NRB directives, NPA are said as classified loans and this includes sub-standard doubtful and loss categories as defined by new NRB Directives. (NRB circular, 2057) As per circular, NRB has identified the NPA as an account of loan where the balance sheet date in respect of

- Term loan interest remains "past due" for more than 180 days, overdraft and cash credit amount are main out of order.
- Bills purchase or discounted remain overdue or unpaid for more than 180 days.
- Other accounts receivables remain past due for 180 days.

In our country, previous circular of NRB had classified the loans in to six categories: however, as per new circular issued and effective from FY 2058/059, commercial banks are required to make provision against loan and advances as follows:

Classification of loans and advances	Criteria for provisioning	Provisioning rate
Pass	Not part due and part due for a period up to 3 months(Performing Loans)	1%
Substandard	Past due for a period of 3 months to 6 months	25%
Doubtful	Past due for a period of 6 months to 1 year	50%
Loss	Part due for a period of more than 1 year or advance which have least possibility of recovery.	100%

The above criteria are supposed to be effective fully onwards FY 2061/062 (NRB circular, 2057 and 2067).

2.1.4 Effect of NPA on Profitability of Bank:

Under the circumstances, assets that do not earn any income to the bank affect the profits in a number of ways. (Athmannathan and Venkata Krishna, 2001)

Profitability Impact

- The resources locked up in NPA are borrowed at a cost and have to earn a minimum return to service this cost.
- NPA on the one hand do not earn any income but on the other hand drain the profits earned by performing assets through the claim on provisioning requirement.
- Since they do not earn interest, they bring down the yield on advances and the net interest margin or the spread.

- NPA have a direct impact on return on assets and return on equity, the two main parameters for measuring profitability of the bank.
- Return on assets will be affected because while the total assets include the NPA they do not contribute to profits, which are the numerator in the ratio.
- Return on equity is also affected as provisioning eats more and more into profits earned.
- The cost of maintaining these assets include administrative costs, legal costs and cost of procuring the resources locked in.
- NPA bring down the profits, affect the shareholders value and thus adversely affect the investor confidence.

As a whole the impact of NPA can be assessed with the following (Athmannathan and Venkata Krishna, 2001)

- Lower ROE and ROA.
- Lower image and rating of bank.
- Disclosure reduces investor's confidence.
- Increase Costs/ Difficulties in raising capital.
- NPA do not generate income.
- They require provisioning.
- Borrowing cost of resources locked in.
- Opportunity loss due to non-recycling of fund.
- Capital is blocked in NPA.
- Utilizes capital but does not generate income to sustain the capital that is locked.
- Recapitalization by government comes with string.
- Administration and recovery cost of NPA.
- Affect an employee morale and decision-making.

2.2 Review of Related Studies:

2.2.1 Review from journals and Articles

Sound and competitive financial sector is not only the backbone of country's economy but also the key to the economic development. As the countries are becoming more and more

interdependent through globalization and liberalization most of the poor and developing nations are finding themselves way behind the developed countries in terms of trade and development to become a successful trade partner and to achieve economic development, development of a financial sector is a must and this is impossible without proper management of NPA. So the RBB is trying to manage the position of NPA through financial sector reform program. For this purpose, the books, journals, articles, thesis and reports related to NPA, financial sector reform program and other relating factors are reviewed for this study.

Non-performing loan is an outstanding loan that is repaid i.e. neither payments nor principle is made. In case of banks, the loans and advances are the assets as the banks flow loans from the fund generated through shareholders equity money deposited by the people and fund having through borrowings. Hence, the term NPA means the loans and advances that are not performing well. Thus, all the irregular loans and advances can be treated as NPA.

Sujena (1992) in her article "The reference book and management of credit written" has also been consulted pointing out the cause of NPA says that the risk connected with lending to business depends on an enormous number of factors. For any particular type of business, the risk failure is affected by the state of economy, trend in demand for the product or service provided competition from any other suppliers, financial resources are too limited and management skills are lacking. Reiterating the difficulties Suneja (1992) says probably the most difficult decision facing a banker is to determine when it becomes necessary to recall a loan and to begin the process of liquidating the security. Further, she suggests that if a customer fails to make repayment on the due date, the bank has to consider what steps need be taken to recover the debt.

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

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Pradhan (2058) in his article "NPA: Some suggestions to tackle them" found saying that unless the growth in NPA is kept in control, it has the potential to cause systematic crisis. He has mentioned that a dream of globalization led to huge investment, which unfortunately could not be utilized properly due to hesitant liberalization policies. Large corporate misused the credits, delayed payments, and contributed indirectly for enhancing NPA ration.

He further argues that lack of vision in appraisal of proposal while loan sanctioning, reviewing or enhancing credit limits, absence of risk management policy of financing, concentration of credit in few group of parties and sector, lack of coordination among various financier, lack of initiatives to take timely action against will full defaulters, indecision on existing out of bad loans for fear of investing agencies like special policy, CIAA, public accounts committee of the parliament have also contributed in whatever measures to the worsening situation of NPA. He further pointed out that most crucial reason for the increasing in the NPA is shabby and defaulter friendly legal system. Suggesting the remedy of NPA he adds that Administrative system should be strengthened. Legal reforms should be made and assets Reconstruction Company should be formed.

Henderson (2003), CEO of RBB during new business age agrees that the challenging target of RBB turnaround is restructuring and collection of NPA.

Through these studies are found to be quite useful in their own side but the question of NPA and its cause as well as effect on various aspects in commercial bank is yet to be reviewed. In view of these, this study has been based on the various contributing factors that increase NPA level in commercial banks in Nepalese perspective and its effect on profitability portions of the bank. Bahadur (2061) "Financial sector stability and monetary policy" Nepal Rastra Bank Samachar, P31) In the article, "Financial sector stability and monetary policy" Nara Bahadur Thapa mentions, "The primary instrument that is generally used for achieving the financial sector stability is the regulation and supervision of banks and financial institution. (Thapa, Nara In the article, "Need for macro prudential appraisal of the financial system soundness" Gunakar Bhatta has presented the interest of multilateral donor agencies in the financial soundness of the recipient countries. He writes, "Vulnerabilities in the financial system along with its development has become a common word in the recent years. There have been several efforts in

the local, regional and global fronts to mitigate the risk and uncertainties in the financial system. Episodes of turmoil in the international financial markets particularly after mid nineties have underscored the need for better tools to monitor financial risks and vulnerability. Realizing this emerging need, the international monetary fund (IMF) initiated to strengthen its assessment of financial system soundness as part of its surveillance work." (Bhatta, Gunakar (2061), "Need for macro prudential appraisal of the financial system soundness" Nepal Rastra Bank Samachar P58) In the article, "Contract of Rastriya Banijya Bank opportunities and challenges "Mahesh Ghimire opines that "although the management contract of Rastriya Banijya Bank was quite expensive in cost, when it started, it is now starting to produce good results. Although there has not been good progress in loan recovery other aspects of management is starting to show progresses." (Ghimire, Mahesh (2062), "Management contract of Rastriya Banijya Bank: opportunities and challenges" Nepal Rastra Bank Samachar, P88) In the article published in "The Kathmandu post" August 28, 2006 on topic "Huge bank Defaulter" who is responsible? Rajib Upadhaya. Sr. External Affairs Specialist, The World Bank, found saying that defaulters are the villains of the marketplace. The must hurt in the situation is the poor, if the defaulting continues, the government will have to spend money from its budget to fix the problems at the expenses of programs that help poor to improve their living standard. Delaying the resolution of the problem will result in accumulation of more losses, eating further into future government resources for poverty reduction. (Bhattarai, M (2059), "Restructuring process of commercial bank and responsibility of restructuring team, "Nepal Rastra Bank Samachar vol 47, P 62) In an article, Mahesh Bhattarai, "Is trying to indicate the problem of banks bad debt and non performing assets. According to him, "If a bank cannot recover its loan lending banks cash flow will be badly affected" Similarly, it can affect the close relationship between depositors.

2.2.2 Review from Thesis

(Nepal, Ajay Kumar (2002), "Financial sector reform in Nepal; after economic liberalization" T.U. Kritipur) Ajay Kumar Nepal in his thesis "Financial sector reform in Nepal: After economic liberalization" recommends "There is a critical need to reform, revitalize and modernize the financial sector. The government is endeavoring to achieve a privately owned and managed banking system, which provides economic and efficient financial intermediation in the economy. The inefficiency of the banking sector stems mainly because of the problem in the state owned banks viz. Nepal Bank Limited and Rastriya Banijya Bank. Meanwhile the agricultural

Development Bank and Nepal Industrial Development Bank are also facing similar type of problem".

Khadka Dinesh Kumar in his thesis non-performing assets of Nepalese commercial banks with an objectives to examine the level of NPAs in total assets, total deposits and total lending of Nepalese commercial banks. He also showed that the effects of non-performing assets on Return on Assets (ROA) and Return on Equity (ROE) of Nepalese commercial banks.

He said that despite of being loan and advances more profitable those other assets it creates risk of non-payment for the bank. Such risk is known as credit risk or default risk. Therefore, like other assets, the loan and advances are classified into performing and non-performing assets based on overdue schedule. Escalating level of NPAs has been becoming great problem in banking business in the world. In this context, Nepal cannot be run off from such situation. The level of NPAs in Nepalese banking business is very alarming. It is well known fact the problem of swelling non-performing assets and the issue is becoming more and more unmanageable day by day. We are well known from different financial reports, newspaper and news that the total NPA in Nepalese banking system is about 35 billion, while it is very worse in case of two largest commercial banks Rastriya Banijya Bank (RBB) and Nepal Bank Limited (NBL).

Finally, he concluded that the level of NPA in sampled Nepalese Commercial Banks is not so alarming. The situation is quite satisfactory. However, the increasing trend remain continue in coming days, the situation will be unmanageable and alarming. The commercial banks could not give full attention toward supervising their lending and towards recovering their bad loans perfectly. Level of NPA has been increasing. The level of NPA of joint venture banks such as Nepal Bangladesh Bank Limited (NBBL) seems very unsatisfactory, if the situation is not handling right now, it will be unmanageable and difficult to handle.

He recommends that the banks should have to take enough collateral while lending loan, appropriates financial analysis, supervision, monitoring and control should be done. Lastly, those banks having high level of NPA should take immediate action toward recovering their bad loan as soon as possible. In case of default to repay the loan recover principle and interest amount.

Shrestha Niva (2004) in her study "A study on non-performing loan and loan loss provisioning of commercial banks" with reference to Nepal Bank Limited, Nabil Bank Limited and Standard Chartered Bank Nepal Limited has made on attempt to analyze the various aspects of non-performing loan in the commercial banks. Her main objectives of the study is to find out the proportion of non-performing loan, factors lending to accumulation of non-performing loan, relationship between loan and loan loss provision and impact of loan loss provision on profitability of the commercial bank.

She concludes increasing non-performing loan is the serious problem of the banking sector in Nepal. Non-performing assets directly affects the income flow of the bank. It has been found that NBL has very high portion of non-performing loan resulting to higher portion. Hence, even the bank has the highest investment in the most income generating assets, i.e. loan and advances, it is in loss. Even the private sector bank as Nabil has higher non-performing loan during the study period is higher than the acceptable. However, in recent two year, Nabil's non-performing loan has shown significant decrement and according provision has also decreased. Among the three banks, SCBNL has the least non-performing loan and thus the least loan loss provision. From these indicators it can be said that SCBNL is the best among the three banks. SCBNL seems less oriented towards lending. Hence, the lower percentage of NPL and provisioning of SCBNL is not only due to proper lending function but also due to relatively lower investment in loans and advances. (Shrestha, 2004:99)

She also said that ineffective credit policy, political pressure to lend on credit worthy borrowers, overvaluation of collateral are the major cause of mounting non-performing assets in government owned banks like NBL. Other factors lending to accumulation of NPAs are weak loan sanctioning process, ineffective credit monitoring and supervision system, economic slowdown, borrower's misconduct etc. In addition to this establishing recovery cell, hiring assets Management Company is also measure to resolve the problem of NPA.

She recommended that the factor which leads to non-performing loan are improper credit appraisal system, ineffective credit monitoring and supervision system etc. Besides that negligence in taking information from credit information bureau may also led to bad debts. Hence all the three banks are recommended to be more cautions and realistic while granting loan

and advances. After advancing loans there should be regular supervision and follow up for proper utilization of loan. It also recommended that the banks to initiate training and development program for the employees to make them efficient and professional in credit appraisal, monitoring and proper risk management. The regulation regarding loan classification and provisioning is stringent and tighter than the previous. Hence, NRB should not only impose directive but also create supportive environment for the commercial banks. NRB is recommended to strength credit information bureau (CIB) so that banks can get required credit information about the borrowers on time. This help in reducing NPL.

Shama Bhattarai (2004) has stated in her research "Implementation of Directives issued by Nepal Rastra Bank: A comparative study of Nepal SBI Bank Limited and Nepal Bangladesh Bank Limited" to analyze the various aspects of NRB directives such as capital adequacy and loan classification and loan provisioning. In her view, the loan classification helps to the banks to monitor the quality of their loan and advances and to take step toward the remedial action in the credit quality of their loan and advances. She concludes that the new provision of the banks will have its provision amount increasing in coming years and subsequently profitability of the banks will also down. However, the true picture of the quality of assets will be painted in the coming year.

She recommends the banks should be very careful while analyzing the paying capacity of its credit clients with longer period of past due, the banks will end up increasing its provisions that will keep the bottom line low if the bank is not careful. (Bhattarai, 2004:95)

2.3   Research Gap

Most of the studies mentioned earlier dealt about NRB Directives as a whole and generalized the matter about the objectives, purpose and impact of the directives to the commercial banks and financial institutions. Very few of them have gone specific about the position of the non-performing assets but none of them has written over the position of the non-performing assets taking RBB, HBL and SCBNL in specific. So, this study is conducted to make a specific review of the position of the non-performing assets with a specific case of above mentioned three Banks. The study covers the data of only five fiscal years from 2004/05 to 2008/09 based on secondary data, which consist of banks publications, audited reports and other secondary sources. It may be

the case that the banks are very old, so, many studies regarding this bank have been made compared to other elder commercial banks. As such, this study might be a novelty one with reference to the study of the position of the non-performing assets of RBB, HBL and SCBNL.

Unified Directives for Financial Institutions has been issued as applicable from FY 2062/63 and 2067, so, it can be said that this study should be new one incorporating the position of the non-performing assets norms of such new directives. The study is focused on the position of the non-performing assets of the bank, norms fulfilled by the bank and its impact on profitability of the bank. The study has also reviewed few important items like trend of total deposits, loan, advances, and loan loss provision, which have important role to play in the position of NPA. Moreover, the study has incorporated the views and opinions of the bank officials with the help of questionnaires regarding NPA requirements set by NRB. In addition to that, the study has been able to incorporate the views of the stake holder regarding the causes and position of NPA. The studies certainly give clear picture of the position of the NPA of three sample banks and identify the impact, cause and consequences of NPA.

CHAPTER 3

RESEARCH METHODOLOGY

The topic of the problem has been selected as the position of NPA in RBB, SCBNL and HBL. The main objectives of the study are to assess the level of NPA in government owned banks especially in RBB and the joint venture banks (i.e. SCBNL and HBL), to find out the causes and effect of NPA in selected banks and to give some suggestions for the proper management of NPA.

3.1 Background

Research Methodology describes the method and process applied in the entire aspect of the study. Research Methodology refers to the various sequential steps to be adopted by the researcher in studying a problem with certain objects in view. Its focus is made on the basic relationship between relevant topics. To achieve the basic objectives to the study, the following methodology has been adopted which includes research design, nature and types of data, sources of data, data collection, processing and tabulation procedure and methodology.

Research Methodology is a way to systematically solve the research problem (Kothari, 1990 10). It may be understood as a science of studying how research is done scientifically. In it, we study the various steps that are generally adopted by a researcher, studying his research problem among with the logic behind them.

