

# NON-PERFORMING ASSETS: CAUSE AND EFFECT

[A Study on Himalayan Bank Limited (HBL) and Nepal  
Bangladesh Bank Limited (NBBL)]

**Submitted By:**

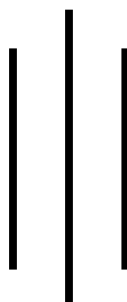
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**Submitted To:**

**Office of the Dean**

**Faculty of Management**

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***In the partial fulfillment of the requirements of the degree of  
Masters of Business Studies (M.B.S.)***

**Kathmandu, Nepal**

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# **RECOMMENDATION**

This is to certify that this thesis

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**Sunena Shelalik**

Entitled

**"Non-Performing Assets: Cause and Effect, A Study on Himalayan Bank Limited (HBL) and Nepal Bangladesh Bank Limited (NBBL)"**

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

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# VIVA-VOCE SHEET

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# DECLARATION

I hereby declare that the thesis entitled "**Non-Performing Assets: Cause and Effect, A Study on Himalayan Bank Limited (HBL) and Nepal Bangladesh Bank Limited (NBBL)**" submitted to Office of Dean, Faculty of Management, Tribhuvan University is my original work done in the form of the partial fulfillment of the requirements of Masters of Business Studies (M.B.S.) under the guidance and supervision of **Mrs Snehalata Kafle and Mr. Govinda Thapa** of **Shanker Dev Campus, Kathmandu**.

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.....

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## ABBREVIATIONS

|       |                                |
|-------|--------------------------------|
| AOA   | Article of Association         |
| ATM   | Automatic teller machine       |
| CV    | Coefficient of Variation       |
| FOM   | Faculty of Management          |
| HBL   | Himalayan Bank Limited         |
| HMG   | His Majesty's Government       |
| i.e.  | That is                        |
| JVs   | Joint venture banks            |
| MBS   | Masters of Business Studies    |
| MOA   | Memorandum of Association      |
| NBA   | Non-banking assets             |
| NBBL  | Nepal Bangladesh Bank Limited  |
| NEPSE | Nepal Stock Exchange Limited   |
| NPA   | Non-performing assets          |
| NBA   | Non- banking assets            |
| NRB   | Nepal Rastra Bank              |
| ROA   | Return on total assets         |
| ROE   | Return on shareholder's equity |
| SD    | Standard Deviation             |
| SEBO  | Security Board                 |
| TU    | Tribhuvan University           |

# CHAPTER-I

## INTRODUCTION

### 1.1 Background of the Study

The role of money in an economy is very important. Proper and well-planned management of money directs, determines and enhances the health and productivity of total financial sector and the performance of the financial sector affect the growth of the economy. Hence, money is a subject to manage and Banks are the manager thereof. Bank, as a manager collects, disperses and controls the flow of money. Banks collect the fund from public who has savings and disperse the fund to the person who is in need of it. This way, whole infrastructure of national development, direction of economy, rate of progress and even the habit of people are being the function of banking systems. Therefore, the existence of a bank is for the change in every aspect of human beings and its presence is for the upliftment of people.

During the early periods although private individuals mostly did the banking business, many countries established public banks either for the purpose of facilitating commerce or to serve the government. The Bank of Venice established in 1157, is supposed to be the most ancient bank, which however was not a bank in modern sense simply an office for the transfer of the public debt. Eventually, during 1401, a public bank was established in Barcelona. It used to exchange. Receive deposits and discount bill of exchange, both for the citizen and foreigners. Similarly, The Bank of Geneva was established in 1407 and The Bank of Amsterdam was established in 1609. The Bank of Amsterdam was established to meet the needs of merchants of the city. The Bank also adopted a plan by which depositors receive a kind of certificate entitling them to withdraw his deposit within six months. The most of the European banks now in existence were found on the model of the Bank of Amsterdam.

In Nepal borrowing and lending acclivity has been recorded long ago however, there was no organized institution for such activity until Malla King Jayasthiti Malla on the basis of occupation divided the people into 64 categories out of which "Tanka Dhari" was also one of them. The main occupation of "Tanka Dhari" was to lend money. Then after during Rana regime Prime Minister Ranodip Singh established a government institution called "Tejarath Adda ". The "Tejaratha" helped the public by supplying

easy and cheap credit against the security of gold and silver ornaments. But the debt facility was only opened for government officials. The general public has to depend on the private moneylenders for the debt who used to charge high interest rate and exploit them.

The advent of financial institution in Nepal started with the establishment of Nepal Bank Limited in year 1994 B.S under the "Banking Act 1993". Then after Nepal Rastra Bank, the central bank emerged in 2013 B.S under "Rastra Bank Act- 2012" which is apex financial institution providing policies and guidance to the financial sectors in one hand and is monitoring and controlling them in other hand. Realizing the need of adequate banking services for the integrated and speedy development of industrial sector. Rastriya Banijya Bank came into existence in 2022 B.S. (*NRB Report, 1981: 3*).

Economic liberalization policy of the Government has encouraged the establishment and growth of financial institutions in Nepal. Now, there are so main financial institutions such as Commercial Banks, Development Banks, Finance Companies and Cooperatives in operation. Some other institutions pipelines are supposed to come into function very soon. Before the year 2041 B.S. there were only two commercial banks in existence. As the government owned banks were not able to cater the need of the people with modern banking facilities the need of privately owned banks were badly felt and there were rapid growth of commercial banks during a short span of time.

Banking sectors are the backbone of a country's economy. Motto of the commercial banks is to mobilize the resources by investing the same in a profitable manner. The resources may include capital funds consisting of shareholders equity, money deposited by the people, borrowings and profit capitalization. The competency of any commercial banks is referred as to the utilization of the resources on most profitable manner. The profit should be adequate to meet its costs 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. Though, their activities are guided by some social obligations but some profits are always been desirable for maintaining existence.

A big chunk of resources are being utilized on loan and advances. As the return from

loan floatation 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 principal for higher return higher risk should be taken and vice versa. The mushrooming growth of the banks has led them towards cutthroat competition. 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 from the small and same size of the cake.

The less opportunity for getting avenues for loan floatation has compelled the banks to finance without being choosy. Quality of the loans and advances could not be maintained to the desirable level if there is no choice whether to finance or not. Once the loan is given it is supposed that the re-payment of interest or principal shall have to be served without any hindrance. The resources could not be considered utilized properly when the loans provided to the clients could not be regular and if there is cumulative overdue outstanding. There may be various reasons behind the loans that turn irregular from regular one. The main reason may be economic situation of the country, which has global and far-reaching impact.

The smooth operation of the commercial banks is possible only when the economy of the country functions well. Satisfactory level of return on investment is the pre-requisite for the financial sector to be groomed. The other contributing factors that turn the good loan into bad are the attitude of the borrower. Types and quality of security taken and legal hurdles created by the borrower when the recovery action is started. Once the distributed loan is not returned timely by clients and becomes overdue than it is known as Non Performing Assets (NPA) for the banks. Reduction of NPA has always been a significant problem for every commercial Banks and proper attention for the management of the NPA now under priority. Due to various hurdles on way of management of NPA. Commercial banks are now losing their profitability and struggling for their existence.

The operations of the banking institution has been regulated by the international norms, relevant acts, regulations, Memorandum of Association (MOA), Article of Association (AOA), instruction given at the time of getting intent and Directives issued by Central bank from time to time. Likewise the expectation of the stakeholder should also be

taken into consideration. All banking institutions are supposed to confine their activities within that periphery.

Money is the imperative need of the people either its for meeting their basic needs or for meeting their need for convenience or to satisfy their luxury requirements, flow of money in the economy plays a vital role in determining how developed the economy is. It also helps in determining the living standard of the people in the economy by poking into the fact how much they spend and where they spend, financial Institutions have been playing a vital role in flowing money in the economy.

Banks and financial institutions collect savings of the individuals, corporate offices and institutions in form of deposits by providing them interest in return of their deposit, It provides loan and advances to the individual, organization or institution which are in need of cash flow for undertaking money generating activities. While providing loans and advances the banks analyze various aspects of the borrower. A feasibility report analyzing technical aspect, financial aspect as well as managerial aspect is conducted. Despite a loan may turn into bad loan. The borrower may not be able to repay the interest and principal on time or could not pay at all. There might be various causes for the loan to turn into a bad loan which may be either external or internal. It might occur that sometimes change in government policies affects the business so badly that the borrower may not be able to pay, sometimes the borrower's lack of managerial skill might be the cause of downturn of business resulting into failure to repay the loan as per schedule. Loans and advances are availed in due influence which later on turn into bad loan. Loans availed to the renowned persons if turn into bad might is very difficult to recovery due to his/her social status. A good monitoring and control system of bank also plays major role for recovery of a loan.

From an unauthorized source it has been revealed that Nepal Bangladesh Bank Limited has the highest percentage of NPA among the commercial bank which is followed by Rastriya Banijya Bank and Nepal Credit and Commerce Bank Limited. Similarly, excepting new banks which have recently come into operation Siddhartha Bank Limited is the lowest Percentage of NPA. The reasons for the high % of NPA might be due to credit concentration rather than diversification, improper credit assessment from product market, demand, supply as well as the borrowers' creditworthiness. Sometimes,

weak legal documentation and weak monitoring and lack of recovery actions can also be cause of NPA.

## **1.2 Profile of Sample Banks**

### **1.2.1 Nepal Bangladesh Bank Limited (NBBL)**

Nepal Bangladesh Bank Limited was established in June 1994 with an authorized capital of Rs. 240 million and Paid up capital of Rs. 60 million as a Joint Venture Bank with IFIC Bank Limited of Bangladesh. Its Head Office is situated at New Baneshwore, Bijuli Bazar, Kathmandu.

The prime objective of this bank is to render banking services to the different sectors like industries, traders, businessmen, priority sectors, small entrepreneurs and weaker sections of the society and every other people who need banking services. During the period of 14 years of its operation, it has accommodated a large number of chanta and has been able to provide excellent services to its chanta.

With a network of 17 branches and a corporate office, the bank commands a large network in Nepal. The bank's branches are located at Putalisadak, Bijulibazar, Bhainsepati, Lalitpur, New Road, Kalimati, Dharan, Battar, Bulwal, Biratnagar, Birgunj, Nepalgunj, Tatopani, Janakpur, Hetauda, Pokhara and Dhangadhi the bank has introduced its first ATM facility at Kathmandu Plaza, Putalisadak Branch to give 24 hours and 365 days banking services to their valued customers. It is also a member of Smart Choice Technology (SCT).

Nepal Bangladesh Bank Ltd. is providing full Hedged Commercial Banking services to its clients. Besides accepting deposits in various forms, it extends loans and advances under viz hire purchase loan, home loan, educational loan, consortium loan, demand loan. Term Loan and Working capital Loan. It also issues letter of credit and bank guarantee. Remittance services, telebanking, SMS banking. Bearer Certificate Deposit and ABBS are other faculties offered by the bank.