So, without the help of proper research methodology, the justification on the present study cannot be obtained.

3.2 Research Design

A Research Design is the specification of the methods and procedures of acquiring the information needed. It is the overall operational pattern of framework of the project that stipulates what information needed. It is the overall operational pattern of framework of the project that stipulates what information is to be collected from which sources and what procedure. If it is a good design, it will ensure that the information obtained is relevant to

research question and that it was collected objective and economical procedures. Similarly, research design is the plan structure and strategy of investigation conceived to obtain answer to research question and control variance. The first purpose is to answer the research question or test the relationship, the second purpose of a research design is to control variance. The purposed study will be carried out successfully by collecting information regarding the behavior / attitude of the bank personnel, borrowers and the policies of the banks through personal interviews and written sources as well. Moreover, the study will be conducted in the light of central banks rules and regulations that abide the commercial banks. This study seeks to analyze the impact of NPA on profitability, NPA and its relationship with NBA and influencing factors. The research design of the study is therefore combination of two major research designs i.e. descriptive design for secondary data and survey research design for primary data.

3.3 Nature and Types of Data

The main purpose of this study is to assess the impact of NPA on the profitability of bank as well as the influencing variables of NPA. The nature of data used in the study is both secondary natures.

3.4 Sources of Data

Most of the data are collected from the secondary sources. Taking consideration into the sources of data, the secondary sources of data are collected from research department of Nepal Rastra Bank, directly from concern banks, audited financial report and through visiting different web sites. However, primary data has also been aimed to achieve to some extent through personal interviews.

3.5 Population and Samples

Overall 28 A class commercial banks and 67 development banks are operating in Nepal, out of these; the following commercial banks have been taken as the populations of the study.

1. Rastriya Banijya Bank (RBB)
2. Himalayan Bank Limited (HBL)
3. Standard Chartered Bank Nepal Limited (SCBNL)

Similarly, the financial statements of these banks for five years from 2004/05 to 2008/09 have been taken as sample for the same purpose. Among the three sample banks, RBB is a state

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controlled bank and rests of the banks are joint venture banks, so by studying the position of NPA commercial banks in Nepalese perspective. Therefore, the commercial banks are the population of the study.

3.6 Data Collection Procedure

After the identification of sample banks, the sources of data required for the study are also identified and collected through the following procedures.

) First of all nature of data have been identified.

) For the collection of secondary data yearly annual report of the sampled banks have been taken for the period of five years i.e. during the fiscal year 2004/05 to 2008/09.

) For the collection of the primary data information has been collected developing a scheduled questionnaire and distributing these employees of the banks. Besides this, junior employees are also being observed and responses can be drawn from them about relevant questionnaires. But I have not mentioned the primary datas in analysis.

3.7 Data Processing Procedure

According to the requirement of the study, the different types of data should be collected. That is why the collected data from various sources are in raw form. They are classified and tabulated as per the nature of the study. So, the primary data collected through questionnaire as well as the secondary data have been tabulated as per the need of calculating financial and Karl Person coefficient of correlation as a statistical tool.

3.8 Methods of Data Analysis

Presentation and analysis of the collected data is the core part of the research work. The collected raw data are first presented in systematic manner in tabular form and are then analyzed by applying different financial and statistical tools to achieve the research objectives. Besides, some graph charts and tables have been presented to analyze and interpret the findings of the study.

To make the study more specific and reliable, the researcher used two types of tool for analysis.

1. Financial Tools
2. Statistical Tools

3.8.1 Financial Tools

Financial tools help analyze the financial strength and weakness of a firm.

Ratio Analysis

Ratio analysis is a part of the whole process of analysis of financial statements of any business or industrial concerned especially to analyze its efficiency. Ratio analysis is used to compare firm's financial performance and status that of the other firms or to it overtime. Therefore, ratio helps to summarize the large quantities of financial data and to make qualitative judgment about the firm's financial performance. There are so many reasons for selecting different kinds of ratios for different types of situations. For this study, ratios are categorized into the following major headings.

   A. Liquidity Ratio
   B. Asset Management Ratio/ Efficiency Ratio
   C. Profitability Ratio
   D. Lending Efficiency Ratio

A) Liquidity Ratio

This ratio measures the liquidity position of a firm. It measures the firm's ability to meet its short-term obligations or its current liabilities. It measures the speed with which a bank's asset can be converted in to cash to met deposit withdrawal and other current obligations. The following ratios are developed under the liquidity ratios to identify the liquidity position.

i) Current Ratio

Current ratio measures the ratio between current assets and current liabilities. The more the current ratio bank has the more liquidity the bank possesses. The current ratio is calculated by following formula:

$$\text{Current Ratio} = \frac{CurrentAssets}{CurrentLiabilities}$$

Current assets are those assets, which can be converted into cash within a year, and so it includes. Cash and bank balance investment in treasury bill, bills purchased and discounted,

customer acceptances liabilities, prepaid expenses, bills for collection likewise current liabilities denotes current account deposits, saving account deposits, margin deposits, bills payable. Call deposits, bank overdraft, interbank reconciliation account, provisions and customer acceptance liabilities etc.

ii) Liquidity Fund to Current Liability Ratio

It indicates the ability of bank to discharge its liquidity risk. Liquid fund are those assets, which can be converted in to cash within a short period without any decline in their volume.

Liquid fund to current liability ratio= $\dfrac{LiquidFund}{CurrentLiabilities}$

iii) Cash and Bank Balance to Total Deposit Ratio

Cash and bank balance are the liquid current assets. This ratio measures the real liquidity of the bank. Both higher and lower ratios are not desirable. The reason is that if bank maintains higher ratio of cash, it has to pay interest on deposits and some earning may be lost. In contract, if a bank maintains low ratio of cash, may fail to make payment for the demands of the depositors. So, sufficient appropriate cash reserve should be maintained properly. Higher the ratio shows higher liquidity position and ability to cover the deposits and vice versa. This ratio can be calculated by the following formula.

Cash & bank balance to total deposit ratio = $\dfrac{Cash\ \&\ BankBalance}{TotalDeposits}$

B) Assets Management Ratio/ Efficiency Ratio

It is also known as activity or turnover ratio. Turnover means how many number of times the assets flow through a firm's operations and into sales. Asset management ratio measures the proportion of various assets and liabilities in balance sheets. The proper management of assets and liability ensures its effective utilization. The banking business converts the liability into assets by way of its lending and investing functions. So, greater rate of this ratio indicates more efficiency of a firm in managing and utilizing its assets, being other things equal. Various ratios examined under this heading are as follows:

i. Loan and Advances to Total Deposit Ratio

Loan and advances to total deposit ratio shows whether the banks are successful to utilize the outsiders fund (i.e. total deposits) for the profit generating purpose or not. Generally, a high ratio reflects the higher efficiency to utilize outsiders fund and vice versa. Sign following formula can calculate the ratio.

$$\text{Loan \& advances to total deposit ratio} = \frac{Loan \,\&\, Advances}{TotalDeposits}$$

ii. Loan and Advances to Total Assets Ratio

It measures the ability in mobilizing total assets into loan and advances for profit generating income. A higher ratio is considered as an adequate symbol for effective utilization of total assets of bank into loan and advances, which create opportunity to earn more a more. It is calculated by the following formula.

$$\text{Loan \& advances to total assets ratio} = \frac{Loan \,\&\, Advances}{TotalAssets}$$

iii. Non-Performing Assets to Total Assets Ratio

It measures the strength and weakness of bank in relation to financial condition. Normally, the more the ratio the less profit bank earns. The ratio is calculated by following formula.

$$\text{NPA to total assets ratio} = \frac{Non\,Z\,Perfor\,\min\,gAssets}{TotalAssets}$$

iv. Total Investment To Total Deposit Ratio

A commercial bank may mobilize its deposit by investing its fund in different securities issued by government and other financial and non-financial companies. Effort has been made to measure the extent to which the banks are successful in mobilizing the total deposit on investment. A high ratio is the indicator of high success to mobilize the banking fund as investment and vice versa.

Total investment to total deposit ratio $= \dfrac{TotalInvestment}{TotalDeposits}$

C) Profitability Ratio

Profit is the difference between revenues and expenses over a period. A company should earn profit to survive and to grow over a long period. So, profitability ratios are used to indicate and measure the overall efficiency of a firm in terms of profit and financial performance. For better performance, profitability ratios of firms should be higher. The following ratios are calculated under the profitability ratios.

i) Return on Loan and Advances Ratio

This ratio measures the earning capacity of commercial banks through its fund mobilization as loan advances. Here, higher the ratio clear the indication that loan and advances are generating profit. The ratio is calculating by following formula.

Return on loan and advances $= \dfrac{Net\,\mathrm{Pr}\,ofit}{Loan\,\&\,Advances}$

ii) Return on Total Assets Ratio

The ratio calculates the relationship between the net profit and total assets. Higher the ratio indicated the higher efficiency in the utilization of total assets and vice versa. In this study, net profit/ loss to total assets ratio is examined to measure the profitability of all the financial resources in bank assets and is calculated by applying the following formula.

Return on total assets ratio $= \dfrac{Net\,\mathrm{Pr}\,ofit\,/\,Loss}{TotalAssets}$

iii) Interest Income to Total Loan and Advances Ratio

It is useful to know the fact that whether the loan has given good return or not. We can increase interest income by taking good issuing and recovery credit policy. The higher the ratio shows the bank's profitability position.

Interest income to total loan & advances ratio $= \dfrac{InterestIncome}{TotalCredit\,\&\,Advances}$

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iv) Earning Per Share (EPS)

It is the profit after tax figure that is divided by the number of common shares to calculate the value of earnings per share. This figure tells us what profits to the common shareholders for every share held have earned. A company can decide whether to increase or reduce the number of shares on issue. The higher the ratio the better a share earns. The ratio is calculated by the following formula.

Earnings per share (EPS) = $\dfrac{Net\,\Pr ofitAfterTax}{No.ofequityShareholders}$

D) Lending Efficiency Ratio

This ratio is also known as investment management and solvency ratio. These ratios indicate the efficiency of activity of an enterprise to utilize available funds, particularly short-term funds. These ratios are used to determine the efficiency, quality and the contribution of loans and advances in the total profitability. The following are the various types of lending efficiency ratios.

i)   Loan Loss Provision to Total Loan and Advances Ratio

The ratio measures the total loan and its provision. Increase in loan loss provisions decrease in profit result to decrease in dividends but it's positive impact is that strengthens financial conditions of the bank by controlling the credit risk and reduced the risks related deposits. The low ratio indicates the good quality of assets in total volume of loan and advances. High ratio indicates more risky assets in total volume of loan and advances.

Loan loss provision to total loan & advances = $\dfrac{LoanLoss\,\Pr ovision}{TotalLoan\,\&\,Advances}$

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

NRB has directed all the commercial banks create loan loss provision against the doubtful and bad debts.

Non-performing loans to total loan & advances = $\dfrac{LoanLoss\,\Pr ovision}{TotalLoan\,\&\,Advances}$

3.8.2 Statistical Tools

Some important tools are used to achieve the objective of this study. In this study statistical tools such as mean standard deviation, coefficient of variance and coefficient of correlation, trend analysis have been used.

i) Arithmetic Mean ($\overline{X}$)

Arithmetic mean represents the entire data by a single value. Arithmetic means of given set of observation does the number of observation divide their sum. In general $x_1, x_2, x_3 \ldots\ldots\ldots x_n$ are the given number of observation, their arithmetic mean can be derived in this way.

$$X \; X \frac{X_1 \; \Gamma \; X_2 \; \Gamma \; X_3 \ldots\ldots\ldots \Gamma \; X_n}{N}$$

Where,

X= Variables

X= Arithmetic Mean

N= Number of observation

Therefore, out of the various central tendencies a mean is one of the useful tools to find out the average value of the given data. Furthermore, it is very much useful with respect of financial analysis and it is easy to calculate.

ii) Standard Deviation (S.D)

Standard deviation is also one of the tools to analyze the data. This tools help to find out the fluctuation and consistency of the specified variables. Actually, it measures the level of variation from the mean of variables. In other words, standard deviation is the square root of mean squared deviations from the arithmetic mean and is denoted by S.D or .

$$= \sqrt{\frac{X^2}{N} \; Z \frac{(\;X)^2}{N}}$$

Where,

= Standard Deviation

$\dfrac{X^2}{N}$ = Sum of squares of observations

$\dfrac{(\;X)^2}{N}$ = Sum of square of mean

iii) Coefficient of Variation (C.V.):

Coefficient of variation (C.V) is defined as the ratio of the standard deviation to the mean expressed in percentage. Therefore, it checks the consistency of given data. The less the C.V. the more consistence the value is and vice versa. The C.V. is calculated by the following formula:

$$C.V. = \frac{}{\overline{X}} \times 100\%$$

Where,

= Standard Deviation

$\overline{X}$ = Mean

iv) Correlation Coefficient (r):

Out of the several mathematical method of measuring correlation the Karl Person popularity known as Pearson's Coefficient of correlation widely used in practice to measure the degree of relationship between two variables. These variables are said to be correlated when the change in the value of our results change in another variable. There are three types of correlation: simple, partial and multiple correlations. Correlation can never be more than +1 or less than -1. Similarly, correlation can be classified as linear or non-linear. It is measured by the following formula:

$$r = \frac{N \ X_1 X_2 \ \mathrm{Z}(\ X_1)(\ X_2)}{\sqrt{N \ X_1^{\ 2} \ \mathrm{Z}(\ X_1)^2} \sqrt{N \ X_2^{\ 2} \ \mathrm{Z}(\ X)^2}}$$

Where,

r= coefficient of correlation

$N \ X_1 X_2$ = No. Of product observation and sum of product X_1 and X_2

$X_1 \ X_2$ = sum of product X_1 and sum of product X_2

v) Probable Error (P.E.)

With the help of probable error, it is possible to determine the reliability of the value of the coefficient as far as it depends on the conditions of random sampling. The probable error of the coefficient of correlation is obtained as follows.

$$\text{P.E.} = \frac{1\,Z r^2}{\sqrt{N}}$$

Where,

r= correlation coefficient

N = Number of pairs of observations.

If the value of 'r' is less than the probable error, there is no evidence of correlation, but if the value of 'r' is more than six times of probable error, the coefficient of correlation is practically certain, i.e. value of 'r' is significant.

3.8.3 Trend Analysis:

Trend analysis is the tools that are used to show grandly increase and decrease of variable in a period is known as trend analysis. With the help of trend analysis, the tendency of variable over the period can be seen clearly.

CHAPTER 4

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

In this chapter, efforts have been made to present and analyze the collected data. Thus, the collected data through primary as well as secondary sources have been presented in the suitable format using different arithmetical and statistical tools.

This study includes not only the NPA but also other factors that affect the profitability of the bank. Therefore, the study revolves around the programmed and the procedures initiated for the management of NPA and other factors.

4.2 Ratio Analysis

Ratio analysis is a widely used tool of financial analysis. It is defined as the systematic use of ratio to interpret the financial statements so that the strength and weakness of a firm as well as its historical performance and current financial condition can be determined. Thus, the main objective of this study is the proper management of NPA in RBB and the joint venture banks.

i) NPA to Total Loan and Advances Ratio

NPA, non-performing assets to total loan and advances ratio shows the actual figure of NPA over the total lending of bank. It is the base ratio to measure efficiency of lending department. Here, lower ratio reflects higher efficiency to provide good lending and vice-versa. The ratio is calculated by using following formula.