Top exporters and importers of the country have established banking relationship with the bank with a substantial volume of foreign business, which has enhanced the bank's popularity in the International Trade from. Bank has developed Agency and



Correspondent relationship with more than 200 prominent foreign Banks in the world.

With the continuous support of valued customers, the bank has made all round progress in every sphere of its operation. The bank has mobilized deposits to the extent of Rs.9463.91 (In Million) and advanced loans to the extent of Rs.5854.58 (In Million) making profit of Rs.392.70 (In Million) for the fiscal Year 2006/07.

**Table: 1.1**

**Capital Structure of Nepal Bangladesh Bank Limited (NBBL)**

| <b>Capital</b>     | <b>Amount in Rs.'000'</b> |
|--------------------|---------------------------|
| Authorized Capital | 15,000,000                |
| Issued Capital     | 1,000,000                 |
| Paid up Capital    | 719,852                   |

**1.2.2 Himalayan Bank Limited (HBL)**

Himalayan Bank Limited was incorporated in 1992 by a few distinguished business personalities of Nepal in partnership with Employees Provident Fund and Habib Bank Limited, one of the largest commercial bank of Pakistan. Banking operation commenced from January 1993. It is the first commercial bank of Nepal whose maximum shares are held by the Nepalese private sector. Besides commercial banking services, the bank also offers industrial and merchant banking services.

The bank has six branches in Kathmandu Valley at the following locations: Thamel, New Road, Maharajgunj, Pulchowk (Patan), Bhaktapur and Teku. In addition, the bank also has eleven other branches outside Kathmandu Valley in Banepa, Tandi, Bharatpur, Birgunj, Hetauda, Bhairawa, Biratnagar, Pokhara, Dharan, Butwal and Nepalgunj.

Himalayan Bank Limited has been providing various services to its customers by way of accepting deposit, providing loans and advances under different heads. It has been also providing ATM facility, Internet banking and SMS banking. Himal Remit is one of the most popular product of the bank helping people to transfer money from foreign countries. Himalayan Bank has the largest network covering all major cities, towns and villages of the country and is capable of paying at more than 200 locations across Nepal.

Himalayan Bank Limited had been awarded Number One Bank in Nepal by The Bankers' Almanac, Britain for the year 2003 and 2006. Similarly, it was awarded with National Excellence Award by Federation of Nepalese Chamber of Commerce for the year 2003. The bank has mobilized deposit of Rs.30,048.42 (In Million) and advanced loan of Rs.17,793.42 (in Million) making profit of Rs.49,182.00 (In Million) for Fiscal year 2006/07.

**Table: 1.2**

**Capital Structure of Himalayan Bank Limited (HBL)**

| <b>Capital</b>     | <b>Amount in Rs.'000'</b> |
|--------------------|---------------------------|
| Authorized Capital | 1,000,000                 |
| Issued Capital     | 810,810                   |
| Paid up Capital    | 810,810                   |

**1.3 Statement of the Problem**

NPA in terms of banking sector consists of those loans 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 severe impacts on the financial institution. On the one hand, the investment becomes worthless as expected return cannot be realized 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 principal has to be recovered timely and without any obstacles.

NPA as 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 aging 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 led the banks towards the rigorous recovery action, which ultimately may cause auctioning of the security held with bank's custody. Due to adverse economic situation of the country and perception build up annum 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 piling up the volume of Non Banking Assets (NBA). As the major chunk of NBA are fixed in nature the fund supposed to be rolled over are being tied up on fixed asset, which is healing the liquidity of the banks. Present study is confined to evaluate the relationship of NPA and NBA also.

It is confined to analyze the repercussion of NPA on the profitability of the banks. Credit concentration risk and its implication on NPA increment shall also be considered. Affecting factors for the conversion of NPA shall be another area to be intended to focus under this study. I or the analyzing of cause and consequences, the NPA level of two privately owned banks shall be taken into consideration.

While floating the loans bank expects that interest and principal will be served on time. In principle loans and advances extended by banks are repayable on demand.

But 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 principal cannot be recovered in time, the loan is considered as classified loan or NPA. In the recent days not only government owned banks but some of the banks under private sectors are also suffering from NPA burden. It is a matter of debate among the banking sector regarding the real cause of NPA increment and on some occasion it is said NRB directives is the cause of NPA increment. This study has identified the following research questions regarding to NPA with special reference to NBBL and HBL.

- a) What is the present condition of NPA on sample banks?
- b) What is the impact of NPA on profitability of the banks under study?
- c) What is the relationship of NPA and total loan and advances, profitability and NBA of sample banks?
- d) What is the trend of total loan and advances, non-performing assets, loan loss

provision, Net Profit and NBA of sample banks?

- e) What are the factors causing NPA in the sample banks?

#### **1.4 Objectives of the Study**

The main objective of this study is to analyze and identify the impact, cause and consequences of NPA. The specific objectives of this research are as follows.

- a) To analyze the present condition of NPA on sample banks.
- b) To evaluate the impact of NPA on profitability of the banks under study.
- c) To assess the relationship of NPA with total loan and advances, profitability and NBA of sample banks.
- d) To analyze the trend of loan and advances, non-performing assets, loan loss provision, Net profit and NBA of sample banks.
- e) To find out factors causing NPA in the sample banks.

#### **1.5 Significance of the Study**

The gradually increasing NPA has now become a major issue for every commercial bank. Every bank has now put the NPA management under top priority. Thus, in present context, analyzing the cause and implication of NPA obviously shall be useful for banking sector. Problem due to increasing NPA is more or less being faced by every commercial bank in Nepal. To the extent, the nature of problem is similar on every bank. As this problem has already been recognized as serious problem thus obviously this study will have significant contribution to investigate the issues more systematically. This study will have academic as well as practical significance. The finding and conclusion of the study will add to the literature of Non Performing Assets in general and review the previous findings. The study will be helpful for the banking industry to identify and to trace the contributing factors causing NPA and to reduce its level.

This study will also be helpful for the regulating authority to know existing recovery problem so as to have some modification on directives, laws and other proceedings.

## **1.6 Limitations of the Study**

Present study is a milestone in exploratory study in searching the NPA problems and its solutions in Nepalese financial sector. Findings of the study might be very much useful for academicians as well as for practitioners. However this study suffers from many limitations such as:

- a) Cross sectional data are the major limitations to find the casual linkage between NPA and profitability of the banks as well as NPA and its relationship with NBA.
- b) This paper is confined on the NPA of two major banks namely NBBL and HBL only.
- c) The analysis is based on the data available from financial statements of the sample banks that are secondary in nature and it is assumed that that figure depicted reflects their actual position.
- d) The study covers the data of only seven fiscal years from 2000/01 to 2006/07 and the conclusion drawn confines only to the above period.
- e) The researcher has used unedited financial statement of NBBL for fiscal Year 2005/6 and 2006/07 due to unavailability of the audited statements.
- f) This research used only the selective tools for analysis and interpretation of data.
- g) Limited time and resource are another limitation of this study to reach into the specific aspects of the issues.

## **1.7 Organization of the Study**

The entire study is complies in the chapters as follows:

|               |  |
|---------------|--|
| Chapter One   | : Introduction                           |
| Chapter Two   | : Literature Review                      |
| Chapter Three | : Research Methodology                   |
| Chapter Four  | : Presentation and Analysis              |
| Chapter Five  | : Summary, Conclusion and Recommendation |

First chapter includes the introductory framework of the study with brief conceptual clarification about the existing financial condition of commercial bank in Nepal, increasing NPA and its impact on commercial banks. It also includes focus of the study,

objectives of the research work, methodology applied for the assessing cause and impact of NPA, limitations of the study with reference to the constraint research paper has to bear.

Second chapter includes the review of literature available and review of related theoretical background of the relevant field of the study, which aims at forming a conceptual framework of the study. This chapter includes the brief presentation of origin and concept of bank, concept of commercial bank, evolution of the Banking sector in Nepal. This also covers the review of theoretical background being implemented as for the management of NPA. Present regulator) provisions and their assessment are also reviewed in this chapter.

Third chapter deals about the research design and tools and techniques used in the research work. It includes research design, population and sample, nature and source of data and methods of analysis of data.

Fourth chapter includes presentation and analysis of data collected from various secondary and primary sources. This chapter also includes the major findings of the study.

Similarly, fifth chapter, i.e. last chapter presents summary in aggregate. Conclusions drawn through the findings and the probable recommendations enlightened through the study.

The list of bibliography and annexes are included at the end for references.

## **CHAPTER- II**

### **LITERATURE REVIEW**

The purpose of reviewing the literature is to develop some expertise in one's area, to see what new contribution can be made and to receive some ideas for developing a research design. Thus, the previous studies can't be ignored because they provide the foundation to the present study. In other words, there has to be continuity in research. This continuity in research is ensured by linking the present study with the past research studies. From this, it is clear that the purpose of literature review is to find out what research studies have been conducted in one's chosen field of study and what remains to be done.

The review of literature is a crucial aspect because it denotes planning of the study. The main purpose of literature review is to find out what works have been done in the area of the research problem under study and what has not been done in the Held of the research study being undertaken. For review, study, the researcher uses different books, reports, journals and research studies published by various institutions, unpublished dissertations submitted by master level students have been reviewed.

It is divided into three headings:

- Conceptual review
- Review of related studies
- Research gap

#### **2.1 Conceptual Review**

This chapter includes the brief presentation of the origin and concept of bank, concept of commercial bank, evolution of the banking sector in Nepal. This also covers the review of theoretical background being implemented as for the management of NPA. 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. But relating to the cause of NPA growth and its total impact on financial position of the banks has not been studied so far in detail. There are some articles in this perspective that comes occasionally however those are also not specific

for tracing out the cause and effect of NPA.

In India State Bank Staff College, Distance Learning Department, Hyderabad had prepared the paper for the management of NPA which was basically for the purpose of internal management of NPA. No previous research papers have been found in this sector. However, it is tried the best to give the introduction of NPA and categorization norms in India and Nepal through Reserve Bank of India (RBI) 's guide line and NRB directives on country, specific. For some theoretical aspect some banking related books have also been studied for the assessment of banking approach towards NPA.

### **2.1.1 Origin of Bank**

There are different opinions on the origin of the bank. According to one opinion, the term bank was originated from Italian word 'Banco' which meant bench. The money exchangers at that time kept heap of money on the bench from which came the use of word "Banko". In the opinion of Macleod, since banko means "heap", it denotes the joint fund contributed by many persons. The origin of the word "Bank" is linked to French word "banquet" means a bench (*Vuidhyu, 2001: 2*).

Moneylenders in the streets of major cities of Europe used benches for acceptance and payment of valuables and coins. When they are unable to meet their liabilities, the depositors used to break their benches. Hence the word 'Bankruptcy' is derived from there (*Klise. 1972: 3*).

The term bank was first used in Italy in 157 A.D. in 12th century. The first bank was set up in Venice Italy as a public bank, by the name "Bank of Venice".

Subsequently, 'Bank of Barcelona' in 1401 A.D. and 'Bank of Geneva' in 1407 A.D. were established. In 1609 A.D. "Bank of Amsterdam", a famous bank was established. In reality, the history of modern banking had started from "Bank of England" in 1694 A.D. But the modern joint stock banks were established in England only in 1833 A.D. In 1844 A.D, "Bank of England" was established as a first central bank in the world. The "Banque De France" was established in France in 1807 A.D. Later, the banks were established in other parts of the world (*Shekher and Shekher. 1999: 2*).



### **2.1.2 Concept of Bank**

Generally, an institution established by law, which deals with money and credit is called bank (*Bhandari, 2003: 1*). It is obvious that in a common sense, an institution involved in monetary transactions is called bank.

A bank is a financial institution, which plays a significant role in the country. It facilitates the growth of trade and industry and boost national economy. However, a bank is a resource of economic development, which maintains the self-confidence of various segments of society and extends credit to the people (*Vaidhya. 2001: 1*).

A bank is a business organization that receives and holds deposits of funds from others, makes loans or extends credits and transfers funds by written orders of depositors (*The Encyclopedia America. 1984: 302*).

The business of the banking is collection of funds from community and extending credit to people for useful purposes. Bank plays a vital role in making money from lenders to borrowers. Bank is a profit seeking business, not a community charity profit seeker. It is expected to pay dividend and otherwise, add to the wealth of shareholders (*Encyclopedia. The World Book. 1984: 6*).

Hence, in concise, we can say that there is no single universally accepted definition of Bank. In brief, it is an institution, which accepts deposits in different accounts, provides loans of different types, and creates credit.

### **2.1.3 History of Banking in Nepal**

The history of banking in Nepal is not very old. It goes at least back to the Lichchhavi era. There were 'Gosthies' to work as credit banks established under the permission of Royal order and they were conducted through local legislation called Panchah. Then the King Jayasthiti Maha from Malla dynasty, allowed "Tankadhari", a class of people, to deal in depositing and lending of money and ornaments. The Banda who still worked in ornaments used to deal in lending and depositing the ornaments in that time also. Then, came the King Ram Shah, in developing the banking system in Nepal. He found that unorganized lending was taking place in the society at very high interest rates. So, he fixed up the interest rates of lending (*Bhandari, 2003: 6*).

Though it seemed realizing the development of banking in those early times, it could not be materialized till the end of Rana regime. The first government institutionalized credit house called "Tejarath Adda" was established during the tenure of Prime Minister. Ranoddip Singh (1993-1994 B.S.). The "Tejarath Office" used to give loans to government employees against the securities of gold, silver, etc (*Bhandari, 2003: 7*).

Banking in true sense started with the inception of Nepal Bank Limited on 30<sup>th</sup> Kartik, 1994 B.S. as the first commercial bank of Nepal under Nepalese Banking Law and Nepal Bank Act 1994 B.S. formulated by the Industrial Board of Nepal (*Bhandari, 2003: 7*).

After that Nepal Rastra Bank was established as a central bank on 14<sup>th</sup> Baisakh, 2013 under Nepal Rastra Bank Act, 2012 B.S. The bank was empowered by the Act to have direct control over banking institution of the country to manage the circulation of national currency along with foreign exchange rate. Then came Rastriya Banijya Bank established on 10<sup>th</sup> Magh, 2022 B.S. established under Rastriya Banijya Bank Act, 2021 B.S (*Bhandari, 2003: 8*).

Nepal Arab Bank Limited was established on 26<sup>th</sup> Ashar, 2041 B.S. as a first joint venture bank in Nepal opened under Banijya Bank Act, 2031 B.S. Having observed the success of Nepal Arab Bank Limited (currently named as Nabil Bank Limited) and of liberal economic policy adopted by the government, various other commercial banks including joint venture banks and privately ownership banks established in Nepal (*Bhandari, 2003: 9*).

#### **2.1.4 Concept of Commercial Bank**

Commercial banks are that financial institutions which deal in accepting deposits of people and institutions and giving loans against securities. They provide working capital needs of trade, industry and even to agricultural sector. Commercial banks also provide technical and administrative assistance to trade, industries, and business enterprises. Commercial bank is a corporation, which accepts demand deposits, subject to check and makes short-term loan to business enterprises, regardless of the scope of its other services.

A commercial banker is a dealer in money and substitutes for money, such as cheque or bill of exchange. It also provides a variety of financial services (*The New Encyclopedia Britannica. 1985: 605*).

The American Institute of Banking has laid down for functions of the commercial banks i.e. receiving and handling deposits, handling payments for its clients, granting loan and investment and creating money by extension of credit (*American Institute of Banking, 1985: 609*).

Principally, commercial banks accept deposits and provide loans, primarily to business firms, thereby facilitating the transfer of funds on the economy (*Bhandari, 2003: 65*).

In the Nepalese context, a commercial bank is one which exchanges money, deposits money, accepts deposits, grants loans, and performs commercial banking functions (*Commercial Bank Act, 1974*).

Commercial banks are those banks, which pool together the savings of the community and arrange for their productive use. They supply the financial needs of modern business by various means. They accept deposits from the public on the condition that they are repayable on demand or on short notice. Commercial banks are restricted to invest their funds in corporate securities. Their business is confined to financing the short-term needs of trade and industry such as working capital financing. They cannot finance in fixed assets. They grant loans in the form of cash, credits and overdrafts. Apart from financing, they also render services like collection of bills and chouse, safe keeping of valuables, financial advising, etc. to their customers (*Vaidya, 2001:38*).

The commercial banks in Nepal are categorized into four groups on the basis of capital owned. They are; the fully government owned bank; Rastriya Banijya Bank, the government and private sector bank: Nepal Bank Limited, the JVBs consist of Nabil Bank Limited. Standard Chartered Bank Limited. Himalayan Bank Limited, Nepal Bangladesh Bank Limited, Nepal SBI Bank Limited, Everest Bank Limited and the privately owned banks; Lumbini Bank Limited, NIC Bank Limited, Kumari Bank Limited, Nepal Investment Bank Limited, Bank of Kathmandu, Laxmi Bank Limited, Machhapuchhre Bank Limited, NCC Bank Limited , Global Bank, Citizens Bank

International, Prime Bank Limited, Sunrise Bank Limited and Siddhartha Bank Limited.

However, central bank is the main bank of any nation that directs and controls all other banks. In Nepal, Nepal Rastra Bank is the central bank and all the commercial banks perform their functions under its rules, regulations, and directions.

### **2.1.5 Functions of Commercial Bank**

Commercial banks are the most important types of financial institution for the nation in terms of aggregate assets. Traditional functions of commercial banks are only concerned with accepting deposits and providing loans. But modern commercial banks work for overall development of trade, commerce, services and agriculture also. The business of banking is very broad in modern business age. The number and variety of services provided by bank will probably expand. Recent innovation in banking include the introduction of credit cards, accounting services for business firms, factoring, leasing, participating in the Euro-dollar market, and lock-box banking. The main functions of commercial banks are as follows:

**i. Accepting Deposits:** - It is fair deduction that no person or body, corporate or otherwise, can be banker who does not take deposits, issue and pay cheques and collect cheques from his customers. Here, all functions are related with the acceptance of deposits. Therefore, accepting deposits by bank is the oldest function of bank.

A bank accepts deposits in three forms viz. saving, current and fixed. Saving deposit is one of the deposits collected from small depositors and low-income depositors. The banks usually pay small interest to depositors for their deposits. Current account is also known as demand deposits. Under this, any amount may be deposited. There are no restrictions regarding number and amount of withdrawals as contrary to saving account. The banks don't pay any interest on such account but charge small amount on the customers having current account. A fixed or time deposit is one where customers are requested to keep a fixed amount in the bank for specific period, generally by those who don't need money for stipulated time. The bank pays a higher interest on such deposits.

**ii. Advancing Loans:** - The second major function of a commercial bank is to provide loans and advances from the money, which it receives by way of deposits for the development of industry, trade, commerce, services, and agriculture. The main purpose of commercial bank is to boost up the development pace of communities and the economy as a whole.

**iii. Agency Services:** - The bank also performs number of services on behalf of the customers. The following are the agency functions provided by the bank.

- Dealing with the transaction of foreign exchange business
- Serving as an agent of correspondent on behalf of the customers
- Issuing letter of credit, circulate note, traveler's cheques, etc.
- Purchasing and selling different kinds of securities and remitting funds
- Keeping valuable article in safe custody
- providing financial advice to various persons and bodies whenever required

**iv. Creating Money:** - The major function of the bank that separates it from other financial institution is the ability to create money and to destroy money. This is accomplished by lending and investing activities. The power of the commercial banking is of great economic significant as it results in the elastic credit system that is necessary for the economic progress at a relatively steady growth rate (*American Institute of Banking, 1985: 149*).

#### **2.1.6 Definition of Loan and Advances**

Loan is defined as a thing that is lent, especially a sum of money. Like-wise debt means a sum of money owed to somebody. However in financial terms loan or debt means principal or interest availed to the borrower against the security. Debt means money that bank owes or will lend to individual or person.

Likewise the term loan is defined as a lending. Delivery by one party to and receipt by another party of sum of money upon agreement expressed or implied to re-pay it with or without interest. Anything furnished for temporary use to a person at his request, on condition that it shall be returned, or it's equivalent in kind, with or without

compensation for its use. Loan includes (i) the creation of debt by the lender's payment of or agreement to pay money to the debtor or to a third party for the account of the debtor; (ii) the creation of debt *by* a credit to an account with the lender upon which the debtor is entitled to draw immediately; (iii) the creation of debt pursuant to a lender credit card or similar arrangement; (iv) the forbearance of debt arising from a loan.

Further debt means "Principal and Interest provided to debtor *by* banks or financial institutions, with the pledge of immovable or movable property or other securities or guarantee or without guarantee and the word also means over dues of the transaction beyond balance or fees, commission and interest incurred in that relation" (*Debt Recover} Act for Bank and Financial Institution, 2058*).

### **2.1.7 Definition of Non Performing Asset and Non Banking Asset**

To define Non Performing Asset first of all meaning of assets should be understood. Asset means the property of a person or a company. This indicates that assets are the property of a company accumulated with the help of sources.

**Non Performing Asset (NPA)** means an outstanding loan that is not repaid, i.e. neither payments on interest or principal are made. In case of the banks, the loan and advances are the assets as the banks flow loans from the funds generated through shareholders equity, money deposited by the people and fund having through the borrowings. Hence, the terms NPA means the loan and advances that are not performing well. Thus, all the irregular loan and advances can be termed as NPA.

In India an asset is classified as Non Performing Asset if the interest or installment of principal is due remain unpaid for 180 days. If any advance or credit facilities granted to a borrower become non-performing, then the bank have to treat all the advances/credit facilities granted to that borrower as non performing without having any regard to the fact that there may still exist certain advances/credit facilities having performing status. (*www.Developing the Asian Markets for Non-Performing Assets: Development in India: Sumina Batra*).