NPA to total loan and advances ratio = $\dfrac{Non\,\text{Z}\,Perfor\min gAssets}{TotalLoan\,\&\,Advances}$

4.2.1 Non-performing Assets to Total Loan and Advances Ratio of Rastriya Banijya Bank (RBB).

Table:1   Rs in Million

Year	Non-Performing Assets	Total Loan and Advances	Ratio %
2004/05	13877	27001	60.54
2005/06	8384	23103	57.86
2006/07	7725	25395	51.39
2007/08	5908	21136	27.95
2008/09	4942	26187	18.88

Source: Annual report   Average= 43.33

The above table shows the non-performing assets to total loan and advances ratio of RBB over the five fiscal year. The ratios are 60.54%, 57.86%, 51.39%, 27.95% and 18.88% respectively in the fiscal year 2004/05 to 2008/09 respectively. In comparison, the highest ratio is 60.54% in the fiscal year 2004/05 and the lowest ratio is 18.88% in the fiscal year 2008/09, in an average the ratio is 43.33%. This can be shown in the following bar diagram.

Figure: 1
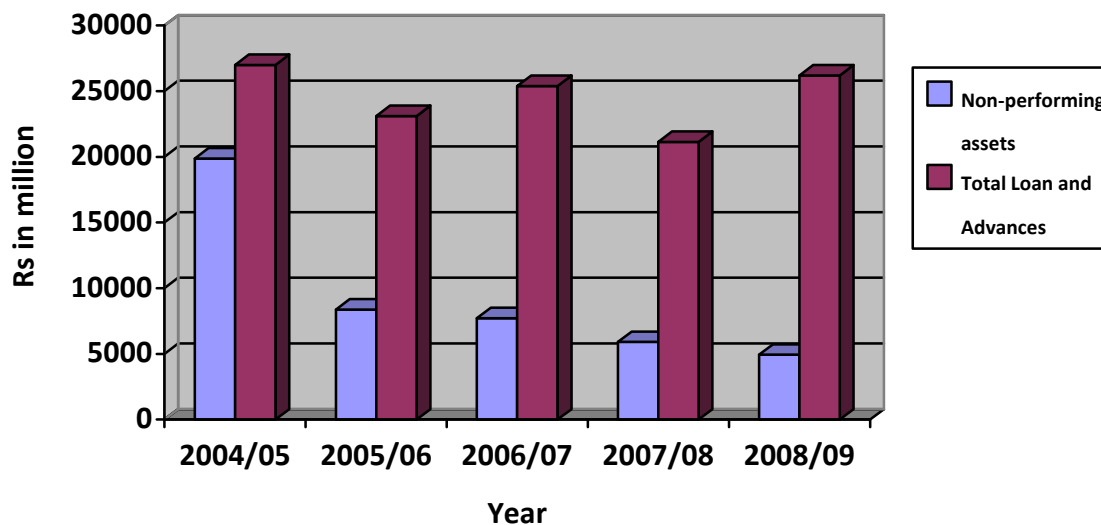
4.2.2 Non-performing Assets to Total Loan and Advances Ratio of Himalayan Bank Limited (HBL)

Table: 2   Rs in Million

Year	Non-Performing Assets	Total Loan and Advances	Ratio %
2004/05	1001	12424	8.10
2005/06	1040	14642	7.10
2006/07	641	16998	3.80
2007/08	477	19497	2.40
2008/09	551	24793	2.20

Source: Annual report   Average= 4.72

The above table reflects the non-performing assets to total loan and advances ratio of HBL over the five fiscal years. The ratio are 8.10%, 7.10%, 3.80%, 2.40% and 2.20% respectively in the fiscal years 2004/05, 2005/06, 2006/07, 2007/08 and 2008/09 respectively. In comparison, the higher ratio is 8.10% in the fiscal year 2004/05 and the lowest ratio is 2.20% in the fiscal year 2008/09, on an average the ratio is 4.72%. This can be shown in the following bar diagram.

Figure: 2
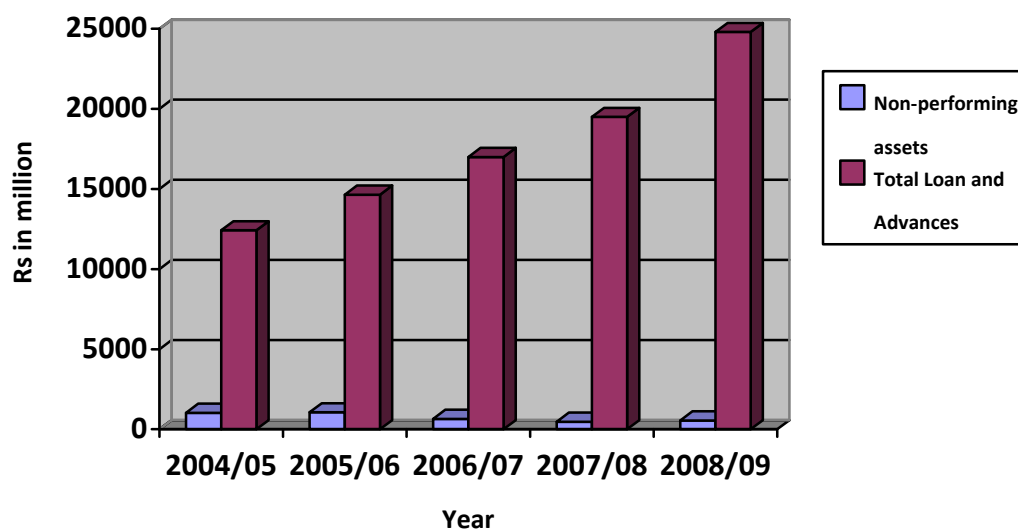
4.2.3 Non-performing Assets to Total Loan and Advances Ratio of Standard Chartered Bank Nepal Limited (SCBNL)

Table: 3   Rs in Million

Year	Non-Performing Assets	Total Loan and Advances	Ratio %
2004/05	226	8143	2.78
2005/06	196	8935	2.19
2006/07	197	10502	1.88
2007/08	128	13718	0.93
2008/09	91	13679	0.06

Source: Annual report   Average= 1.57

The above table reflects the Non-Performing assets to Total Loan and Advances ratio of SCBNL over the five fiscal years. The ratios are 2.78%, 2.19%, 1.88%, 0.93% and 0.06% respectively in the fiscal year 2004/05 to 2008/09 respectively. In comparison, the highest ratio is 2.78% in the fiscal year 2004/05 and the lowest ratio is 0.06% in the year 2008/09. On an average, the ratio is 1.57%. This can be shown in the following bar diagram.

Figure: 3
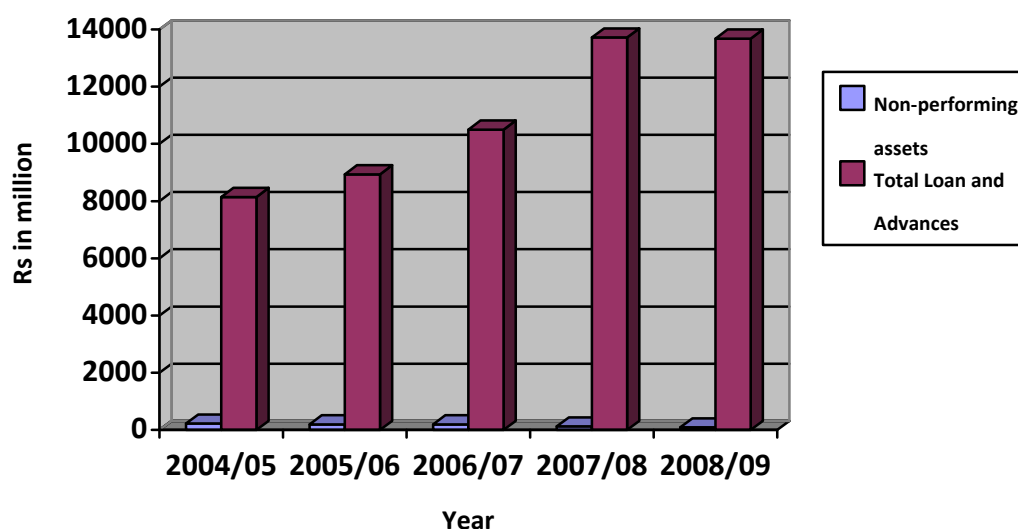
Comparison:

In comparison, the non-performing assets to total loan and advances ratio are in decreasing trend for all the three sample banks in the subsequent years of study period. First in the case of Rastriya Banijya Bank, it decreased up to 18.88% from 60.54%. Similarly, the ratio decrease up to 2.20% from 8.10% in the case of HBL. Finally, we can say that SCBNL is conscious on recovery process of loan and advances because its decreasing trend is up to 0.06% from 2.78%. Therefore, this decreasing trend of NPA to total loan and advances is due to efficient management as well as the low evaluation of collateral e.t.c. However, in overall evaluation SCBNL is much better than other two bank of efficient management and performance.

i) Loan and advances to total deposit ratio:

Loan and advances to total deposit ratio shows whether the banks are successful to utilize the outsiders funds (i.e. total deposits) for the profit generating purpose or not. Generally, a high ratio reflects higher efficiency to utilize outsiders fund and vice versa. The ratio can be calculated by using following formula.

Loan and advances to total deposit ratio = $\dfrac{TotalLoan\ \&\ Advances}{TotalDeposits}$

4.2.4 Loan and advances to total deposit ratio of RBB

Table: 4   Rs in Million

Year	Loan and advances	Total Deposits	Ratio %
2004/05	27001	43016	62.77
2005/06	23103	46195	50.01
2006/07	25395	50346	50.44
2007/08	21136	58333	36.24
2008/09	26187	68160	38.42

Source: Annual report   Average= 47.58

The above table shows the real figure of Rastriya Banijya Bank (RBB) on loan and advances to total deposits ratio of last five fiscal years. In the fiscal year 2004/05, the ratio is the highest i.e.

56

62.77% but in the year 2008/09 the ratio is the lowest, i.e. 38.42%. On an average the ratio remained at 47.58% over the study period. This can be shown in the following bar diagram.

Figure: 4
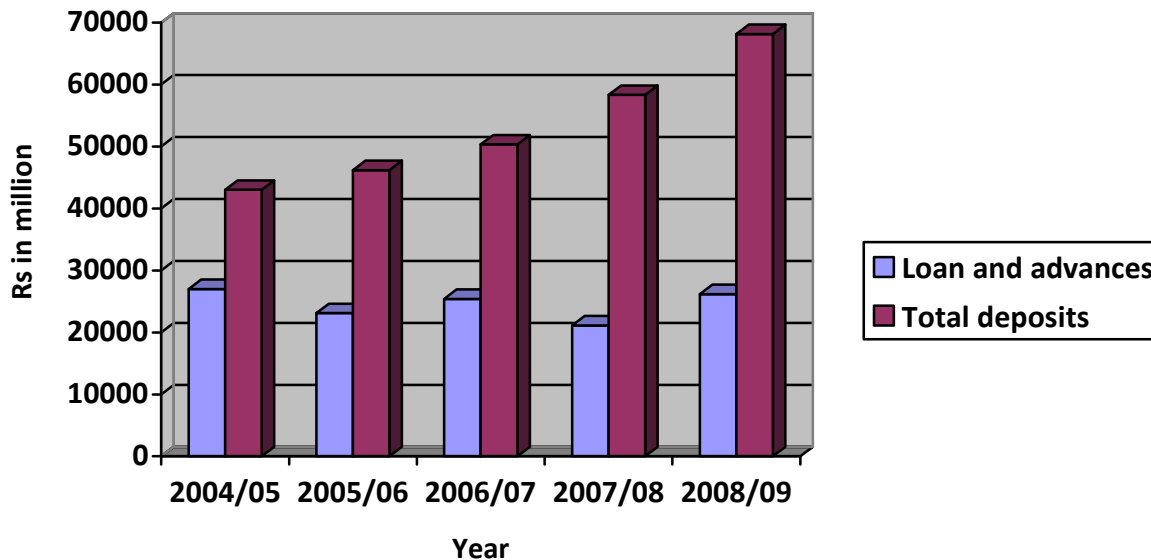
4.2.5 Loan and advances to total deposits ratio of HBL

Table: 5   Rs in Million

Year	Loan and advances	Total Deposits	Ratio %
2004/05	12424	24814	50.07
2005/06	14642	26490.8	55.27
2006/07	16998	30048.4	56.57
2007/08	19497	31842.7	61.23
2008/09	24793	34681.3	71.49

Source: Annual report   Average= 58.92

The above table shows the ratio of HBL on loan and advances to total deposits for the last five fiscal years. During the period, the ratio is the highest in the year 2008/09 i.e. 71.49% and the ratio is the lowest in the fiscal year 2004/05 i.e. 50.07%. On an average the ratio remains at 58.92 %. This can be shown in the following bar diagram.

Figure: 5
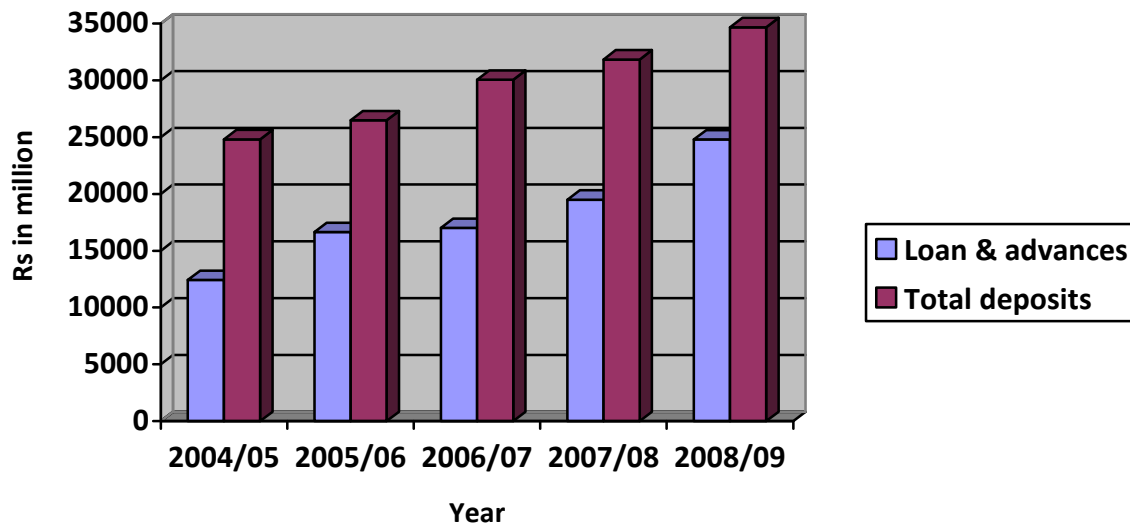
4.2.6 Loan and advances to total deposits ratio of SCBNL

<div align="center">

Table: 6   Rs in Million

</div>

Year	Loan and advances	Total Deposits	Ratio %
2004/05	8143	19344	44
2005/06	8935	23061	38
2006/07	10502	24647	42
2007/08	13718	29743	46
2008/09	13679	35871	38

Source: Annual report   Average= 41.60

The above table shows the ratio of Standard Chartered Bank Nepal Limited on loan and advances to total deposits for the last five fiscal years. In the fiscal year 2007/08, the ratio is the highest, i.e. 46 % but in the year 2005/06 and 2008/09, the ratio is the lowest i.e. 38%. On an average, the ratio remains at 41.60% over the study period. This can be shown in the following bar diagram.