As per IMF "A loan is non performing when payments of interest and principal are past due by 90 days or more, or at least 90 days of interest payments have been capitalized,

refinanced or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons to doubt that payments will be made in full".

Non Performing Asset has been a hindrance to economic stability and growth in any parts of the region as the capital get blocked in non productive sector and the money could not be reinvested. A variety of methods are being employed to deal with the problem and to prevent the buildup of more Non Performing Assets in banks. Indeed, the NPA problem undermines the effectiveness of the banking sector in performing its role as the most important channel of financial intermediation in many jurisdiction in the region and inhibits economic growth and development as it blocks the capital in the non productive sector and the capital cannot be reinvested which would have created more opportunity in the economy by enhancing the income as well as living standard of people. When the NPA has no chance of recovery at all the bank take measure in decreasing the NPA by auctioning of the collateral security tied up with the loan. 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 piling up the volume of Non Banking Assets (NBA). As the major chunk of NBA are fixed in nature the fund supposed to be rolled over are being tied up on fixed asset which is heating the liquidity of the Banks.

It has been observed that in many countries one of the most common features in the resolution of the Non Performing Assets is the establishment of Asset Management Companies (AMCs) involving, inevitably the use of public funds to take off NBAs off the books of the banks

In Korea for example, the Korean Asset Management Corporation promptly purchased almost 80 percent of the total NPA from banks at market value in the aftermath of the financial crisis. In Malaysia, the national AMC, Danaharta, purchased some 40 percent of total NPA in the banking system. The recovery rate of the NPAs held by the AMCs obviously varies, depending on host of domestic factors and how the AMCs are structured. It is again inevitable to note that getting stock of NPAs of the books of the banks does not mean that the flow of NPA will be stemmed. To prevent build up NPA

is much more difficult task than getting rid of the stock. The enhancement of corporate, including bank, governance, enhancement of credit information, including the compilation, organization and dissemination of credit information to facilitate better decision in allocation of credit and enhancement of prudential supervision so as to ensure that proper systems are in place for taking banking decisions and managing the risks arising there from. (*www.hktcd.com:Non-Performing Loans: Joseph Yam, Chief Executive, Hong Kong Monetary Authority: Non-Performing Loan, August 21, 2003*)

### 2.1.8 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 the 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 account remain out of order.
- Bills purchased or discounted remain overdue or unpaid for more than 180 days.
- Other accounts receivables remain past due for 180 days.

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

| <b>Classification of loans and</b> | <b>Criteria for provisioning</b>  | <b>Provisioning rate</b> |
|------------------------------------|---|--------------------------|
| Pass                               | Not past due and past due for a period up to 3 months<br>(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                               | Past due for a period of more than 1 year or advance which have least possibility of recovery | 100%                     |



However, for F/Y 2058/059, 2059/60 and 2060/061 there are certain relaxation on ageing of due loan. The above criteria are supposed to be effective fully onwards F/Y 2061/062 (*NRB Circular. 2057*).

### **2.1.9 Factors Contributing NPA**

It has been observed that that there are various external and internal factors contributing NPA. These factors also keep on changing with the time and place.

A research paper has shown that in India following contributory factors results in the emergence of NPAs on large scale amongst commercial banks and financial institution.

- Little freedom in respect of decision to price their product in competition with each other, cater their products to segments of their choice or invest their funds in their best interest as they determine also led to mounting of bad loan.
- Audit and Control functions remain under the control of executive officers and hence the staffs were unable to correct the effect of serious flaws in policies and directions of their superiors.
- Inadequate legal provisions on foreclosure and bankruptcy and difficulties in the execution of court decree hampered effective recovery from defaulting and overdue borrowers. In addition to it, too many formalities and time consuming nature of legal remedies also cause difficulty in recovering NPA.
- Impractical credit analysis like considering only net profit of the business results into creation of NPA. Anticipated cash flows have to be taken in account as recovery of installments is to be done through recourse of working capital of the borrowing firm.

*(Developing the Asian Markets for Non-Performing Assets: Development in India: Sumanta Batra )*

A research paper by **Prakash K Reddy** has identified following factors being cause and remedies for NPA in different countries

## ***CHINA***

### Causes

- Moral hazard while recovering bad loans.
- Borrower friendly bankruptcy law.
- Inefficient legal enforcement mechanisms.
- Political and Social implications compulsions force the government to keep the borrowers afloat.

### Remedies

- Creation of Asset Management Companies.
- Foreign Equity participation in the NPA disposal process.
- Raising of disclosure standards.

## ***JAPAN***

### Causes

- Investments were made in real estate at high prices during the boom. The recession caused prices to crash and turned a lot of these loans bad.
- Time consuming legal mechanisms.
- Crony capitalism.
- Weak corporate governance coupled with a no-bankruptcy doctrine.
- Inadequate accounting systems.

### Remedies

- Accounting standards      Major business groups established a private standard-setting vehicle for Japanese accounting standards (2001) in line with international standards.
- Strict action for non compliance of capital norms.
- Government support to deal with banking sector weakness.
- Securitization of real estate loans.

## ***KOREA***

### Causes

- Protracted periods of interest rate control and selective credit allocations gave rise to an inefficient distribution of funds.
- Lack of Monitoring.
- Banks relying on collaterals and guarantees in the allocation of credit, and little attention was paid to earnings performance and cash flows.

### Remedies

- The speedy containment of systemic risk and the domestic credit crunch problem with the injection of large public funds for bank recapitalization.
- Corporate Restructuring Vehicles (CRVs) and Debt Equity Swaps were used to facilitate the resolution of bad loans.
- Creation of the Korea Asset Management Corporation (KAMCO) and a NPA fund to fund to finance the purchase of NPA.
- Strengthening of Provision norms and loan classification standards based on forward looking criteria (like future cash flows) were implemented.
- The objective of the central bank was safely defined as maintaining price stability. The Financial Supervisory Commission (FSC) was created (1998) to ensure an effective supervisory system in line with universal banking practices.

## ***THAILAND***

### Causes

- Debtors' friendly legal systems.
- Liberalized capital and current account.
- Wrong real estate speculation.
- Steep interest rate increase.
- Highly decentralized nature of problem.

## Remedies

- Privatization of government entities.
- Removal of caps on foreign equity ownership in financial institution was removed.
- Creation of Asset Management Company.
- Government takeover of banks and financial institution.

### **2.1.10 Effect of NPA**

Under the circumstances assets that do not earn any income to the Bank a fleet the profits in a number of ways (*Athmanathan and Venkalakrishnan, 2001*).

- 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 requirements.
- Since they do not earn interest, (hey 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 shareholder value and thus adversely affect the investor confidence.

As a whole the impact of NPA can be assessed with the following (*Athmanathan and Venkalakrishnan, 2001*).

- Lower ROE and ROA.
- Lower image and rating of bank.
- Disclosure reduces inverters' confidence.
- Increases costs / difficulties in raising capital.

- NPA do not generate income.
- They require provisioning.
- Borrowing cost of resources locked in.
- Opportunity loss due to non-recycling of funds.
- Capital gets blocked in NPA.
- Utilizes capital but does not generate income to sustain the capital that is locked.
- Recapitalization by government comes with string.
- Administration and recovery cost of NPA.
- Effect on employee morale and decision making.

## **2.2 Review of Related Studies**

### **2.2.1 Review from Journals and Articles**

On way to conduct this research work some books, journals and publications have been studied to formulate ideas about the subject matter. Although, the specific books regarding the NPA could not be found, however, some banking related books have been consulted such as Tanna's Banking Law and Practice in India (1997). Assessing the gravity of the problem, Tanna (1997) found that banks and financial institutions at present face considerable difficulties in recovers of dues from the clients and a significant portion of the funds of banks and financial institutions is thus blocked in unproductive assets.

Likewise for taking reference book on management of bank credit written by Suneja, (1992) has also been consulted. Suneja (1992) 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.

Ghimire (1999) in her article. "Efficiency Indicators of Commercial Bank: A comparative analysis", found that efficiency indicator of the bank may be viewed on the basis of amount allocated for loan loss provisioning against loan and investment.

Basyal (2000) discussing the financial performance of government owned banks in his article "Placing RBB and NBI, under Management Contracts: Rational and Opposition" agreed that the disappointing performance of these two banks has become serious concern to all the stakeholders. 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 behavior.

Pradhan (2001) in his article "NPA: Some suggestions to tackle them" found 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 and delayed payments and contributed indirectly for enhancing NPA ratio. He further argues that lack of vision in appraisal of proposal while loan sanctioning, reviewing or enhancing credit limits, absence of risk management policy of financing, concentration of credit in few group of parties and sector, lack of coordination among various financiers, lack of initiatives to take timely action against willful defaulters, indecision on existing out of bad loans for fear of investigating agencies like special police, CIAA, Public Accounts Committee of the parliament have also contributed in whatsoever measures to the worsening situation of NPA front, he further pointed out that most crucial reason for the increase in the NPA is the shabby and defaulter friendly legal system. Suggesting the remedy of NPA, he adds that administrative system should be strengthened, legal reforms should be made and Assets Reconstruction Company should be formed.

Bhattarai (2006) in his article of Business Age, it talks about the paper presented by Bhisma Raj Dhungana, Director of Bank and Financial Institution. In his paper he has mentioned about the decreasing trend of NPL (Non Performing Loan) in Nepali banking system. The NPL of Nepali banking system is found decreasing though it has not come down to acceptable level (i.e. below 5%). The NPL of banking system was 19% in July 2005 and come down to 13.8% in July 2006. He further elaborates that the

foreign management has made wonderful recovery of bad loans in case of RBB, which is one of the two banks contributing significant percentage of NPL, is achieved by writing off significant amount of bad loan, which has ultimately reduced the profit of shareholders. The NPL of RBB has decreased to 45.34% in fourth quarter of the fiscal year 2005/06 from 50.96% in the previous quarter. Similarly, NPL of NBL decreased to 25.11% at the end of fourth quarter from 42.40% in the previous quarter. As per him to reduce the NPL to significant level, financial institution must put in the greater efforts themselves and regulators must be serious to monitor and regulate the market. The writer is hopeful of the current efforts of the Nepal government to recover the NPL as well as the result of the efforts made by the South East Asian Nations in year 2002. A study of Fungel and Others (2004) showed that China in year 2002, reduced NPL to 20% from the peak level of 42%, Indonesia to 8.1% from peak level 48.6%, Malaysia to 8% from 30.1% and Thailand to 10% from 51.6%. These results were achieved mainly by establishment of Asset Management Companies (AMPS), initiation of corporate debt restructuring programs, bank capitalization programs and enforcement of bankruptcy law.

Bhirban in his study paper for investigating the factors contributing to non-performing loans of the Krung Thai Bank (Public Company) Chiang Rai Branch has found that the majority of the non-performing debtors were men, aged between 41-50. Education was below Bachelor's Degree level and their profession was primarily trading. Their major choice of the loan service was (he overdrawn loan and used most of the loans as working capital. The study identified the major factors contributing their inability to repay the loan were the national economic downturn which leading to depression for business in general; reduced buying ability of consumers: misuse of the loan, and the combination internal and external debts debtors. The other factors included the bank clients started new businesses which they had no experience, the simultaneous operation of too many debtors knew of and applied for the bank debt reconciliation and the reconciliation was, at the time, proceeding. This effectively accelerated the bank reconciliation policy.

In an article published in "The Kathmandu Post" August 28, 2006 on topic "Huge Bank Defaulter: Who is responsible?" Rajub Upadhaya, Sr. External Affairs Specialist, The World Bank, found saying that defaulters are the villains of the marketplace. The

financial sector is suffering due to the defaulters. The most 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.

In an article published in "The Kathmandu Post" August 28, 2006 on topic "Who is responsible? Is Biz community only the culprit?" Arun K. Subedi, Industrialist, Printing and Packaging, Hetauda found saying that it is the bank's duty to analyze and study the report financially, managerially and technically. If the project is then found to be handsome and having good cash flow then the bankers have to sanction the loan up to the limit of the corporate worth. He complains that bankers bother about collateral only. All policymakers, bankers and the press must know that collateral cannot repatriate the loan. It is the cash flow that repatriates the loan. So, existing investigation and analyses must be concentrated on project status. He is of vies that collateral produces only 60% of the loan if one does not pay loan for more than three years. The same thing happens in project lending: the equity portion will be covered by interest portion of debt. But she has to sign an unethical, illegal and immoral clause of the bond to loans. They add a clause the right to recover the loan from the individual properties of the promoter(s) and their family members. A bank is not only the financier but is also the partner of the project when he invests in any project so bankers are equally responsible for the failure of the project. Hence the banks must undertake the project and start to recover the loan by operating and managing. When a project fails, the bankers together with promoters have to sell the properties. If it is inadequate then the banks have to write off the loans instead of claiming unrelated properties of the promoters and should not also blacklist the promoters as they could promote other business. Liabilities of particular company are to be Limited to that company.

Though 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 position of the banks.



### 2.2.2 Review from Dissertations

Shrestha (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 have made an 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 leading 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 like 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. However 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 I investment in loans and advances.

She also said that ineffective credit policy, political pressure to lend un-credit worthy borrowers, overvaluation of collateral are the major caused of mounting non-performing assets in government owed banks like NBL. Other factors leading 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 Asset Management Company is also measure to resolve the problem of NPL.

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 lead 10 bad debts. Hence, all the three banks are recommended to be more cautious 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 directives 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.

Khadka (2004) in his thesis non-performing assets of Nepalese commercial banks with an objectives to examine the level of NPAs in total assets, total deposit and total lending of Nepalese commercial banks. He also showed that the effects of non-performing assets on return on assets and return on equity 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 on the basis of 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 (NPAs) and the issue is becoming more and more unmanageable day by day. We are well known from different financial reports, newspapers 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 Banijaya Bank (RBB) and Nepal Bank limited (NBL.)

Finally, he concludes that the level of NPA in sampled Nepalese commercial banks is not so alarming. The situation is quite satisfactory. But the increasing trend remain continue in coming days, the situation will be unmanageable and alarming. The

commercial banks could not give full attention towards supervising their lending and towards recovering their bad loans perfectly. Level of NPA has been increasing. The level of Nepal Bangladesh Bank Limited (NBBL), Nepal SBI bank Limited (NSBIBL) and Bank of Kathmandu Limited (BOKL), seems very unsatisfactory. If the situation is not handling right now, it will be unmanageable and difficult to handle.

In other level of NPA of Nepal Investment Bank and NABIL Bank has been gradually decreasing every year. The NPA of NIBL is least (minimum) that all of other banks at the end of 2059/60. The high degree of negative correlation of different commercial banks between NPA and ROA and NPA and ROE indicates towards the inverse relation between NPA and ROA and NPA and ROE. It means the level of NPA effect the return on assets and return on shareholder's equity. Therefore, banks should reduce their level of NPA to increase the ROA and ROE.

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

Bhattarai (2004) has stated in her research "Implementation of Directives Issued by Nepal Rastra Bank: A Comparative Study of Nepal SB1 Bank Limited and Nepal Bangladesh 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 towards 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 come 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 bank will end up increasing its provisions which will keep the bottom line low if the Bank is not careful.

### **2.3 Research Gap**

From the above study it can be said that the NPA is one of the challenging problem of the commercial banks in Nepal, which is followed by increasing loan loss provisioning. It is found that some research in the related topic but no research was found in detailed research and analysis of non-performing assets of commercial banks. Related articles and thesis have already been reviewed which helps to this study.

The purpose of this research is to develop some expertise in one's area, to see what new contribution can be made and to receive some ideas, knowledge and suggestions in relation to latest information of NPA. The previous studies can't be ignored because they provide the foundation to the present study. In other words there has to be continuity in research. This continuity in research is ensured by linking the present study with the past research studies. Here, it is clear that the new research cannot be found on that exact topic, i.e. Non-performing assets of commercial banks: cause and effect. Therefore, to fulfill this gap, this research is selected. To complete this research work: many books, journals, articles and various published and unpublished dissertations are followed as guideline to make the research easier and smooth. In this regard, here we are going to analyze the non-performing assets of commercial banks, which are considered only on NBBL and HBL. Our main research problem is to analyze the impact of NPA on profitability. To achieve this main objective, various financial and statistical tools are used. Similarly, trend analysis of deposits, loan and advances, non-performing assets and loan loss provision are reviewed to make this research complete. Therefore, this study is useful to the concern banks as well as different persons: such as shareholders, investors, policy makers, stockbrokers, state of government etc.

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Research in common parlance refers to a search for knowledge. The Webster International Dictionary gives a very inclusive definition of research as a careful critical inquiry or examination in seeking facts and principles: diligent investigation in order to ascertain something (*Scravanavel, 1990: 1*).

Research Methodology is a way to systematically solve the research problem (*Kofhari, 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 along with the logic behind them.

This chapter looks into the research design, population and sample, nature and sources of data, tools and techniques used for the analysis of data.

A research methodology helps us to find out accuracy, validity and suitability. The justification on the present study cannot be obtained without help of proper research methodology, for the purpose of achieving the objectives of study; the applied methodology will be used. The research methodology used in the present study is briefly mentioned below.

This topic presents the short outline of the methods applied in the process of analyzing the non-performing assets of the selected joint venture bank. Research is a systematic method of finding out the solution to a problem whereas research methodology refers to the various sequential steps to adopt by a researcher in studying a problem with certain objective in view.

#### **3.2 Research Design**

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. For the analysis of non-performing assets of selected joint venture bank,

analytical as well as descriptive designs applied to achieve the objective of the research.

Review of literature means reviewing research studies or other relevant propositions in the related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted. It is an integral and mandatory process in research works.

### **3.3 Populations and Sample**

A population in most studies usually consists of large group because of its large size. It is fairly difficult to collect detailed information from each member of population rather than collecting information from each member, a sub-group is chosen which is believed to be representative of population. This sub-group is called a sample and sampling does the method of choosing this sub-group. The sampling allows the researcher more time to make an intensive study of a research problem. The total commercial banks shall constitute the population of data and two banks under the study constitute the sample under the study. So among the various commercial banks in the banking industry, Nepal Bangladesh Bank Limited and Himalayan Bank Limited are taken as sample for the study. Similarly, financial statements of these banks for seven years from 2000/01 to 2006/07 have been taken as samples for the same purpose.

### **3.4 Nature and Sources of Data**

The researcher used two types of data.

- a) Primary Data and
- b) Secondary Data

The primary data are those which are collected a fresh and for the first time, and thus happen to be original in character. The secondary data, on the other hand are those, which have already been collected by some one else and already, been passed through the statistical process (*Kothari. 1990: 115*).

In this research work primary data have been collected by using scheduled questionnaire and distributing them to the employees of the banks. Questions of both open-ended as well as close ended have been included in the questionnaire.

Questionnaires have been distributed to the employees of the sample bank. Junior as well as senior level staffs are provided with the questionnaire.

In some cases primary data are also taken as personal interview, face to face and telephone interview but the study is mainly based on secondary data. So, the major sources of secondary data for this study are as follows:

- a) Annual reports of the bank.
- b) Published and unpublished bulletins, reports of the bank.
- c) Published and unpublished bulletins, reports of the Nepal Stock Exchange.
- d) Previous studies and reports.
- e) Unpublished official records.
- f) "Banking and Financial Statistics" report of Nepal Rastra Bank Magazines.
- g) Journals and other published and unpublished related documents and reports for Central Library of T. U. and Library of Nepal Rastra Bank.
- h) Various Internet Websites.
- i) Other published materials.

### **3.5 Data Analysis Tools**

Mainly financial tools are applied for the purpose of this study. Appropriate statistical tools are also used. Among them correlation analysis regarded as major one is used for this research.

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

- i) Financial Tools and
- ii) Statistical Tools.

#### **3.5.1 Financial Tools**

Brief explanation of the financial tools used are given below:

##### **Ratio Analysis:**

Ratio analysis is a powerful and the most widely used tool of financial analysis. A ratio defined as "The indicated quotient of two mathematical expression" and as the relationship between two or more things (*Webster's New Collection Dictionary, 1975: 958*).

A ratio is a figure or a percentage representing the comparison of one-dollar amount with some other dollar amount as a base (*Roy. 1974: 9<sup>7</sup>*). 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. In financial analysis a ratio is used as an index or yardstick for evaluating the financial position and performance of a firm. Ratio helps to summarize the large quantities of financial data and to make qualitative judgment about the firm's financial performance (*Pandey. 1979: 97*).

A large number of ratios can be generated from the components of profit and loss account and balance sheet. They are sound reasons for selecting different kinds of ratios for different types of situations. For this study, the following ratios are calculated:

**i. NPA to Total Loan and Advances ratio**

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:

$$\text{NPA to total loan and advances ratio} = \frac{\text{Non Performing Assets}}{\text{Total Loan and Advances}}$$

**ii. 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:

$$\text{NPA to total assets ratio} = \frac{\text{Non Performing Assets}}{\text{Total Assets}}$$



### **iii. 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. Higher ratio reflects the effective in relation to future loss but it directly affected in profitability and vice versa. The ratio is calculated by using following formula:

$$\text{Loan loss provision to NPA ratio} = \frac{\text{Loan Loss Provision}}{\text{Non Performing Assets}}$$

### **iv. 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 banks assets. The ratio is calculated by using following formula:

$$\text{Return on total assets} = \frac{\text{Net Profit}}{\text{Total Assets}}$$

### **v. Return on Shareholder's Equity (ROE) ratio**

A return on shareholder's equity is calculated to see the profitability of owner's investment. The shareholder's equity includes paid-up share capital, share premium and reserves and surplus less accumulated losses. The return on shareholder's equity is net profit after taxes divided by shareholder's equity.

$$\text{Return on shareholder's equity} = \frac{\text{Net Profit After Tax}}{\text{Toatl shareholder's equity}}$$

Here, the shareholder's equity includes both ordinary and preference share capital but excludes past accumulated losses and deferred expenditures.