Figure: 6
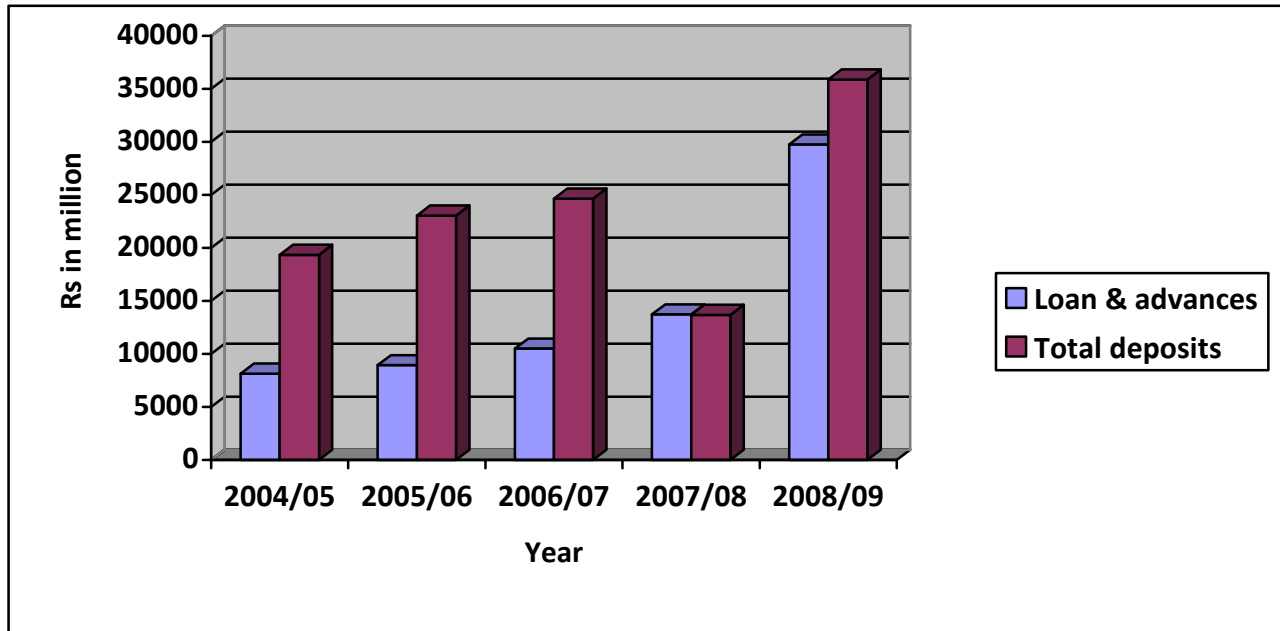
Comparison

In comparison among the Rastriya Banijya Bank (RBB), Himalayan Bank Limited (HBL) and the Standard Chartered Bank Nepal Limited (SCBNL), the loan and advances as well as deposits trend is high with RBB than other two banks. But In case of investment HBl ia much stronger than other two banks. In case of deposit RBB is much stronger thans other two banks to collect the deposit. In case of deposit mobilization SCBNL is little bit weak than other two bank.

i) NPA to Total Assets Ratio:

Non-Performing assets to total assets ratio shows the total default loan out of total assets. It measures the strength and weakness of bank in relation to financial condition. Normally, lower ratio reflects more efficiency in granting loan and advances and vice versa. The ratio is calculated as following formula.

NPA to total assets ratio = $\dfrac{Non\,Z\,Perfor\min gAssets}{TotalAssets}$

4.2.7 Non-performing Assets to Total Assets Ratio of RBB

<div align="center">**Table: 7**</div>   Rs in Million

Year	Non-Performing Assets	Total Assets	Ratio %
2004/05	13877	56822	24.42
2005/06	8384	49010	17.11
2006/07	7725	47911	16.12
2007/08	5908	53232	11.10
2008/09	4942	68714	7.20

Source: Annual report   Average= 11.75

The above table shows the non-performing assets ratio of RBB. The ratios are 24.42%, 17.11%, 16.12%, 11.10% and 7.20% respectively from the fiscal year 2004/05 to 2008/09 respectively. The highest ratio is 24.42% in the year 2004/05 and the lowest ratio is 7.20% in the year 2008/09. On an average the ratio, remain at 11.75%.

<div align="center">**Figure: 7**</div>
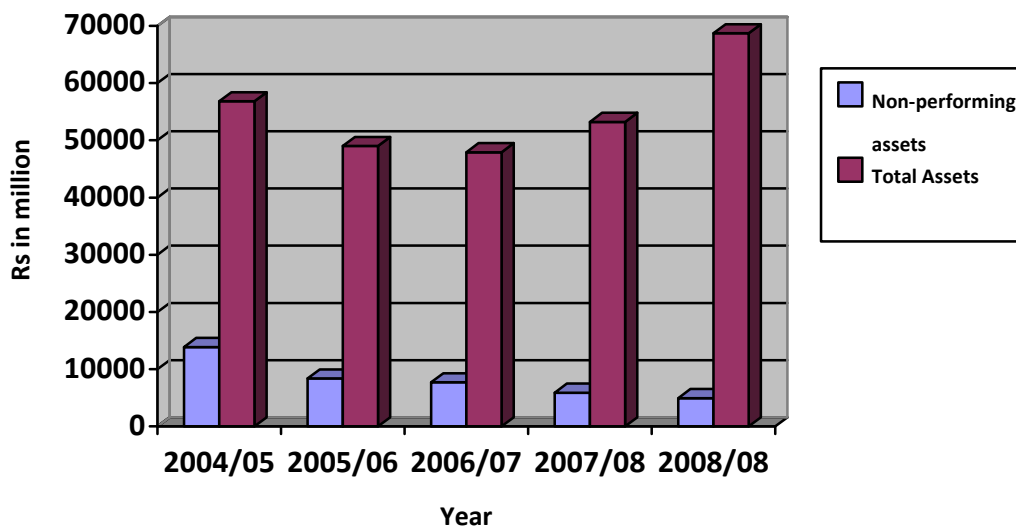
4.2.8 Non-performing Assets to Total Assets Ratio of HBL

Table: 8   Rs in Million

Year	Non-Performing Assets	Total Assets	Ratio %
2004/05	1001	27845	3.59
2005/06	1040	29460	3.53
2006/07	641	33519	1.91
2007/08	477	36175	1.32
2008/09	551	39320	1.40

Source: Annual report   Average= 2.35

Table no. 4.1.8 presents the non-performing assets to total assets ratio of Himalayan Bank Limited for the study period of 2004/05 to 2008/09. The ratios for the five years are 3.59%, 3.53%, 1.91%, 1.32% and 1.40% respectively. Accordingly, the average (mean) ratio is 2.35% of the total assets. According to Nepal Rastra Bank directives, non-performing assets should be 10% or below the total assets. This means the bank is able to maintain the non-performing assets to total assets ratio according to the directives. In the fiscal year 2004/05 to 2008/09, the ratio is less than average ratio while the previous two years ratios are higher than the main ratio. The total assets is in increasing trend while the non-performing assets has decreased in the whole study fiscal year, it may be because of recovering some of the non-performing loans through bringing new rules and regulations.

Figure: 8
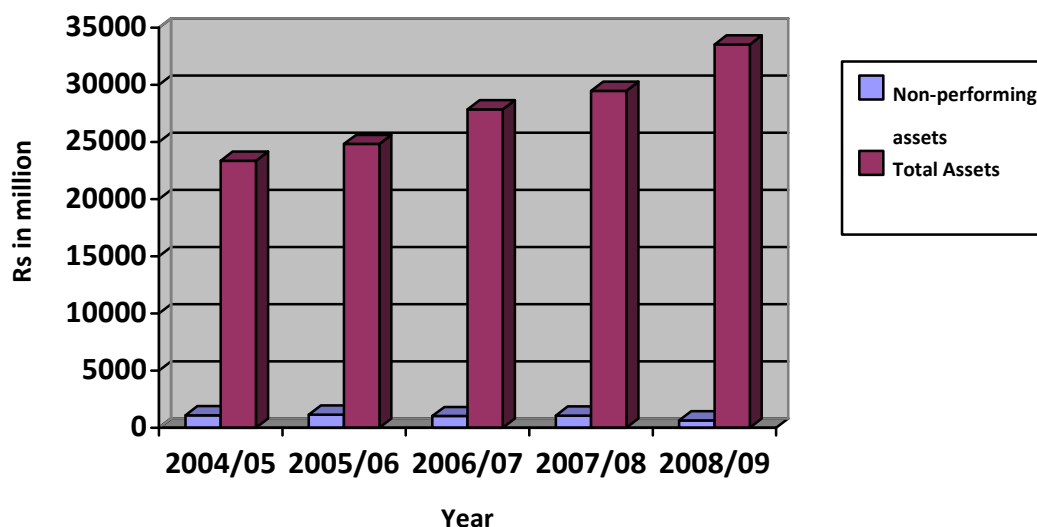
4.2.9 Non-performing Assets to Total Assets Ratio of SCBNL

<div align="center">Table: 9</div>

Rs in Million

Year	Non-Performing Assets	Total Assets	Ratio %
2004/05	226	21782	1.04
2005/06	196	25767	0.76
2006/07	197	28597	0.69
2007/08	128	33336	0.39
2008/09	91	40588	0.22

Source: Annual report   Average= 0.62

Table no. 4.1.9 presents the non-performing assets to totals ratio of SCBNL for the study period of 2004/05 to 2008/09.The ratios for the five years are 1.04%, 0.76%, 0.69%,   0.39 % and 0.22% respectively. The average ratio is 0.62% of the total assets. According to the Nepal Rastra Bank directives, non-performing assets should be 10% or below the total assets. This means the bank is also to maintain the NPA to total assets ratio according to directives. In the fiscal year 2007/08 and 2008/09 the ratio are less than the average ratio while the previous three years ratio are higher than the average ratio.

<div align="center">Figure: 9</div>

Com
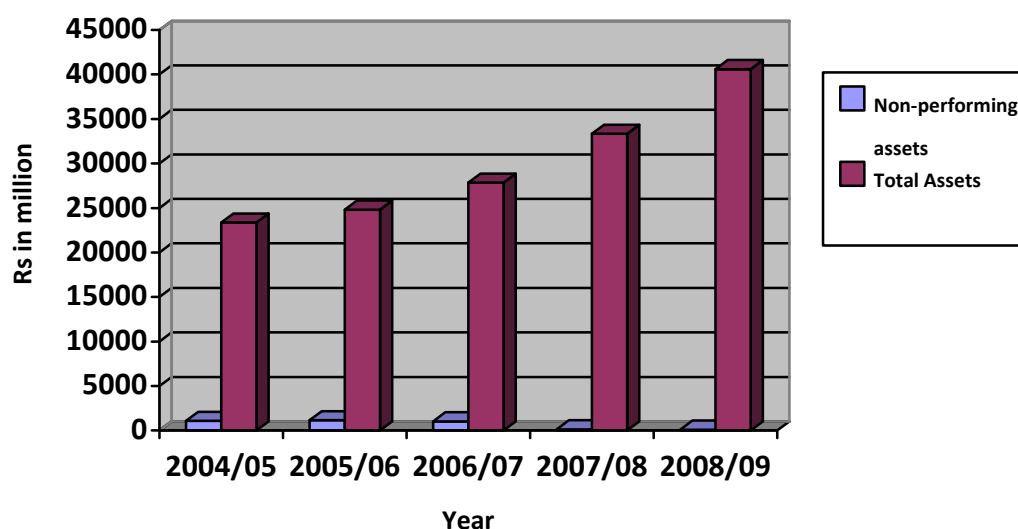
parison:

In comparison, the non-performing assets to total assets ratio of three sample banks are in decreasing trend in the subsequent years of the study period. First, in case of RBB, it decreased up to 7.20% from 24.42%. Similarly, the ratio decreased up to 1.40% from 3.59% in case of HBL. Finally, the SCBNL became it's decreasing trend is up to 0.22% from 1.04%, it is only due to the bringing new rules and regulation by the central bank,high competition and it is the positive achievement of the efficient new management. In overall performance evaluation, SCBNL is much better than other two banks.

i) Loan Loss Provision to NPA Ratio:

Loan loss provision to non-performing assets ratio shows the provision made for future loss so that the bank can remove from worst condition and could operate it as smoothly. In other words, the provision helps to overcome the unnecessary burden of non-performing assets. Here, higher ratio reflects the effective in relation to future loss but it directly affected in profitability and vice versa.

NPA to total assets ratio = $\dfrac{LoanLoss\,\Pr ovision}{Non\,\mathcal{Z}\,Perfor\min gAssets}$

4.2.10 Loan Loss Provision to Non-Performing Assets Ratio of RBB

Table 10			Rs in Million
Year	**Loan Loss provision**	**Non-Performing Assets**	**Ratio %**
2004/05	1273	13877	9.18
2005/06	756	8384	9.02
2006/07	386	7725	5.00
2007/08	492	5908	8.33
2008/09	481	4942	9.80

Source: Annual report   Average= 8.27

The above table represents the loan loss provision to non-performing assets of RBB. The ratio is in decreasing trend in the first four fiscal years of study period and then it started to increase. The highest ratio is 9.80% in the fiscal year 2008/09 and the lowest ratio is 5% in the fiscal year 2006/07. On an average, the ratio remains at 8.27%. This can be shown in the following bar diagram. The data is fluctuation in study period.

Figure: 10
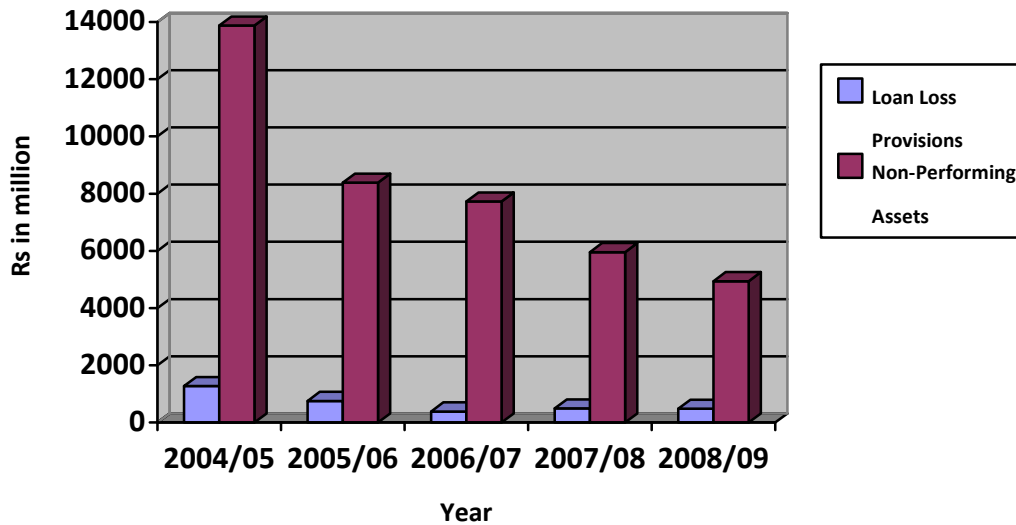
4.2.11 Loan Loss Provision to Non-Performing Assets Ratio of HBL

Table: 11   Rs in Million

Year	Loan Loss provision	Non-Performing Assets	Ratio %
2004/05	147	1001	14.23
2005/06	88	1040	8.29
2006/07	90	641	13.76
2007/08	58	477	12.15
2008/09	68	551	12.34

Source: Annual report   Average= 13.15

The table no. 4.1.11 presents the loan loss provision to non-performing assets of HBL. The ratio is in decreasing trend in the first four years of the study period and then it started to increase. The highest ratio is 14.23% in the fiscal year 2004/05 and the lowest ratio is 8.29% in the fiscal year 2005/06, on an average the ratio remains at 13.15%. This can be shown in the following bar diagram.
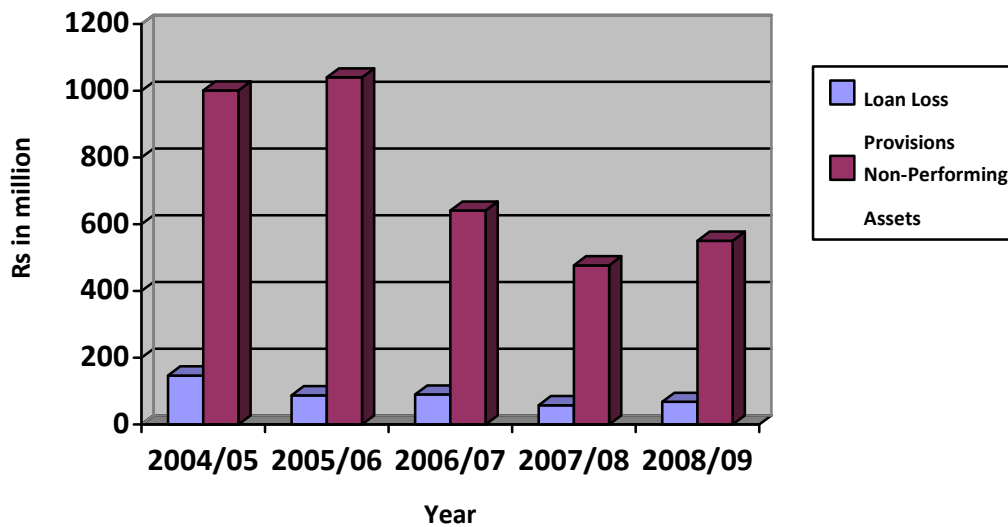
4.2.12 Loan Loss Provision to Non-Performing Assets Ratio of SCBNL

Table: 12   Rs in Million

Year	Loan Loss provision	Non-Performing Assets	Ratio %
2004/05	277.7	226	122.88
2005/06	270.8	196	138.16
2006/07	287.5	197	145.94
2007/08	245.3	128	191.64
2008/09	200.9	91	220.77

Source: Annual report   Average= 163.88

The above table represents the loan loss provision to non-performing assets ratio of SCBNL. In the study period of 2004/05 to 2008/09 the ratio are fluctuated from 122.75% to 220.77%. The highest ratio is 220.77% in the fiscal year 2008/09 and the lowest ratio is 122.88% in the fiscal year 2004/05. This show, the ratios are in fluctuating trend. On an average, the ratio remains at 163.88%. This can be shown in the following bar diagram.