### **vi. 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. If NPA increased, profit is 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:

$$\text{NPA to net profit ratio} = \frac{\text{Non Performing Assets}}{\text{Net Profit}}$$

#### **vii. NBA to Total Assets ratio**

Non-banking assets to total assets ratio visualized the actual picture of assets, which are owned by the bank from default creditors. This ratio separates the assets in two sectors. One in the form of outsider assets who could not repay the due credit in time and other in the form of banks assets owned by it. Here, low ratio indicates high efficiency in lending management and vice versa. The ratio is calculated by using following formula:

$$\text{NBA to total assets ratio} = \frac{\text{Non Banking Assets}}{\text{Total Assets}}$$

#### **Limitations of Ratio Analysis:**

Ratio analysis is suffered from some inherent limitations that are direct inherited from financial statements. Some of the most common weakness of ratio analysis is as follows:

- i) The firms or industry although apparently comparable in respect to size, age, location; product mix and technology may not be really comparable if they are following different accounting methods.
- ii) Financial statement records past transactions. They are, thus an index of what happened in the past. They do not show the current position of the business. Evidently ratio analysis is also primarily concerned with analyzing the past, which may or may not be relevant today. It is thus a sort of POST-MORTEM analysis rather than a guide for decision-making.
- iii) In the context of persistent price level changes, intra firm trends analysis losses much of its operational significance.
- iv) The differences in the definitions of items in the balance sheet and the income statement make the interpretation of ratios difficult.
- v) Some times ratio analysis may suffer from what is known as fallacy of misplaced concreteness (*Shingh. 1993:101*).

Although, various limitations of ratio analysis and doubt may arise about the valid measure of the performance but they are used widely to measure the performance of the firm.

### 3.5.2 Statistical Tools:

For supporting the study, statistical tool such as Mean, Standard Deviation, Coefficient of Variation, Correlation, Trend Analysis and diagrammatic cum pictorial tools have been used under it.

#### i. Arithmetic Mean (A):

Average is statistical constants, which enable us to comprehend in a single effort of the whole (*Gupta, 2000: 357*). It represents the entire data by a single value. It provides the gist and gives the bird's eye view of the huge mass of unwieldy numerical data. It is calculated as:

$$\bar{x} = \frac{\sum x}{N}$$

Where,

$\bar{x}$  = Arithmetic mean

N = Number of observations

$\sum x$  = Sum of observations

Here, the researcher calculated the average figures of total loan and advances to total deposits, loan loss provision to non-performing assets, non-performing assets to total deposits, total loan and advances, return on equity, return on assets, net profit as well as non-banking assets.

#### ii. Standard Deviation (S.D.)

The standard deviation is the square root of mean squared deviations from the arithmetic mean and is denoted by S. D. or  $\sigma$  (*Shrestha, 1991: 43*). It is used as absolute measure of dispersion or variability. It is calculated as:

$$\sigma = \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}}$$

where,

- $\sigma$  = Standard Deviation
- $N$  = No of Observation
- $X_n$  = The individual observation
- $\bar{X}$  = The average mean

Here, the researcher calculated the value of standard deviation of the ratio of NPA to total loan and advances, NPA to total assets, loan loss provision to NPA. , return on equity, return on assets, NPA to net profit as well as non-banking assets to total assets. This standard deviation measures the deviation of individual variable with the aggregate variables.

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

The Co-efficient of variation (C.V.) is the relative measure based on the standard deviation and is defined as the ratio of the standard deviation to the mean expressed in percentage (*Shrestha. 1991: 45*). It is independent of units. Hence, it is a suitable measure for comparing variability of two series with same or different units. A series with smaller C.V. is said to be less variable or more consistent or more homogeneous or more uniform or more stable than the others and vice versa. It is calculated as:

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

$\sigma$  = Standard Deviation

$\bar{X}$  = Mean

Here, the researcher calculated the value of coefficient of variation from the ratio of NPA to total loan and advances, NPA to total assets, loan loss provision to NPA, return on

equity, return on assets NPA to net profit as well as non-banking assets to total assets. This coefficient of variation measures volatile or risk of variables.

#### iv. Correlation Coefficient (r)

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. Correlation is of three types. They are Simple, Partial and Multiple correlations. Correlation may be positive, negative or zero. Correlation can be classified as linear or non- linear. Here, we study simple correlation only. In simple correlation the effect of others is not included rather these are taken as constant considering them to have no serious effect on the dependent variable (*Shrestha. 2(15 : 31)*). It is calculated as:

$$r_{x_1x_2} = \frac{N\sum X_1X_2 - (\sum X_2)}{\sqrt{[N\sum N_1^2 - (\sum X_1)^2][N\sum N_2^2 - (\sum X_2)^2]}}$$

Whereas,

$$r_{x_1x_2} = \text{Correlation between } X_1 \text{ and } X_2$$

$$N\sum X_1X_2 = \text{No. of Product observation and Sum of product } X_1 \text{ and } X_2$$

$$\sum X_1\sum X_2 = \text{Sum of Product } X_1 \text{ and sum of Product } X_2$$

Here, the researcher calculated correlation coefficient of loan and advances and non-performing assets, on Performing Asset and Net Profit and Non Performing Asset and Non Banking Asset to show the relationship of these variables.

#### v. Probable Error

The probable error of the coefficient of correlation helps in interpreting its value. With the help of probable error, it is possible to determine the reliability of the value of the coefficient in so far as it depends on the conditions of random sampling. The probable

error of the coefficient of correlation is obtained as follows:

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

Here,

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, i.e., the value of 'r' is not at all significant. If the value of 'r' is more than P.E., there is correlation. And if the value of 'r' is more than six times of the probable error, the coefficient of correlation is practically certain, i.e., the value of 'r' is significant. (*Kothari 1991:233*)

### 3.5.3 Trend Analysis

It is the tool that is used to show increase and decrease of variable in a period of time, 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, non-banking assets and loan loss provision has been conducted.

For the purpose of finding trend Least Square Method has been used. Least squares method of fitting a line through Scatter diagram is a method which minimizes the sum of the squared vertical deviations from the tilted line. (*Kothari 1991: 210*). This method helps us in finding the future trend of variable taking independent variable into account.

The formula used is

$$Y = a + bx$$

Where

Y = estimated value of dependent variable

X = independent variable

a = Y intercept (the value of Y when X=0)

b = slope of the trend line

For this purpose we need to find out the value of 'a' and 'b' which is calculated as under:

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

## CHAPTER-IV

### PRESENTATION AND ANALYSIS OF DATA

#### 4.1 Introduction

This chapter is related to presentation and analysis of data collected from various sources viz: primary as well as secondary. The collected data has been represented in the suitable formats (i.e. tables and charts), analyzed using various statistical and financial tools, and certain inferences and interpretation have also been made finally.

#### 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. For this study, the following ratios are calculated:

##### i. NPA to Total Loan and Advances Ratio

Non-performing assets to total loan and advances ratio shows the actual figure of NPA over the total lending of bank. This ratio depicts the amount of bad loan out of total loan availed to the borrowers. The lower ratio reflects good lending practices and lower percentage of bad loan. 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:

$$\text{NPA to total loan and advances ratio} = \frac{\text{NonPerforming Assets}}{\text{Total Loan and Advances}}$$



**Table: 4.1****Non-Performing Assets to Total Loan & Advances Ratio**

| Year    | NBBL    |         |       | HBL     |          |       |
|---------|---------|---------|-------|---------|----------|-------|
|         | NPA     | L&A     | Ratio | NPA     | L&A      | Ratio |
| 2000/01 | 613.77  | 7358.74 |       | 1090.84 | 9015.55  | 0.12  |
| 2001/02 | 1275.22 | 8083.99 | 0.16  | 1156.04 | 9557.14  | 0.12  |
| 2002/03 | 1013.27 | 7964.51 | 0.13  | 1092.84 | 10844.60 | 0.10  |
| 2003/04 | 1042.18 | 9644.69 | 0.11  | 1147.46 | 12919.63 | 0.09  |
| 2004/05 | 1832.94 | 9626.91 | 0.19  | 1001.35 | 13451.17 | 0.07  |
| 2005/06 | 1040.35 | 8478.78 | 0.12  | 1040.76 | 15761.97 | 0.07  |
| 2006/07 | 2235.87 | 5854.58 | 0.38  | 641.62  | 17793.72 | 0.04  |
| Mean    | 0.17    |         |       | 0.09    |          |       |
| S.D     | 0.10    |         |       | 0.03    |          |       |
| C.V     | 0.60    |         |       | 0.35    |          |       |

Source: Annual Report of NBBL and HBL, from fiscal year 2000/01 to 2006/07

The above table shows that the ratio of NPA to Loans and Advances of NBBL is found increasing in first two years of study. Then after it starts to decrease from fiscal year 2002/03 which again increases to 0.19 times in fiscal year 2004/05. The ratio is found highest in fiscal year 2006/07 i.e. 0.38 times. Whereas in case of HBL the bank has been able to maintain consistency in its NPA to Loans and Advances ratio which is as low as 0.09 times. The highest ratio is recorded as 0.12 times in first two fiscal years. Then after the ratio is found decreasing. It is also observed that between two banks HBL maintained lower covariance of 0.35. From this we can interpret that HBL has been controlling its NPA and the recovery process of HBL is more effective than that of NBBL. Another reason for higher percentage of NPA of NBBL may be also due to inefficient management, collusion during loan sanctioning process & high evaluation of collateral.

**ii. 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 & advances and vice versa. The ratio is calculated as following formula:

$$\text{NPA to total assets ratio} = \frac{\text{Non Performing Assets}}{\text{Total Assets}}$$

**Table: 4.2**

**Non Performing Assets to Total Assets Ratio**

| Year    | NBBL    |              |       | HBL      |              |       |
|---------|---------|--------------|-------|----------|--------------|-------|
|         | NPA     | Total Assets | Ratio | NPA      | Total Assets | Ratio |
| 2000/01 | 613.77  | 10593.92     | 0.06  | 1090.84  | 18870.80     | 0.06  |
| 2001/02 | 1275.22 | 11102.23     | 0.11  | 1 156.04 | 20672.43     | 0.06  |
| 2002/03 | 1013.27 | 11932.61     | 0.08  | 1092.84  | 23279.34     | 0.05  |
| 2003/04 | 1042.18 | 14257.97     | 0.07  | 1 147.46 | 24762.02     | 0.05  |
| 2004/05 | 1832.94 | 13277.15     | 0.14  | 1001.35  | 27418.16     | 0.04  |
| 2005/06 | 1040.35 | 14481.99     | 0.07  | 1040.76  | 29460.39     | 0.04  |
| 2006/07 | 2235.87 | 10118.11     | 0.22  | 641.62   | 33519.14     | 0.02  |
| Mean    |         | 0.11         |       |          | 0.04         |       |
| S.D     |         | 0.06         |       |          | 0.01         |       |
| C.V     |         | 0.52         |       |          | 0.32         |       |

Source: Annual Report of NBBL & HBL from fiscal year 2000/01 to 2006/07

The above table reflects the percentage of non-performing assets to total assets of both sample banks. It is observed that during the study period NBBL's has maintained average NPA ratio of 0.11 which is higher than that of HBL which is recorded as low as 0.04. In case of NBBL the NPA's share in total assets is found increasing in the study period. The highest NPA to Total Assets ratio of 0.22 is recorded in fiscal year 2006/07. Similarly, in case of HBL, the NPA out of Total Asset ranges from 0.06 times to 0.02. The bank has recorded decrease trend of its level of NPA during the period of study. The covariance of HBL is recorded 0.32 whereas that of NBBL is 0.52 which shows that HBL maintained consistency in the level of NPA. From this it is depicted that the NBBL is suffering from NPA which will ultimately result into creation of additional loan loss provision and result into reduction of profitability of bank. On the other hand

HBL has been taking due care for not increasing bad loan rather it is concentrating in decreasing its NPA level with effective recovery process.