Figure: 12
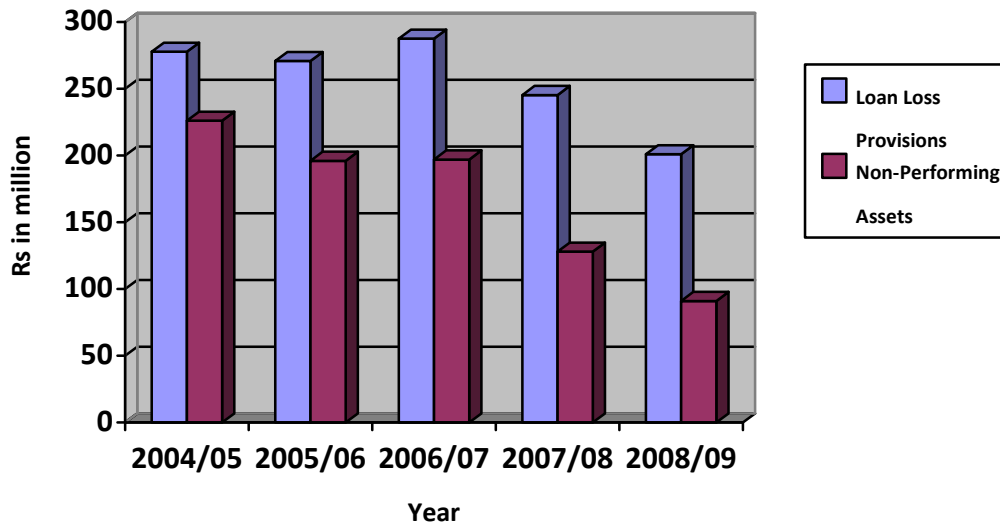
parison:

In comparison, two sample banks RBB and HBL are loan loss provision is in fluctuating trend in the subsequent fiscal years of the study period. In comparatively, we can say that the HBL has operated the lower loss provision that than the other two banks. In case of RBB and SCBNL bank, loan loss provision is decreasing trend in the whole fiscal years of the study period. However, the loan loss provision of SCBNL is increasing trend during the research period.

v) Return on Total Assets (ROA) Ratio:

This ratio measures the profitability with respect to total assets. This ratio is examined to measure the profitability of all financial resources invested in the bank assets. The ratio is calculated by using following formula.

$$\text{Return on total assets} = \frac{Net\,\Pr ofit}{TotalAssets}$$

4.2.13 Return on Total Assets Ratio of RBB

Table: 13   Rs in Million

Year	Net Profit	Total Assets	Ratio %
2004/05	1323	56822	2.33
2005/06	1592	49010	3.25
2006/07	1682	47911	3.51
2007/08	1718	53232	3.22
2008/09	1923	68714	2.80

Source: Annual report   Average= 3.02

Table no. 4.1.13 presents the comparative analysis of return on total assets of RBB for the study period of 2004/05 to 2008/09. In this study period, the highest ratio is 3.51% in the year 2006/07 and the lowest ratio is 2.33% in the fiscal year 2004/05. On an average, the ratio remains at 3.02%. It indicates that the bank is not able to use the all assets in the income sector, which means the bank's assets are not using full phase performance in the producing sector. This can be shown in the following bar diagram.

Figure: 13

67
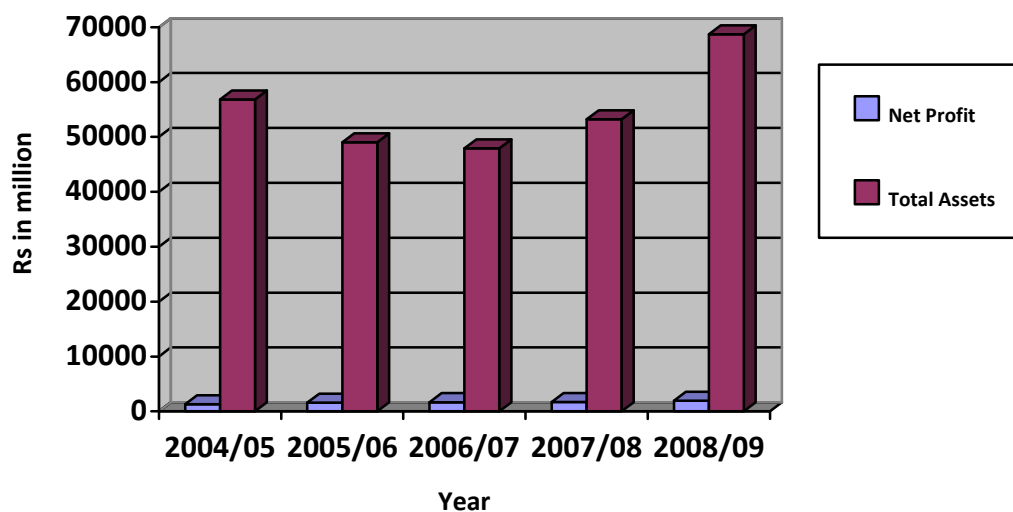
4.2.14 Return on Total Assets Ratio of HBL

Table 14   Rs in Million

Year	Net Profit	Total Assets	Ratio %
2004/05	308.2	27845	1.11
2005/06	457.4	29460	1.55
2006/07	491.8	33519	1.47
2007/08	635.8	36175	1.75
2008/09	752.8	39320	1.92

Source: Annual report   Average= 1.56

Table no. 4.1.14 presents the comparative analysis of return on total assets of HBL for the study period of 2004/05 to 2008/09. Here, the total assets as well as the net profit, both are in increasing trend. This all is possible only by the good management of the bank. So, we can say that the bank management has shown a promising start by earning profit it can be said encouraging. In the study period, the highest ratio is 1.92% in the fiscal year 2008/09 and lowest ratio is 1.11% in the fiscal year 2004/05. On an average, the ratio remains at 1.56%. This can be shown in the following bar diagram.

Figure: 14
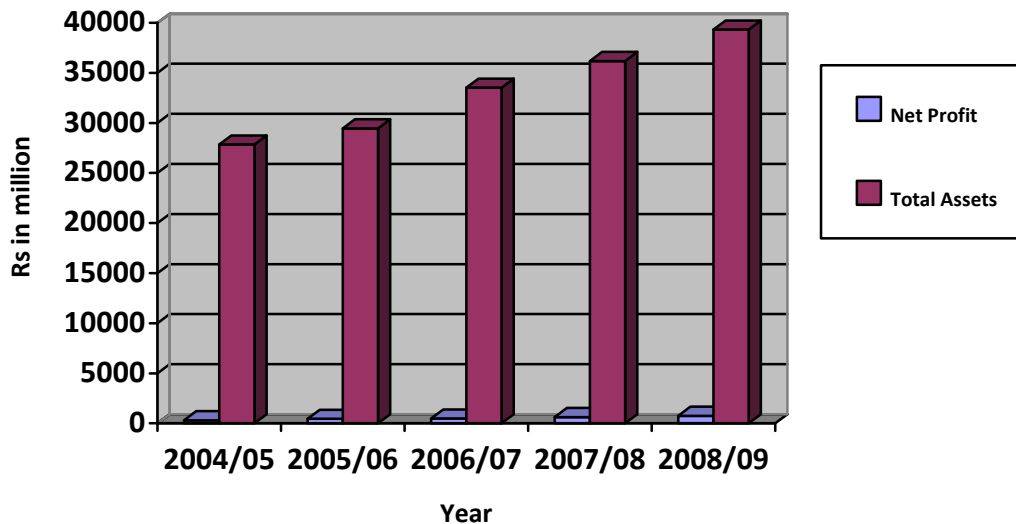
4.2.15 Return on Total Assets Ratio of SCBNL

<p style="text-align:center">Table 15</p>

Rs in Million

Year	Net Profit	Total Assets	Ratio %
2004/05	536.2	21782	2.46
2005/06	658.8	25767	2.56
2006/07	691.7	28597	2.42
2007/08	818.9	33335	2.45
2008/09	1025.1	40587	2.52

Source: Annual report   Average= 2.48

Table no. 4.1.15 presents the comparative analysis of return on total asset of SCBNL for the study period of 2004/05 to 2008/09. The ratios are 2.46%, 2.56%, 2.42%, 2.45% and 2.52% respectively. The highest ratio is 2.56% in the fiscal year 2005/06 and the lowest ratio is 2.42% in the year 2006/07. On an average, the ratio remains at 2.48%. This can be shown in the following bar diagram.

<p style="text-align:center">Figure: 15</p>
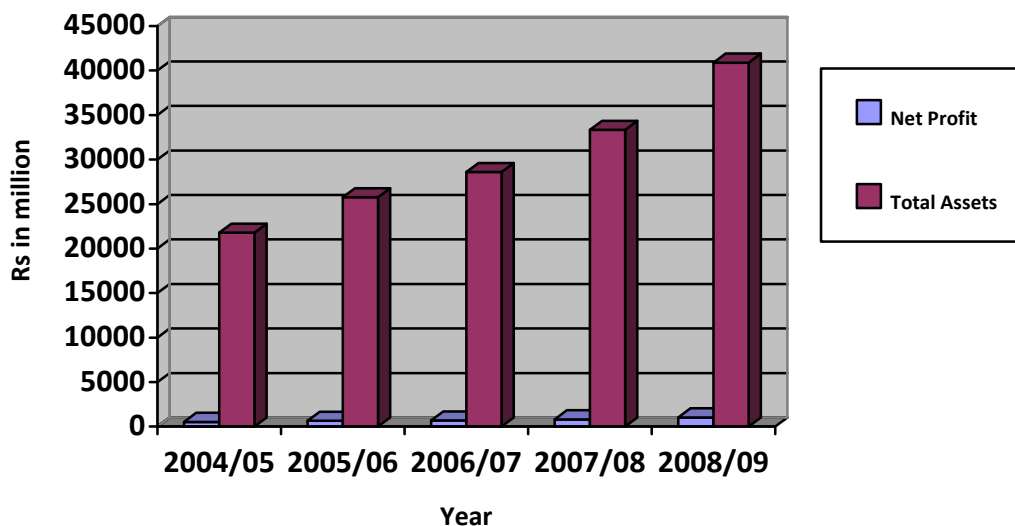
Comparison:

In comparison, the entire three sample banks return on total assets ratio are in increasing trend. Although, The RBB has is the highest ratio than the other banks i.e. HBL and SCBNL, In case of HBL, the ratio is continuously increasing for the first five fiscal years of the study period.

Similarly, in case of SCBNL, the ratio is increased in the first two fiscal year than slightly decreased in the third fiscal year of the study period and then after continuously increased.

i) NPA to Net Profit Ratio:

Non-performing assets to net profit ratio shows the impact of NPA over the profitability of bank. There is inverse relationship between NPA and profit. NPA increased, the profit decreased and if NPA decreased, profit is increased. Here, lower ratio reflects more efficiency to utilized outsides as well as insides fund in good lending and vice versa. The ratio is calculated by using following formula.

NPA to net profit ratio = $\dfrac{Non Z perfor \min gAssets}{Net \Pr ofit}$

4.2.16 Non-Performing Assets to Net Profit Ratio of RBB

Table: 16   Rs in Million

Year	Non-Performing Assets	Net Profit	Ratio %
2004/05	13877	1323	10.49
2005/06	8384	1592	5.26
2006/07	7725	1682	4.59
2007/08	5908	1718	3.44
2008/09	4942	1923	2.57

Source: Annual report   Average= 5.27

The above table shows the non-performing assets to net profit ratio of RBB over the five fiscal years of the study period. The ratios are 10.49 times, 5.26 times, 4.59 times, 3.44 times and 2.57 times respectively from the fiscal year 2004/05 to 2008/09. The highest ratio is 10.49 in the year 2004/05 and the lowest ratio is 2.57 in the year 2008/09. On an average, the ratio remains at 5.27 times. This can be shown in the following bar diagram.

Figure: 16
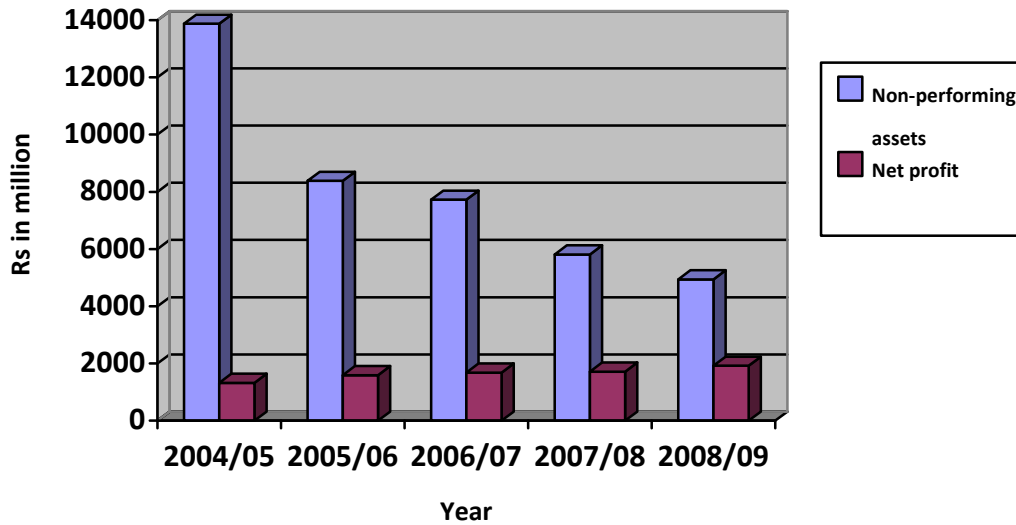
7 Non-Performing Assets to Net Profit Ratio of HBL

Table: 17   Rs in Million

Year	Non-Performing Assets	Net Profit	Ratio %
2004/05	1001	308.2	3.24
2005/06	1040	457.4	2.27
2006/07	641	491.8	1.31
2007/08	477	635.8	0.75
2008/09	551	752.8	0.74

Source: Annual report   Average= 1.67

The above table shows the non-performing assets to net profit ratio of HBL over the five fiscal years of the study period. The ratios are 3.24 times, 2.27 times, 1.31 times, 0.75 times and 0.74 times respectively from the fiscal year 2004/05 to 2008/09. The highest ratio is 3.24 times in the fiscal year 2004/05 and the lowest ratio is 0.74 times in the fiscal year 2008/09. Here the ratios are in decreasing trend. This shows that the bank has good management in lending policy. On an average, the ratio remains at 1.67 times. This can be shown in the following bar diagram.

Figure: 17
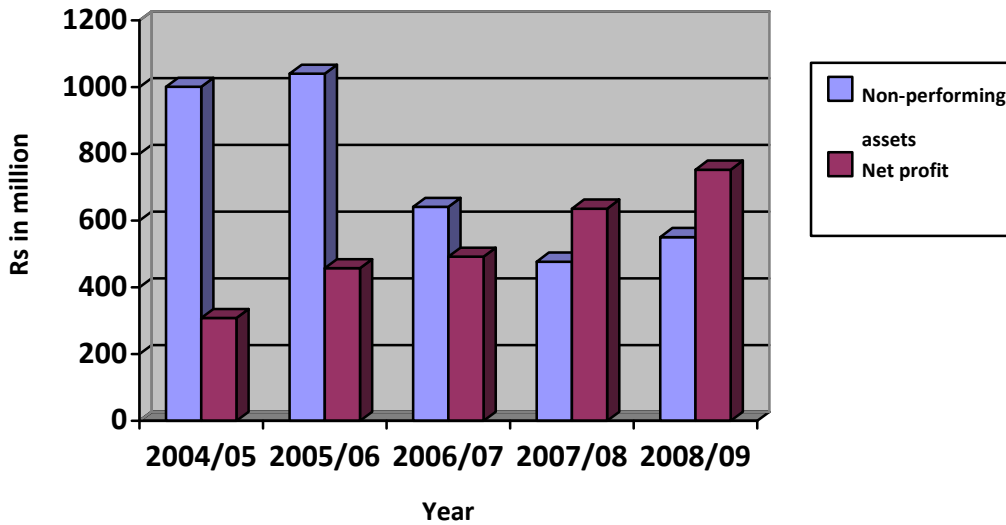
4.2.18 Non-Performing Assets to Net Profit Ratio of SCBNL

Table: 18   Rs in Million

Year	Non-Performing Assets	Net Profit	Ratio %
2004/05	226	536.2	0.42
2005/06	196	658.8	0.29
2006/07	197	691.7	0.28
2007/08	128	818.9	0.16
2008/09	91	1025.1	0.08

Source: Annual report   Average= 0.25

The above table shows the non-performing assets to net profit ratio of SCBNL over the five fiscal years of the study period. The ratios are 0.42 times, 0.29 times, 0.28 times, 0.16 times and 0.08 times respectively from the fiscal year 2004/05 to 2008/09. The highest ratio is 0.42 times in the fiscal year 2004/05 and the lowest ratio is 0.08 times in the fiscal year 2008/09. Here, the ratios are in decreasing trend, which shows the banks improvement in the lending policy. On an average, the ratio remains are 0.25 times. This can be shown in the following bar diagram.

Figure: 18
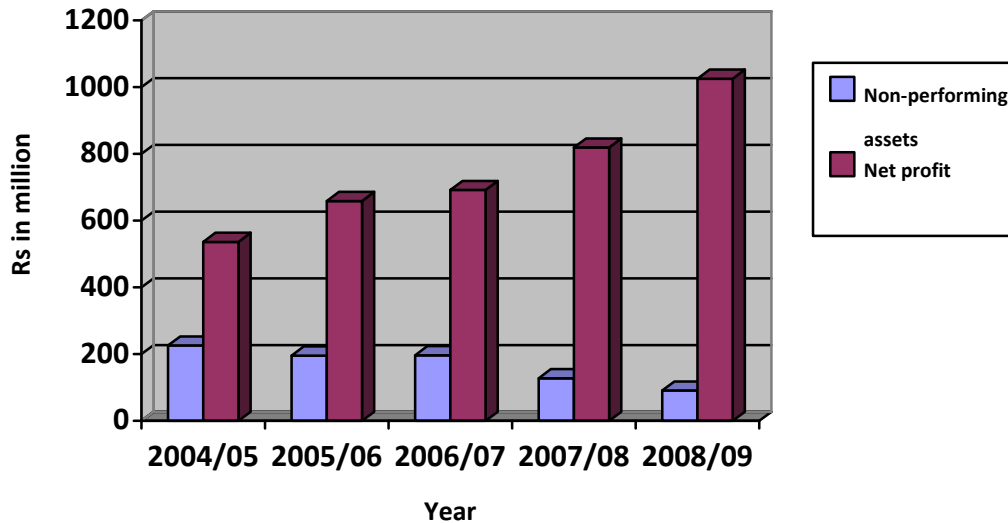
Comparison:

In comparison, the non-performing assets to net profit ratio of RBB and other two joint venture banks (i.e. HBL and SCBNL), NPA is decreasing trend and net profit is increasing. It proves that decreasing of NPA means increasing of net profit. In overall evaluation, all sample banks are trying to do well as better to each other because of well management and excellent performance.

4.3 Correlation Analysis

Correlation may be defined as the degree of linear relationship existing between two or more variables. These variables are said to be correlated when the change in the value of one results change in another variable. It is calculated as:

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

Where,

N = Number of pairs of X and Y observed

X = Value of loan and advances

Y = Values of non-performing assets

r= Pearsonan correlation coefficient

Here, the correlation coefficient of loan and advances and non-performing assets are calculated to show the relationship of these variables. It helps to identify the trend of NPA and loan and advances.

Table 4.3.1

Computation of correlation coefficient between total loan and advances(x) and non-performing assets(y) of RBB

Year	Loan & Advances (x)	NPA (y)	X	Y	X²	Y²	XY
2004/05	27001	13877	27.0	13.8	729	192.57	374.69
2005/06	23103	8384	23.1	8.3	533.61	70.29	193.70
2006/07	25395	7725	25.3	7.7	644.9	59.67	196.18
2007/08	21136	5908	21.1	5.9	446.73	34.90	124.87
2008/09	26187	4942	26.1	4.10	685.75	24.42	129.42
N=5	**95821**	**40836**	**122.82**	**40.84**	**3040.20**	**381.87**	**1018.85**

See in Appendices no: I

Here, N=5,   X= 122.82,   Y= 40.84,   X²= 3040.20,   Y²= 381.87 and   XY= 1018.85

Now coefficient of correlation,

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

r= 0.47

According to the above calculation, the Karl Pearson's Coefficient (r) between total loan and advances and non-performing assets of RBB is 0.47, which denotes that there is positive relationship between them. That means if one variable from them is increased that absolutely increased another variable in relation to 47%. However, to find out the significant or insignificant relationship, here the researcher calculated probable error as following.

$$P.E = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

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Here, r= correlation coefficient

  N= Number of pairs of observations

P.E = 0.2350

6 times P.E = 1.41

According to probable error test, there is insignificant relationship between non-performing assets and total loan and advances of RBB because the correlation coefficient is less than six times of probable error.

Table 4.3.2

Computation of correlation coefficient between total loan and advances(x) and non-performing assets(y) of HBL

Year	Loan & Advances (x)	NPA (y)	X	Y	X^2	Y^2	XY
2004/05	12424	1001	12.4	1.03	153.8	1.06	12.77
2005/06	14642	1040	14.6	1.06	213.2	1.12	15.48
2006/07	16998	641	17	0.65	285.6	0.42	10.98
2007/08	19497	477	19.50	0.48	380.13	0.23	9.30
2008/09	24793	551	24.79	0.55	614.69	0.30	13.66
N=5	**88354**	**3710**	**88.35**	**3.71**	**1652.50**	**3.03**	**61.52**

          See in Appendices no :II

Here, N=5, X=88.35, Y=3.71, X^2=1652.50, Y^2=3.03 and XY=61.52

Now coefficient of correlation,

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

r=-0.81

According to the above calculation, the Karl Pearson's Coefficient (r) of HBL between total loan and advances and non-performing assets is -0.81, which denotes that there is negative correlation between them. That means if one variable from them is decreased that affected another variable but in opposite direction, i.e. in increased in relation to 81% and vice versa. To clarify the significant result, probable error is calculated as the following method.

$$P.E = 0.6745 \times \frac{1\,Zr^2}{\sqrt{N}}$$

Here, r= correlation coefficient

N= Number of pairs of observations

P.E = 0.1040

6 times P.E = 0.6240.

Here, the correlation coefficient (r) is less than the six times probable error. That means there is not significant negative correlation between non-performing assets and total loan and advances to HBL.

Table 4.3.3

Computation of correlation coefficient between total loan and advances(x) and non-performing assets(y) of SCBNL

Year	Loan & Advances (x)	NPA (y)	X	Y	X²	Y²	XY
2004/05	8143	226	8.14	0.23	66.31	0.05	1.84
2005/06	8935	196	8.93	0.20	79.83	0.04	1.75
2006/07	10502	197	10.50	0.20	110.29	0.04	2.07
2007/08	13718	128	13.72	0.13	188.18	0.02	1.76
2008/09	13679	91	13.68	0.09	187.12	0.01	1.24
N=5	**54977**	**838**	**54.98**	**0.84**	**631.73**	**0.15**	**8.66**

See in Appendices no :III

Here, N=5,   X= 54.98,   Y=0.84,   X²= 631.73,   Y²= 0.15 and   XY= 8.66

Now coefficient of correlation,

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

r=-0.95

According to the above calculation, the Karl Pearson's Coefficient (r) of SCBNL between total loan and advances and non-performing assets is -0.95, which denotes that there is negative correlation between them. That means if one variable from them is decreased that affected another variable but in opposite direction, i.e. in increase in

relation to 95% and vice versa. To test the significance probable error is calculated as the following method.

$$P.E= 0.6745 \times \frac{1 Z r^2}{\sqrt{N}}$$

Here, r= correlation coefficient

      N= Number of pairs of observations

P.E = 0.031

6 times P.E = 0.1867

Here, the correlation coefficient (r) is less than the six times probable error. That means there is not significant negative correlation between non-performing assets and total loan and advances to SCBNL.

Table 4.3.4

Computation of correlation coefficient between total assets (x) and non-performing assets(y) of RBB

Year	Total Assets (x)	NPA (y)	X	Y	X^2	Y^2	XY
2004/05	56822	13877	56.8	13.8	3228	193	789
2005/06	49010	8384	49.0	8.3	2401	70	411
2006/07	47911	7725	47.9	7.7	2295	60	370
2007/08	53232	5908	53.23	5.91	2834	35	314
2008/09	68714	4942	68.71	4.94	4722	24	340
N=5	**275689**	**40836**	**275.69**	**40.84**	**15481**	**382**	**2224**

See in Appendices no :IV

Here, N=5,   X= 275.69,   Y= 40.84, X^2= 15481, Y^2= 382 and   XY= 2224

Now coefficient of correlation,

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

r= -0.24

According to the above calculation, the Karl Pearson's Coefficient (r) of RBB between total assets and non-performing assets is -0.24, which denotes that there is negative correlation between them. That means if one variable from them is decreased that

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affected another variable but in opposite direction, i.e. in increased in relation to 24% and vice versa. To clarify the significant result, probable error is calculated as the following method.

$$\text{P.E} = 0.6745 \times \frac{1 Z r^2}{\sqrt{N}}$$

Here, r= correlation coefficient

N= Number of pairs of observations

P.E = 0.2842

6 times P.E = 1.7053

Here, the correlation coefficient (r) is less than the six times probable error. That means there is insignificant negative correlation between non-performing assets and total assets to RBB. The NPA is decreasing but and highly satisfactory in the comparison of the previous year datas.

Table 4.3.5

Computation of correlation coefficient between total assets (x) and non-performing assets(y) of HBL

Year	Total Assets (x)	NPA (y)	X	Y	X²	Y²	XY
2004/05	27845	1001	27.8	1.03	775.34	1.00	28.6
2005/06	29460	1040	29.4	1.06	867.89	1.08	31.2
2006/07	33519	641	33.5	0.65	1122.25	0.41	21.8
2007/08	36175	477	36.18	0.48	1308.63	0.23	17.26
2008/09	39320	551	39.32	0.55	1546.06	0.30	21.67
N=5	166319	3710	166.32	3.71	5621.45	3.03	118.92

See in Appendices no :V

Here, N=5, X= 166.32, Y= 3.71, X²= 5621.45, Y²= 3.03 and XY= 118.92

Now coefficient of correlation,

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

r=-0.91

According to the above calculation, the Karl Pearson's Coefficient (r) of HBL between total assets and non-performing assets is -0.91, which denotes that there is negative correlation between them. That means if one variable from them is decreased that

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affected another variable but in opposite direction, i.e. in increased in relation to 91% and vice versa. To clarify the significant result, probable error is calculated as the following method.

$$P.E = 0.6745 \times \frac{1 Z r^2}{\sqrt{N}}$$

  Here, r= correlation coefficient

        N= Number of pairs of observations

P.E = 0.052

6 times P.E = 0.31

Here, the correlation coefficient (r) is less than the six times probable error. That means there is not significant negative correlation between non-performing assets and total assets to HBL. The NPA is fluctuating in every year but not satisfactory level

Table 4.3.6

Computation of correlation coefficient between total assets (x) and non-performing assets(y) of SCBNL

Year	Total Assets (x)	NPA (y)	X	Y	X²	Y²	XY
2004/05	21782	226	21.7	0.23	470.9	0.053	4.99
2005/06	25767	196	25.7	0.20	660.5	0.038	5.04
2006/07	28597	197	28.5	0.20	812.2	0.039	5.61
2007/08	33335	128	33.34	0.13	1111.22	0.040	4.27
2008/09	40587	91	40.59	0.09	1647.02	0.020	3.69
N=5	150068	838	150.07	0.84	4714.71	0.15	23.57

See in Appendices no :VI

Here, N=5,   X= 150.7,   Y= 0.84,   X²= 4714.71,   Y²= 0.15 and   XY= 23.57

Now coefficient of correlation,

$$r = \frac{N \quad XY \, Z(\quad X)(\quad Y)}{\sqrt{N \quad X^2 \, Z(\quad X)^2} \sqrt{N \quad Y^2 \, Z(\quad Y)^2}}$$

r=-0.98

According to the above calculation, the Karl Pearson's Coefficient (r) of SCBNL between total assets and non-performing assets is -0.98, which denotes that there is negative correlation between them. That means if one variable from them is decreased

that affected another variable but in opposite direction, i.e. in increased in relation to 98% and vice versa. To clarify the significant result, probable error is calculated as the following method.

$$P.E = 0.6745 \times \frac{1 Z r^2}{\sqrt{N}}$$

Here, r= correlation coefficient

N= Number of pairs of observations

P.E = 0.0144

6 times P.E = 0.0865

Here, the correlation coefficient (r) is less than the six times probable error. That means there is insignificant negative correlation between non-performing assets and total assets to SCBNL. The NPA is decreasing in every year and satisfactory level.

Table 4.3.7

Computation of correlation coefficient between Net Profit (x) and non-performing assets(y) of RBB

Year	Net Profit (x)	NPA (y)	X	Y	X^2	Y^2	XY
2004/05	1323	13877	1.32	13.8	1.74	192.57	18.36
2005/06	1592	8384	1.6	8.3	2.56	70.29	13.35
2006/07	1682	7725	1.7	7.7	2.89	59.68	13.00
2007/08	1718	5908	1.72	5.91	2.85	34.90	10.15
2008/09	1923	4942	1.92	4.94	3.70	24.42	9.50
N=5	8238	40836	8.24	40.84	13.76	381.87	64.35

See in Appendices no :VII

Here, N=5,   X= 8.24,   Y= 40.84,   X^2= 13.76,   Y^2= 381.87 and   XY= 64.35

Now coefficient of correlation,

$$r = \frac{N \quad XY \, Z(\quad X)(\quad Y)}{\sqrt{N \quad X^2 \, Z(\quad X)^2} \sqrt{N \quad Y^2 \, Z(\quad Y)^2}}$$

r= -0.96

According to the above calculation, the Karl Pearson's Coefficient (r) of RBB between net profit and non-performing assets is -0.96, which denotes that there is negative

correlation between them. That means if one variable from them is decreased that affected another variable but in opposite direction, i.e. in increased in relation to 96% and vice versa. To test the significance probable error is calculated as the following method.

$$P.E = 0.6745 \times \frac{1 Z r^2}{\sqrt{N}}$$

Here, r= correlation coefficient

N= Number of pairs of observations

P.E = 0.0208

6 times P.E = 0.1248

Here, the correlation coefficient (r) is less than the six times probable error. That means there is not significant negative correlation between non-performing assets and net profit to RBB. The value of NPA is greater than Net profit so that the result is not satisfactory.