### iii. 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. Higher ratio reflects the effective in relation to future loss but it directly affected in profitability and vice versa. The ratio is calculated by using following formula:

$$\text{Loan loss provision to NPA ratio} = \frac{\text{Loan Loss Provision}}{\text{Non Performing Assets}}$$

**Table: 4.3**

#### **Loan Loss Provision to Non-Performing Assets**

| Year    | NBBL    |         |        | HBL     |         |        |
|---------|---------|---------|--------|---------|---------|--------|
|         | LLP     | NPA     | %      | LLP     | NPA     | %      |
| 2000/01 | 283.93  | 613.77  | 46.26  | 344.48  | 1090.84 | 31.58  |
| 2001/02 | 451.57  | 1275.22 | 35.41  | 643.41  | 1156.04 | 55.66  |
| 2002/03 | 713.53  | 1013.27 | 70.42  | 842.75  | 1092.84 | 77.12  |
| 2003/04 | 995.95  | 1042.18 | 95.56  | 967.76  | 1147.46 | 84.34  |
| 2004/05 | 1839.22 | 1832.94 | 100.34 | 1026.65 | 1001.35 | 102.53 |
| 2005/06 | 65.33   | 1040.35 | 6.28   | 1119.42 | 1040.76 | 107.56 |
| 2006/07 | 62.99   | 2235.87 | 2.82   | 795.73  | 641.62  | 124.02 |
| Mean    | 51.01   |         |        | 83.26   |         |        |
| S.D     | 39.55   |         |        | 31.87   |         |        |
| C.V     | 0.78    |         |        | 0.38    |         |        |

Source: Annual Report of NBBL and HBL from fiscal year 2000/01 to 2006/07

It is observed that HBL has recorded highest percentage of Loan Loss Provision on NPA i.e. 124.02% in the fiscal year 2006/07. However, NBBL has maintained lowest percentage of Loan Loss Provision on NPA in fiscal year 2006/07 which is recorded as 2.82%. From the above table

we can also see that out of two sample banks NBBL has been maintaining lowest percentage of Loan Loss Provision on NPA. During the period of study the percentage of Loan Loss Provision to NPA of NBBL ranges from 46.26 % to 2.82 %. On the other hand HBL has maintained average Loan Loss Provision to NPA percentage of 83.26% which is higher than that of NBBL. Similarly, the covariance of HBL is 0.38 which is lower than that of NBBL which is recorded at 0.78. This shows HBL has maintained consistency in maintaining Loan Loss Provision.

While comparing the ratio of NBBL and HBL, it is found that the ratio of HBL is increasing in the subsequent fiscal years of the study period but in the case of NBBL .the ratio is found fluctuating.

Since Loan Loss Provisioning is maintained to mitigate any future losses that may arise due to the turning of good loan into bad. Hence, it is noteworthy that HBL has been maintaining good Loan Loss Provision percentage so as to cope up with any future losses due to default of loan. But NBBL has been maintaining very lower percentage of Loan Loss Provision which might cause problem in future if the loan turns into bad.

#### **iv. 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 banks assets. The ratio is calculated by using following formula:

$$\text{Return on total assets} = \frac{\text{Net Profit}}{\text{Total Assets}}$$

**Table: 4.4**  
**Return on Total Assets Ratio**

| Year    | NBBL       |             |       | HBL        |             |      |
|---------|------------|-------------|-------|------------|-------------|------|
|         | Net Profit | Total Asset | %     | Net Profit | Total Asset | %    |
| 2000/01 | 198.75     | 10593.92    | 1.88  | 277.04     | 18870.80    | 1.47 |
| 2001/02 | 65.78      | 11102.23    | 0.59  | 235.02     | 20672.43    | 1.14 |
| 2002/03 | 71.5       | 11932.61    | 0.60  | 212.13     | 23279.34    | 0.91 |
| 2003/04 | 2.64       | 14257.97    | 0.02  | 263.05     | 24762.02    | 1.06 |
| 2004/05 | -749.54    | 13277.15    | -5.65 | 308.28     | 27418.16    | 1.12 |
| 2005/06 | 291.51     | 14481.99    | 2.01  | 457.46     | 29460.39    | 1.55 |
| 2006/07 | 392.7      | 10118.11    | 3.88  | 491.82     | 33519.14    | 1.47 |
| Mean    | 0.48       |             |       | 1.25       |             |      |
| S.D     | 2.99       |             |       | 0.25       |             |      |
| C.V     | 6.27       |             |       | 0.20       |             |      |

Source: Annual Report of NBBL and HBL from fiscal year 2000/01 to 2006/07

The table outlined in previous page shows return on total assets ratio of HBL and NBBL from the fiscal year 2000/01 to 2006/07. In the study period it is observed that ROA of NBBL ranges from 1.88% to 3.88 % with an average of 0.48%. Whereas HBL has recorded average ROA of 1.25%, NBBL maintained the highest ROA of 3.88% in the fiscal year 2006/07. Similarly, NBBL has negative ROA of -5.65% which is due to loss figure of Rs.749.54 Million in fiscal year 2004/05.

It seems that NBBL performance is weaker than HBL as it is due to investment in unproductive sectors rather than in profit generating sectors. It can be particularly related with the decrease in Net Profit of the bank rather than increase in Assets of the bank. However, it is observed that the bank is slowly improving its level of Net Profit from fiscal year 2005/06 which is after the takeover of management by NRB.

v. **Return on Shareholder's Equity (ROE) Ratio**

A return on shareholder's equity is calculated to see the profitability of owner's investment. The shareholder's equity includes paid-up share capital, share premium and reserves & surplus less accumulated losses. The return on shareholder's equity is net profit after taxes divided by shareholder's equity.

$$\text{Return on shareholder's equity} = \frac{\text{Net Profit After Tax}}{\text{Total Shareholder's Equity}}$$

**Table: 4.5**  
**Return on Shareholder's Equity Ratio**

| Year    | NBBL       |                      |         | HBL        |                      |       |
|---------|------------|----------------------|---------|------------|----------------------|-------|
|         | Net Profit | Shareholders' Equity | %       | Net Profit | Shareholders' Equity | %     |
| 2000/01 | 198.75     | 595.12               | 33.40   | 277.04     | 720.59               | 38.45 |
| 2001/02 | 65.78      | 626.5                | 10.50   | 235.02     | 858.11               | 27.39 |
| 2002/03 | 71.5       | 683.93               | 10.45   | 212.13     | 1063.13              | 19.95 |
| 2003/04 | 2.64       | 656.58               | 0.40    | 263.05     | 1324.17              | 19.87 |
| 2004/05 | -749.54    | 234.58               | -319.52 | 308.28     | 1541.75              | 20.00 |
| 2005/06 | 291.51     | 526.09               | 55.41   | 457.46     | 1766.18              | 25.90 |
| 2006/07 | 392.7      | -1169.89             | -33.57  | 491.82     | 2146.50              | 22.91 |
| Mean    | -34.70     |                      |         | 24.92      |                      |       |
| S.D     | 128.58     |                      |         | 6.69       |                      |       |
| C.V     | -3.71      |                      |         | 0.27       |                      |       |

Source: Annual Report of NBBL and HBL from fiscal year 2000/01 to 2006/07

In comparison, the return on shareholder's equity ratio of HBL is so much stronger than NBBL. The ratio of HBL is in decreasing trend in the first three fiscal years, i.e. from 2000/01 to 2002/03 and then it comes in upward trend due to proper management and profit generating investment. But in the case of NBBL the ratio is above table shows the Return on Shareholder's Equity of Nepal Bangladesh Bank Ltd. and Himalayan Bank Ltd. The ROE of

NBBL ranges from 33.40% to 33.57%. It is observed that in fiscal year 2004/05 ROE is lowest i.e. -319.52%. It is due to the net loss of 749.54 (in Million). Similarly NBBL has negative ROE of -33.57% in Fiscal Year 2006/07 which is due to negative shareholder's equity. On the other hand HBL's ROE ranges from 38.45%, to 22.91% with an average ROE of 24.92%. Both shareholder's equity and net profit is found increasing during the period of study. The C.V of NBBL is -3.71 whereas C.V of HBL is 0.27.

Since NBBL has decreasing trend of Net profit and has been suffering from losses also so it has not been able to provide return/only nominal return is available for shareholders. This is particularly due to investment in unprofitable sector and piling up of NPA. So the bank has to make effort in controlling its NPA by the way of effective recovery process and take due care while flowing new loans by way of effective credit analysis. Comparatively, HBL's position is better than that of NBBL.

**vi. 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. If NPA increased, profit is decreased and if NPA decreased, profit is increased. Here, lower ratio reflects more efficiency to utilize outside as well as inside fund in good lending and vice versa. The ratio is calculated by using following formula:

$$\text{NPA to Net Profit ratio} = \frac{\text{Non - Performing Assets}}{\text{Net Profit}}$$

**Table: 4.6**  
**Non-Performing Assets to Net Profit Ratio**

| Year    | NBBL     |            |        | HBL      |            |       |
|---------|----------|------------|--------|----------|------------|-------|
|         | NPA      | Net Profit | Ratio  | NPA      | Net Profit | Ratio |
| 2000/01 | 613.77   | 198.75     | 3.09   | 1090.84  | 277.04     | 3.94  |
| 2001/02 | 1,275.22 | 65.78      | 19.39  | 1 156.04 | 235.02     | 4.92  |
| 2002/03 | 1,013.27 | 71.5       | 14.17  | 1092.84  | 212.13     | 5.15  |
| 2003/04 | 1,042.18 | 2.64       | 394.77 | 1 147.46 | 263.05     | 4.36  |
| 2004/05 | 1,832.94 | 0          | 0.00   | 1001.35  | 308.28     | 3.25  |
| 2005/06 | 1,040.35 | 291.51     | 3.57   | 1040.76  | 457.46     | 2.28  |
| 2006/07 | 2,235.87 | 720.59136  | -33.57 | 64 1 .62 | 491.82     | 1.30  |
| Mean    | 62.95    |            |        | 3.60     |            |       |
| S.D     | 157.55   |            |        | 1.41     |            |       |
| C.V     | 2.50     |            |        | 0.39     |            |       |

Source: Annual Report of NBBL and HBL from fiscal year 2000/01 to 2006/07

The above table shows the non-performing assets to net profit ratio of NBBL and HBL over the seven fiscal years of the study period. It is observed that NBBL has maintained average NPA to Net Profit ratio of 62.95 times which is higher than that of HBL i.e. 3.60 times only. It is particularly due to the low profit and higher value of NPA of NBBL. The ratio of NBBL ranges from 3.09 times to 5.69 times during the period of study. In fiscal year 2003/04 it has recorded highest NPA to Net Profit ratio i.e. 394.77 times. Similarly, HBL has recorded lowest NPA to Net Profit ratio i.e. 1.30 times in fiscal year 2006/07. The C.V of HBL is 0.39 which is lower than that of NBBL i.e. 2.50.