Table 4.3.8

Computation of correlation coefficient between Net Profit (x) and non-performing assets(y) of HBL

Year	Net Profit (x)	NPA (y)	X	Y	X²	Y²	XY
2004/05	308.2	1001	0.31	1.03	0.09	1.06	0.32
2005/06	457.4	1040	0.46	1.04	0.21	1.08	0.49
2006/07	491.8	641	0.49	0.65	0.24	0.42	0.32
2007/08	635.8	477	0.64	0.48	0.40	0.23	0.30
2008/09	752.8	551	0.75	0.55	0.57	0.30	0.41
N=5	**2646**	**3710**	**2.65**	**3.71**	**1.52**	**3.03**	**1.82**

See in Appendices no :VIII

Here, N=5,   X= 2.65,   Y= 3.71,   X²= 1.52,   Y²= 3.03 and   XY= 1.82

Now coefficient of correlation,

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

r=-0.82

According to the above calculation, the Karl Pearson's Coefficient (r) of HBL between net profit and non-performing assets is -0.82, which denotes that there is negative correlation between them. That means if one variable from them is decreased that will affect another variable but in opposite direction, i.e. in increased in relation to 82% and vice versa. To clarify the significant result, probable error is calculated as the following method.

$$P.E = 0.6745 \times \frac{1 Z r^2}{\sqrt{N}}$$

Here, r= correlation coefficient

N= Number of pairs of observations

P.E = 0.1003

6 times P.E = 0.6017

Here, the correlation coefficient (r) is less than the six times probable error. That means there is not significant negative correlation between non-performing assets and net profit to HBL. Little bit improving, net profit is increasing but not satisfactory because the NPA is fluctuating.

Table 4.3.9

Computation of correlation coefficient between Net Profit (x) and non-performing assets(y) of SCBNL

Year	Net Profit (x)	NPA (y)	X	Y	X^2	Y^2	XY
2004/05	536.2	226	0.536	0.23	0.29	0.05	0.12
2005/06	658.8	196	0.659	0.196	0.43	0.04	0.13
2006/07	691.7	197	0.691	0.197	0.48	0.04	0.14
2007/08	818.9	128	0.82	0.13	0.67	0.02	0.10
2008/09	1025.1	91	1.03	0.09	1.05	0.01	0.09
N=5	**3730.70**	**838**	**3.73**	**0.84**	**2.92**	**0.15**	**0.58**

See in Appendices no :IX

Here, N=5,   X= 3.73,   Y= 0.84, X^2= 2.92, Y^2= 0.15 and   XY= 0.58

Now coefficient of correlation,

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

r=-0.98

According to the above calculation, the Karl Pearson's Coefficient (r) of SCBNL between net profit and non-performing assets is -0.98, which denotes that there is negative correlation between them. That means if one variable from them is decreased that affected another variable but in opposite direction, i.e. in increased in relation to 98% and vice versa. To test the significance probable error is calculated as the following method.

$$P.E = 0.6745 \times \frac{1 Z r^2}{\sqrt{N}}$$

Here, r= correlation coefficient

N= Number of pairs of observations

P.E = 0.0135

6 times P.E = 0.0808

Here, the correlation coefficient (r) is less than the six times probable error. That means there is not significant negative correlation between non-performing assets and net profit to SCBNL.Net profit as well as NPA also good because net profit is increasing and NPA is decreasing trend, which proves that the highly satisfactory level.

4.4 Trend analysis, comparison of Past Data and Provision of future data.

All the commercial Banks do have the different financial indicators, which represent the actual financial position of the bank in different aspects. Therefore, to find out the trend of different financial indicator of RBB, HBL and SCBNL five years financial summary is tried to analyze. Therefore, we can say that, trend analysis is the tools that are used to show grandly increase and decrease of variable in a period, is known as trend analysis. With the help of trend analysis, the tendency of variables over the period can be seen clearly. Here, trend analysis of deposits, loan and advances, non-performing assets and loan loss provision has been conducted.

Table 4.4.1

Deposit Trend of RBB, HBL and SCBNL

Rs. In millon

Year	RBB	Avg.Ratio	HBL	Avg.Ratio	SCBNL	Avg.Ratio
2004/05	43,016	5%	24,814	6%	19,344	4.5%
2005/06	46,195	5%	26,491	6%	23,061	4.5%
2006/07	50,346	5%	30,048	6%	24,647	4.5%
2007/08	58,333	5%	31,843	6%	29,743	4.5%
2008/09	68,160	5%	34,681	6%	35,871	4.5%
2009/010	71,568	5%	36,762	6%	37,485	4.5%
2010/011	75,146	5%	38,968	6%	39,172	4.5%
2011/012	78,904	5%	41,306	6%	40,935	4.5%
2012/013	82,849	5%	43,784	6%	42,777	4.5%

Above table presents the real figure of RBB, HBL and SCBNL about deposit growth trend over the five fiscal years of the study period. In the case of RBB, the deposits collection is in increasing trend year by year. It is Rs.43, 162000000,000,000, Rs. 46,195,000,000, Rs. 50,0346,000,000, Rs. 58,333,000,000, and Rs. 68,160,000,000 respectively in the fiscal year 2004/05 to 2008/09. Similarly, in the case of HBL, the deposit collection is in increasing trend year by year. It is Rs. 24,814,800,000, Rs. 26490,000,000, Rs. 30048,000,000, Rs. 318420,800,000 and Rs. 34,681400,000 respectively in the fiscal year 2004/05 to 2008/09. Whereas the deposit collection trend by SCBNL is in increasing trend of the study period. The amounts are Rs. 19, 344, 00,000, Rs. 23,061,000,000, Rs. 24647,000,000, Rs. 29743000,000 and

Rs. 35871000,000 respectively in the fiscal year 2004/05 to 2008/09. But in cease of the fiscal year 2010 to 2013 all data are posted on the basis of the past and present datas alalysis of percentage base of increasing trend. In case of RBB banks the average increasing rate is 4% yearly on the base of last year, similarly HBL and SCBNL are the 6% and 4.5% of the increament trend on the basis of last year data, in overall evaluation RBB is most stronger than the other two banks to collect the deposit amount.

Table 4.4.2

Loan and Advances Trend of RBB, HBL and SCBNL

Rs. In millions

Year	RBB	Avg.Ratio	HBL	Avg.Ratio	SCBNL	Avg.Ratio
2004/05	27,001.00	3%	12,424.00	4%	8,143.00	3.5%
2005/06	23,103.00	3%	16,642.00	4%	8,935.00	3.5%
2006/07	25,395.00	3%	16,998.00	4%	10,502.00	3.5%
2007/08	21,136.00	3%	19,497.00	4%	13,718.00	3.5%
2008/09	26,187.00	3%	24,793.00	4%	13,679.00	3.5%
2009/010	26,710.74	3%	25,288.86	4%	14,157.77	3.5%
2010/011	27,244.95	3%	25,794.64	4%	14,653.29	3.5%
2011/012	27,789.85	3%	26,310.53	4%	15,166.15	3.5%
2012/013	28,345.65	3%	26,836.74	4%	15,696.97	3.5%

The above table shows the loan and advances trend of RBB, HBL and SCBNL from the fiscal year 2004/05 to 2008/09. In the case of RBB, the loan and advances value is in fluctuating trend in year 2005/06 during the study period. First increased then decreased, again increased and then decreased trend of loan and advances of RBB. The amounts are Rs. 27,001,000,000, Rs.

23,103,000,000, Rs. 25,395,000,000, Rs. 211,136,000,000 and Rs. 26,187,000,000 respectively from the fiscal 2004/05 to 2008/09. However, in case of HBL, the value of loan and advances are continuously in increasing trend. The amounts are Rs. 12,424,000,000, Rs. 14,642,000,000, Rs. 16,998,000,000, Rs. 19,497,000,000, and 24,793,000,000 respectively from the fiscal year 2004/05 to 2006/07. Similarly, in case of SCBNL, the loan and advances value is in also increasing trend. The amount are Rs. 8,143,200,000, Rs. 8,935,400,000,Rs. 10,502,600,000, Rs.13,71,80,00000 and 13,679,00000 respectively from the fiscal year 2004/05 to 2008/09. In case of provisional data analysis all sample banks are increasing trend i.e. 3%, 4% and 3.5% of RBB, HBL and SCBNL respectively, but in overall analysis HBL is better than other two banks but the loan and advance trend will be good and improving of all banks it proves that the public trust and development of business will emerging in that period.

Table 4.4.3

Non-Performing Assets Trend of RBB, HBL and SCBNL   Rs. In millions

Year	RBB	Avg.Ratio	HBL	Avg.Ratio	SCBNL	Avg.Ratio
2004/05	13,877.00	20%	1,001.00	40%	226.00	45.0%
2005/06	8,384.00	20%	1,040.00	40%	196.00	45.0%
2006/07	7,725.00	20%	641.00	40%	197.00	45.0%
2007/08	5,908.00	20%	477.00	40%	128.00	45.0%
2008/09	4,942.00	20%	551.00	40%	91.00	45.0%
2009/010	3,953.60	20%	330.60	40%	50.05	45.0%
2010/011	3,162.88	20%	198.36	40%	27.53	45.0%
2011/012	2,530.30	20%	119.02	40%	15.14	45.0%
2012/013	2,024.24	20%	71.41	40%	8.33	45.0%

The above table reflects the non-performing assets trend of RBB, HBL and SCBNL from the fiscal year 2004/05 to 2008/09. In the case of RBB, the value of NPA is in decreasing trend. The amounts are Rs. 13877 million, Rs. 8344 million, Rs. 7725 million, Rs.5908 million and Rs. 4942 million respectively from the fiscal year 2004/05 to 2008/09. In case of the HBL, the value of NPA is in fluctuating trend during the study period. First decreased then increased, again decreased and then increased trend of NPA of HBL. The amounts are Rs.1001 million, Rs. 1040 million, Rs. 641 million, Rs. 477 million and Rs. 551 million respectively from the fiscal year 2004/05 to 2008/09. Similarly, in case of SCBNL, the value of NPA is decreasing trend except year 2006/07 is slightly increasing trend. The amounts are Rs. 226 million, Rs.196 million, Rs. 197 million, Rs. 128 million and Rs. 91 million respectively from the fiscal year 2004/05 to 2008/09. This can be clarifying by the following diagram also. In case of provisional year from 2009/010 to 2012/13 all sample banks will do well performance to decrease the NPA because of the well performance and management. However, in overall analysis SCBNL is better than other tow bank because the NPA will be 8.33 million only end of the date of 2013 fiscal year. Although other banks also will have decreasing trend of the NPA in the projection period.

4.5 Major Findings

Beside this, the major findings are summarized mainly based on presentation, interpretation and analysis of five years previous data and four-year projection plan, which are as follows.

）The average non-performing asset to total loan and advances ratio of RBB, HBL and SCBNL are 43.33%, 4.72% and 1.57% respectively.

）The average non-performing assets to total assets ratio of RBB, HBL and SCBNL are 11.75%, 2.35%, and 0.62% respectively.

）The average loan loss provision to non-performing assets ratio of RBB, HBL and SCBNL are 8.27%, 13.15% and 163.88%.

）The average loan and advances to total deposit ratio of RBB, HBL and SCBNL are 47.58%, 58.92% and 41.60% respectively.

）The average return on total assets ratio of RBB, HBL and SCBNL are 3.02%, 1.56% and 2.40% respectively.

）The average non-performing assets to net profit ratio of RBB, HBL and SCBNL are 5.27 times, 1.67 times and 0.25 times respectively.

) The correlation coefficient between total loan and advances and non-performing assets of RBB is 0.47 where the six times probable error is 1.41.

) The correlation coefficient between total loan and advances and non-performing assets of HBL is -0.81 where the six times probable error is 0.6240.

) The correlation coefficient between total loan and advances and non-performing assets of SCBNL is -0.95 where the six times probable error is 0.1867.

) The correlation coefficient between total assets and non- performing assets of RBB is -0.24% and probable error is 1.7053.

) The correlation coefficient between total assets and non- performing assets of HBL is -0.91% and probable error is 0.31.

) The correlation coefficient between total assets and non- performing assets of SCBNL is -0.98% and probable error is 0.0144.

) The correlation coefficient between net profit and non- performing assets of RBB is -0.96% and probable error is 0.1248.

) The correlation coefficient between net profit and non- performing assets of HBL is -0.82% and probable error is 0.6017.

) The correlation coefficient between net profit and non- performing assets of SCBNL is -0.98% and probable error is 0.0135.

) The correlation coefficient between Loan loss provision and non- performing assets of RBB is 0.92% and probable error is 0.2838.

) The correlation coefficient between Loan loss provision and non- performing assets of HBL is 0.75% and probable error is 0.8053.

) The correlation coefficient between Loan loss provision and non- performing assets of SCBNL is 0.93% and probable error is 0.2334.

) The correlation coefficient between non-banking assets and non- performing assets of RBB is -0.72% and probable error is 0.8644.

) The correlation coefficient between non-banking assets and non- performing assets of HBL is 0.71% and probable error is 0.8995.

) The correlation coefficient between non-banking assets and non- performing assets of SCBNL is zero and no probable error.

) The total deposits of RBB, HBL as well as the SCBNL are in increasing trend in the following year.

) The total loan and advances of RBB, HBL as well as SCBNL are in increasing trend.

) The non-performing asset of RBB is in decreasing trend but in case of HBL and SCBNL, both are in fluctuating trend.

) The loan loss provision of RBB and HBL is in decreasing trend but the SCBNL is Fluctuating trend.

) The deposit trend is increasing trend in provisional fiscal year 2009/010 to 2012/013 of all sample banks.

) The Loans and advance of the all sample banks will have increasing trend during the provisional period of 2009/010 to 2012/2013.

) The Non-performance assets of the all three sample banks are decreasing trend during the provisional period of 2009/010 to 2012/2013.

) All sample banks found the strong and efficient position in the end of the fiscal year 2012/2013 according to their history and future data analysis.

CHAPTER 5

SUMMARY, CONCLUSION & RECOMMENDATION

5.1 SUMMARY

Present chapter attempts to summarize the major findings of the earlier analysis and results. Researcher also attempted to draw some conclusion base don those findings. This chapter is the composition of the study that is why it is expect that those findings are very much useful for the academicians and practitioners as well as the management of the bank and concerned persons. Based on summary and conclusion of the study, researcher also attempted to identify some strategies of management for NPA and its impact n the financial position on banking sector.

The first chapter consists of framework of the study as well as profile of selected government owned bank i.e. RBB, joint venture bank i.e. HBL and the Nepal largest international bank i.e. SCBNL. Similarly second chapter is good review of the issues related with abstracts of NPA. The possible valid used of ratios and mechanics, financial and statistical tools and techniques are briefly reviewed in chapter three research methodology. Finally, fourth chapter consists of analytical framework of data and findings that is considered as the important part revealing the performance of selected simple banks.

For the analysis of relationship with NPA growth and expansion of credit, it has been found that there is some relationship between credit expansion and increment of NPA. NBA is created due to having NPA. However, it is not certain that NPA always creates NBA, as on some occasion bank may not auction the property or the auctioned property after acceptance of the some in the name of the bank is disposed off. Sometime banks might have been sold some portion of NBA too.

In regard to the creation of high level of NPA, it has been found that relationship of borrowers with top management is the major determining factor in lending. In other words bank has to be careful about the repayment of loan and interest before giving loan. If a bank is too timid it may

fail to obtain the adequate return on the fund. Similarly, if the bank is too liberal, it may easily impair his profits by bad debts. Therefore, banks should not forget the reality that most of the bank failures in the world due to shrinkage in the value of the loan and advances.

After the analysis, it was found that bad intension, weak monitoring and mismanagement 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 in to bad. Some factors such as lack of portfolio analysis, not being effective credit policy and shortfall on security were also identified as factors affecting in NPA growth.

5.2 Conclusion

The growth and increasing integration of the world's economy has been related to the expansion of global banking activities. So the focus should be given to decrease the non-performing assets. To do this all the non-performing loans should be recovered. The management should show strong will to penalize the wilful defaulters. Government should support the bank in its endeavour to recover all bad debts. This study particularly deals with conclusion about "The position of non-performing assets on profitability with respect to Rastriya Banijya Bank, Himalayan Bank Limited and Standard Chartered Bank Nepal Limited". The analysis of NPA is very significant for investment which is the heart function of the commercial banks. Now-a-days, commercial banks are operating with better technology and new efficient method in banking sector. But this study has been undertaken only for commercial and joint venture banks to examine and evaluate the NPA condition. Besides, latest financial statement of five years from 2002/03 to 2006/07 has been conferred for the purpose of the study. This study has been mainly conducted on the basis of secondary data that are processed and analyzed.

Among the three banks, RBB has the satisfactory ratio of total loan and advances to total deposits. In case of RBB, the aggregate ratio is more than 47.58%, which is the good than HBL except SCBNL. In case of HBL is able to utilize the total loan but in case of SCBNL is not able to utilized loan efficiently, because of the economic condition of the country as well as low investment opportunities. They could lend only the 58% and 41.60% of total deposits although theirs ratio are in increasing trend.

Non-performing assets to total loan and advances of three sample banks are in decreasing trend because non-performing assets are in decreasing trend whereas the total loan and advances are in increasing trend. It is due to good lending. But RBB has the highest ratio in comparison with HBL and SCBNL.

SCBNL has the lowest non-performing assets to total assets ratio i.e. 1.57% which denotes that SCBNL invest on profitable sector only. Similarly the HBL has also the satisfactory ratio. The ratio is in decreasing trend due to decrease in NPA and increase in total assets. Although, the ratio of RBB is in decreasing trend, its ratio is highest among the three sample banks due to the fluctuating trend of total assets.

Although the SCBNL has low value of NPA and put the low value of loan loss provision on its provision fund, it's ratio is highest than the other two banks. In case of RBB it has the high value of NPA as well as the high value of loan loss provision. Loan loss provision even reduce the default risk, it directly affected on the profitability of the banks.

In an average, SCBNL has the quite satisfactory return on total assets ratio than the other two sample banks. Although the RBB also doing well performance in the study period it went up to 2.33% to 3.22% and decreased to 2.80 which seem that in the least day it manage well in lending policy and recovery process.

There is a inverse relation between non-performing assets and net profit ratio of three sample banks, in case of RBB and SCBNL, NPA are in decreasing year by year but yet profit is in increasing year by year gradually. But in case of HBL, NPA is in fluctuating trend where as the net profit is in increasing trend. But in overall performance SCBNL is better than other two sample banks regarding their performance, vision, strategy and efficient management.

Karl Parson's correlation coefficient shows that there is negative relationship between non-performing assets and total loan and advances of HBL and SCBNL. That means increase in total loan and advances decreases non-performing assets and decrease in total loan and advances increases the non-performing assets in relation to 81% and 95% respectively of HBL and SCBNL or they are inversely interrelated with each other. But in case of RBB, there is positive

relationship between total loan and advances and NPA that means increase in total loan and advances also increase the NPA and decrease in total loan and advances also decrease the NPA in relation to 47% of RBB or they are directly interrelated with each other.

All three sample banks have increasing trend of total deposits in every year in comparison between five fiscal year. Similarly all sample bank RBB, HBL and SCBNL have increasing trend of loan and advances but the amount of the RBB is higher than other two banks because of the large bank and too many branches.

All sample banks have the decreasing trend of non-performing assets in the study period it proves that all banks are doing well performance and efficient management. It proves that all banks are following the rules, policy and regulation of Nepal Rastra Bank.

Finally we conclude that the levels of NPA in sample banks are not so alarming. The situation is quite satisfactory and improving also, if the all banks do same performance and betterment they got their destination in soon. The commercial banks should give full attention towards supervising their lending and towards recovering their bad loans perfectly, every year their financial performance is increasing and NPA is decreasing, it proves that they are doing well. In comparison of last few fiscal year now too many other commercial banks also competition in the Nepalese market, and because of tuff competition and changing market scenario of liquidity crunch all sample banks are improving.

5.3 Recommendations

High level of non-performing assets not only decreases the profitability of the banks but also affect the entire financial as well as operational health of organization. If the NPA does not control immediately, it will be proved it as a curse for the banks in future. Therefore, based on the above discussion and conclusion present research recommend few major solutions to the authority, academician, practitioners and bankers. Following are the recommendation to minimize the NPA level in sample banks that may support to overcome NPA problems.

⌡ Loan is given if the banker is satisfied that the borrower can repay money from the cash flow generated from operating activities. However the banks want to ensure that their loan is repaid even in case of default. To protect banks from such happenings, the banks

take collateral from the borrower so that in the event of default this collateral is disposed for recovery of loan. Therefore, banks should take enough collateral so that the bank at least can be able to recover its principle and interest amount in case of being unable to repay by the borrower.

⟩ There should be strong follow-up system in commercial banks for the recovery of due loans. Strict monitoring and control system should be there for timely recovery of their loan. It is required to have general practice of follow-up before the loan term into bad loans. Banks should have the proper attention towards the business position of the borrower while floating loan.

⟩ In commercial banks there should be approach of portfolio management. Lending towards the single sector of economy may create higher level of risk thus it is recommended that the credit should be floated to the different sectors of economy. If there is recession to the any specific sectors remaining sectors of economy may function well and there may not be serve impacts, on the whole lending part of the RBB, HBL and SCBNL.

⟩ There is direct effect of NPA on profitability but inversely that means increase in NPA decreases the profitability and decrease in NPA increases the profitability of the banks because of loan loss provision. Therefore, all banks should minimize its NPA level so that they are able to increase in their profitability.

⟩ In case of RBB, Its total loan and advances ratio is higher than the other two banks but its net profit ratio is lower in comparison that's why RBB should invest in less risky investment sector and more profit generating sectors i.e. in productive sectors where as the HBL and SCBNL should minimizes its existing level of excess liquidity by inverting in more profitable sectors. In comparison of the 5 year data its net profit is increasing and NPA is decreasing because of the new management and strong policy of Nepal Rastra Bank, Because of the fully government owned bank and poor political scenario this bank is suffering the some problem of the management. Lack of proper financial analysis of the borrowers by the bank, management inefficiency and the most important thing overvaluation of the collateral assets are the major cause behind increasing NBA of RBB. So RBB in recommended to do the right valuation over the borrower's property specially in granting loans to customers.

〕 In case of HBL bank, to analysis the Five year data's, It found that, fully private sector bank, efficient and proper management, its NPA is decreasing trend except the fiscal year 2008/09, because of the bad loan in this fiscal year the NPA is increased slightly 14% approx but in comparison of the five year datas and overall performance the bank is doing efficiently and proper management. But the management also faces the some political problem during the period.

〕 In case of SCBNL which is the one of the best bank in comparison of the three commercial bank. Few branches, efficient management, proper valuation of assets, reliable operating cost and worldwide connected, the bank have been improving gradually, decreasing of NPA every year and income generated investment, net profit also increasing trend. In the five year study period the bank found the excellent performance and emerging trend in such the financial sector.

Therefore, banks should reduce their level of NPA to increase the ROE and ROA. Last but not least, it is wrong to say NPA should be reduced to maintain sound financial health of the bank. ROE and ROA are depends upon the loan and advance policy of the bank, if the banks are lending the loan with Wright valuation and productivity sector their return of investment and return of the equity will be high in time period and the invertors also be motivated to invest. So that the banks must be able to to reduce the NPA because decreasing the NPA means increasing the net profit of the bank as well vice versa of the ROE and ROA.

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APPENDICES: I

Calculation of Correlation Coefficient between Total Loan and Advances(X) and Non-performing Assets (Y) of RBB.

Where,

N=5,   x= 122.82,   y= 40.84, x^2=3040.20, y^2=381.87and   xy=1018.85

Now,

$$\text{Coefficient of Correlation (r)} = \frac{N \sum xy - \sum x \sum y}{\sqrt{N \sum x^2 - (\sum x)^2} \cdot \sqrt{N \sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 1018.85 - 122.82 \times 40.84}{\sqrt{5 \times 3040.20 - (122.82)^2} \cdot \sqrt{5 \times 381.87 - (40.84)^2}}$$

$$\therefore r = 0.47$$

Calculation of P.E.

We know,

$$\therefore P.E = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1 - (0.47)^2}{\sqrt{5}}$$

$$\therefore P.E = 0.2350$$

98

APPENDICES: II

Calculations of Correlation Coefficient between Total Loan and Advances (X) and Non-Performing Assets (Y) of HBL.

Where,

N=5, x= 88.35, y= 3.71, x^2=1652.50, y^2=3.03 and xy=61.52

Now,

$$\text{Coefficient of Correlation (r)} = \frac{N \sum xy - \sum x \sum y}{\sqrt{N \sum x^2 - (\sum x)^2} \times \sqrt{N \sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 61.12 - 88.35 \times 3.71}{\sqrt{5 \times 1652.50 - (88.35)^2} \times \sqrt{5 \times 3.03 - (3.71)^2}}$$

$$\therefore r = 0.81$$

Calculation of P.E.

We know,

$$\therefore P.E = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1 - (0.81)^2}{\sqrt{5}}$$

$$\therefore P.E = 0.1040$$

APPENDICES: III

Calculation of Correlation coefficient between Total Loan and Advances (X) and Non-Performing Assets (Y) of SCBNL.

Where,

N=5,   x= 54.98,   y= 0.84, x^2=631.73, y^2=0.15 and   xy=8.66

Now,

$$\text{Coefficient of Correlation (r)} = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2} \times \sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 8.66 - 54.98 \times 0.84}{\sqrt{5 \times 631.73 - (54.98)^2} \times \sqrt{5 \times 0.15 - (0.84)^2}}$$

$$\ldots r = -0.95$$

Calculation of P.E.

We know,

$$\ldots P.E = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1 - (-0.95)^2}{\sqrt{5}}$$

$$\ldots P.E = 0.031$$

APPENDICES: IV

Calculation of Correlation Coefficient between Total Assets (X) and Non-Performing Assets (Y) of RBB.

Where,

N=5,   x= 275.69,   y=40.84, x^2=15481, y^2=382 and   xy=2224

Now,

$$\text{Coefficient of Correlation (r)} = \frac{N \sum xy - \sum x \sum y}{\sqrt{N \sum x^2 - (\sum x)^2} \cdot \sqrt{N \sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 2224 - 275.69 \times 40.84}{\sqrt{5 \times 15481 - (275.69)^2} \cdot \sqrt{5 \times 382 - (40.84)^2}}$$

$$\therefore r = 0.24$$

Calculation of P.E.

We know,

$$\therefore P.E = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1 - (0.24)^2}{\sqrt{5}}$$

$$\therefore P.E = 0.2842$$

APPENDICES: V

Calculation of Correlation Coefficient between Total Assets and Advances (X)and Non-Performing Assets (Y) of HBL.

Where,

N=5, x=166.32, y=3.71, x^2=5621.45, y^2=3.03and xy=118.92

Now,

$$\text{Coefficient of Correlation (r)} = \frac{N \sum xy - \sum x \sum y}{\sqrt{N \sum x^2 - (\sum x)^2} \times \sqrt{N \sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 118.92 - 166.32 \times 3.71}{\sqrt{5 \times 5621.45 - (166.32)^2} \times \sqrt{5 \times 3.03 - (3.71)^2}}$$

$$\therefore r = 0.91$$

Calculation of P.E.

We know,

$$\therefore P.E = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1 - (0.91)^2}{\sqrt{5}}$$

$$\therefore P.E = 0.052$$

APPENDICES: VI

Calculation of Correlation Coeffient between Total Assets and Advances (X) and Non-Performing Assets (Y) of SCBNL.

Where,

N=5,   x=150.7,   y=0.84, x^2=4714.71, y^2=0.15and   xy=23.57

Now,

$$\text{Coefficient of Correlation (r)} = \frac{N\ xy - \Sigma x\ \Sigma y}{\sqrt{N\ x^2 - (\Sigma x)^2}\ \times\ \sqrt{N\ y^2 - (\Sigma y)^2}}$$

$$= \frac{5 \times 23.57 - 150.07 \times 0.84}{\sqrt{5 \times 4714.71 - (150.07)^2}\ \times\ \sqrt{5 \times 0.15 - (0.84)^2}}$$

$$\ldots r = 0.98$$

Calculation of P.E.

We know,

$$\ldots P.E = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1 - (0.98)^2}{\sqrt{5}}$$

$$\ldots P.E = 0.0144$$

APPENDICES: VII

Calculation of Correlation Coefficient between Net Profit (X) and Non-Performing Assets (Y) of RBB.

Where,

N=5,   x=8.24,   y= 4.84, x^2=13.76, y^2=381.87 and   xy=64.35

Now,

$$\text{Coefficient of Correlation (r)} = \frac{N\ \ xy\ Z\ \ x\ \ y}{\sqrt{N\ \ x^2\ Z(\ \ x)^2}\ |\ \sqrt{N\ \ y^2\ Z(\ \ y)^2}}$$

$$= \frac{5\ |\ (64.35)\ Z8.24\ |\ 40.84}{\sqrt{5\ |\ 13.76\ Z(8.24)^2}\ |\ \sqrt{5\ |\ 381.87\ Z(40.84)^2}}$$

$$\ldots r\ X Z0.96$$

Calculation of P.E.

We know,

$$\ldots P.E\ X0.6745\ |\ \frac{1\,Z r^2}{\sqrt{N}}$$

$$=0.6745 \times \frac{1\,Z(0.96)^2}{\sqrt{5}}$$

$$\ldots P.E=0.0208$$

APPENDICES: VIII

Calculation of Correlation Coefficient between Net Profit (X) and Non-Performing Assets (Y) of HBL.

Where,

N=5,   x=2.65,   y=3.71, x^2=1.52, y^2=3.03 and   xy=1.82

Now,

$$\text{Coefficient of Correlation } (r) = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2}\;\cdot\;\sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 1.82 - 2.65 \times 3.71}{\sqrt{5 \times 1.52 - (2.65)^2}\;\cdot\;\sqrt{5 \times 3.03 - (3.71)^2}}$$

$$\therefore r = -0.82$$

Calculation of P.E.

We know,

$$\therefore P.E = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1 - (-0.82)^2}{\sqrt{5}}$$

$$\therefore P.E = 0.1003$$

APPENDICES: IX

Calculation of Correlation Coefficient between Net Profit (X) and Non-performing Assets (Y) of SCBNL.

Where,

N=5,   x=3.73,   y=0.84,   x²=2.92,   y²=0.154and   xy=0.58

Now,

$$\text{Coefficient of Correlation (r)} = \frac{N\sum xy - \sum x \sum y}{\sqrt{N\sum x^2 - (\sum x)^2}\ \times\ \sqrt{N\sum y^2 - (\sum y)^2}}$$

$$= \frac{5 \times 0.58 - 3.73 \times 0.84}{\sqrt{5 \times 2.92 - (3.73)^2}\ \times\ \sqrt{5 \times 0.15 - (0.84)^2}}$$

$$\therefore r = 0.98$$

Calculation of P.E.

We know,

$$\therefore P.E = 0.6745 \times \frac{1 - r^2}{\sqrt{N}}$$

$$= 0.6745 \times \frac{1 - (0.98)^2}{\sqrt{5}}$$

$$\therefore P.E = 0.0135$$