In comparison, the non-performing asset to net profit ratio of NBBL is much higher as well as fluctuating during the study period than that of HBL. It is due to lower net profit and higher non-performing assets of NBBL than that of HBL. Lower income of NBBL can be related either to investment in unproductive sectors or less investments due to lack of business with the bank or requirement of higher level of provision due to high NPA.



**vii. NBA to total assets ratio**

Non-banking assets to total assets ratio visualized the actual picture of assets, which are owned by the bank from default creditors. This ratio separates the assets in two sectors. One in the form of outsider assets who could not repay the due credit in time and other in the form of banks assets owned by it. Here, lower ratio indicates high efficiency in lending management and vice versa. The ratio is calculated by using following formula:

$$\text{NBA to Total Assets ratio} = \frac{\text{Non Banking Assets}}{\text{Total Assets}}$$

**Table: 4.7**

**Non-Banking Assets to Total Assets Ratio**

| Year    | NBBL   |              |      | HBL   |              |      |
|---------|--------|--------------|------|-------|--------------|------|
|         | NBA    | Total Assets | %    | NBA   | Total Assets | %    |
| 2000/01 | 219.05 | 10593.92     | 2.07 | 39.39 | 18870.80     | 0.21 |
| 2001/02 | 244.50 | 11102.23     | 2.20 | 41.19 | 20672.43     | 0.20 |
| 2002/03 | 466.94 | 11932.61     | 3.91 | 36.46 | 23279.34     | 0.16 |
| 2003/04 | 270.34 | 14257.97     | 1.90 | 3627  | 24762.02     | 0.15 |
| 2004/05 | 147.36 | 13277.15     | 1.11 | 31.93 | 27418.16     | 0.12 |
| 2005/06 | 220.16 | 14481.99     | 1.52 | 42.22 | 29460.39     | 0.14 |
| 2006/07 | 114.87 | 10118.11     | 1.14 | 40.10 | 33519.14     | 0.12 |
| Mean    | 1.98   |              |      | 0.16  |              |      |
| S.D     | 0.96   |              |      | 0.04  |              |      |
| C.V     | 0.48   |              |      | 0.23  |              |      |

Source: Annual Report of NBBL and HBL from fiscal year 2000/01 to 2006/07

Above table depicted the percentage of non-banking assets to total assets of NBBL and HBL. According to the above calculation, we can say that HBL has very low degree of Non Banking Assets. HBL has average NBA of 0.16%. During the seven-years of study period, highest ratio was at 0.21% in the first year of study period, i.e. in the fiscal year 2000/01 and the lowest ratio was at 0.12% in the fiscal year 2004/05 and 2006/07. Above table shows the

real picture of non-banking assets to total assets ratio of NBBL. The above calculation shows that in the first 3 years, the ratio is in upward trend continuously but after that it starts to decline. But again the level of NBA out of Total Assets starts to increase from fiscal year 2005/06. Highest ratio was 3.91% in the fiscal year 2002/03 and lowest ratio was 1.1% in the fiscal year 2004/05. The average ratio remains at 1.98% over the seven years of study period. The C.V of NBBL is 0.48 and HBL is 0.23.

In comparison, NBBL has high degree of Non Banking Assets than HBL. However, the bank has been making continuous effort to decrease its NBA level by the way of selling it through auction. It is also seen from the fluctuating level of NBA. As NBA define the quality of assets with the bank so the bank should always try to keep NBA level as low as possible.

### **4.3 Correlation Analysis**

The researcher has calculated correlation coefficient of loan and advances and Non Performing Assets, Non Performing Asset and Net Profit and Non Performing Assets and Non Banking Asset to identify if there is any relationship between these variables or not.

#### **4.3.1 Correlation Coefficient between Net Profit and Non Performing Loan**

The computation of Correlation Coefficient between Net Profit and Non Performing Assets shows if there exist any relationship between Net profit and Non Performing Loan. The value of correlation coefficient always lies in between + 1 to -1. If there is positive correlation it shows that an increase in Non Performing Loans will also increase net profit vice versa. On the other hand if there is negative correlation then it shows that an increase Non Performing Loan will decrease net profit. Thus it shows the direction of the relationship between Net Profit and Non Performing Asset.

**Table: 4.8**  
**Correlation Coefficient of Net Profit and Non Performing Asset of**  
**Nepal Bangladesh Bank Ltd.**

| Year       | NPA (X)       | Net Profit (Y) | X <sup>2</sup>     | Y <sup>2</sup>  | XY              |
|------------|---------------|----------------|--------------------|-----------------|-----------------|
| 2000/01    | 613.77        | 198.75         | 376713.6129        | 39501.56        | 121986.8        |
| 2001/02    | 1275.22       | 65.78          | 1626186.048        | 4327.008        | 83883.97        |
| 2002/03    | 1013.27       | 71.5           | 1026716.093        | 5112.25         | 72448.81        |
| 2003/04    | 1042.18       | 2.64           | 1086139.152        | 6.9696          | 2751.355        |
| 2004/05    | 1832.94       | -749.54        | 3359669.044        | 561810.2        | -4373862        |
| 2005/06    | 1040.35       | 291.51         | 1082328.123        | 84978.08        | 303272.4        |
| 2006/07    | 2235.87       | 392.7          | 4999114.657        | 154213.3        | 878026.1        |
| <b>N=7</b> | <b>9053.6</b> | <b>273.34</b>  | <b>13556866.73</b> | <b>849949.4</b> | <b>88507.65</b> |

Source: Annual Report of NBBL and HBL from fiscal year 2000/01 to 2006/07

Here

N = 7

$\sum X$  = 9053.6

$\sum Y$  = 273.34

$\sum X^2$  = 13556866.7

$\sum Y^2$  = 849949.372

$\sum XY$  = 88507.6492

$$\text{Coefficient of Correlation (r)} = \frac{N\sum XY - \sum X\sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \times \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$r = -0.21$$

According to the above calculation, the Karl Pearson's Correlation Coefficient (r) of NBBL between Non Performing Assets and Net Profit is -0.21, 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. a percent increase of NPA will decrease the Net Profit by 21% and vice versa.

To test the significance of correlation coefficient, probable error is calculated as the following method:

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

Here, r = Correlation coefficient

N = Number of pairs of observations

P.E. = 0.24

6 times P.E. = 1.46

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. It means even if Non Performing Asset increase the relationship as derived from calculation of correlation is not likely to be true.

**Table: 4.9**  
**Correlation Coefficient of Net Profit and Non Performing Asset of**  
**Himalayan Bank Ltd**

| Year    | NPA (X)     | Net Profit (Y) | X <sup>2</sup> | Y <sup>2</sup> | XY       |
|---------|-------------|----------------|----------------|----------------|----------|
| 2000/01 | 1,090.84    | 277.04         | 1 189920.997   | 76751.26       | 302205.1 |
| 2001/02 | 1,156.04    | 235.02         | 1336431.862    | 55236.05       | 271696.9 |
| 2002/03 | 1,092.84    | 212.13         | 1 194298.144   | 44998.49       | 231822.4 |
| 2003/04 | 1,147.46    | 263.05         | 1316670.506    | 69197.14       | 301844.1 |
| 2004/05 | 1,001.35    | 308.28         | 1002696.455    | 95033.58       | 308690.5 |
| 2005/06 | 1,040.76    | 457.46         | 1083176.846    | 209267.5       | 476102.7 |
| 2006/07 | 641.62      | 491.82         | 411670.209     | 241889.8       | 315561.1 |
| N=7     | 7170.899036 | 2244.801       | 7534865.011    | 792373.8       | 2207923  |

Source: Annual Report of NBBL and HBL from fiscal year 2000/01 to 2006/07

Here,

|              |            |
|--------------|------------|
| N            | 7          |
| $\Sigma X$   | 7170.89904 |
| $\Sigma Y$   | 2244.80144 |
| $\Sigma X^2$ | 7534865.01 |
| $\Sigma Y^2$ | 792373.838 |
| $\Sigma XY$  | 2207922.78 |

$$\text{Now, Coefficient of correlation (r)} = \frac{N \Sigma XY - \Sigma X \Sigma Y}{\sqrt{N \Sigma X^2 - (\Sigma X)^2} \times \sqrt{N \Sigma Y^2 - (\Sigma Y)^2}}$$

$$r = -0.78$$

Here, the Karl Pearson's Correlation Coefficient between the Non Performing Assets and Net Profit of HBL. (r) is -0.78. That means (here is negative relationship between Non Performing Assets and Net Profit of HBL. It denotes that another variable out of them increase then another variable will decrease by 78%. But to find out whether this relationship is significant or insignificant, here the researcher calculated probable error as following:

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

Here, r = Correlation coefficient

N = Number of pairs of observations

$$\text{P.E.} = 0.10$$

$$6 \text{ times P.E.} = 0.59$$

According to the probable error test, there is significant relationship between Non Performing Assets and Net Profit of HBL because the correlation coefficient (r) is higher than six times of probable error. In other words the increase in Non Performing Asset will result into decrease of Net Profit by 78% as shown by the correlation coefficient.

#### 4.3.2 Correlation Coefficient between Loan and Advances and Non Performing Loan

The computation of Correlation Coefficient between Loans and Advances and Non Performing Assets shows if there exist any relationship between Loans & Advances and Non Performing Loan. The value of correlation coefficient always lies in between +1 to -1. If there is positive correlation it shows that an increase in Loans & Advances will also increase Non Performing Asset vice versa. On the other hand if there is negative correlation then it shows that an increase Loans and Advances will decrease Non Performing Loan. Thus it shows the direction of the relationship between Loans Advances and Non Performing Asset.

**Table: 4.10**

**Correlation Coefficient of Loans and Advances and Non Performing Asset of Nepal Bangladesh Bank Ltd**

| Year    | L& A (X) | NPA (Y)  | X <sup>2</sup> | Y <sup>2</sup> | XY       |
|---------|----------|----------|----------------|----------------|----------|
| 2000/01 | 7358.74  | 613.77   | 54151054.39    | 376713.6       | 4516574  |
| 2001/02 | 8083.99  | 1275.22  | 65350894.32    | 1626186        | 10308866 |
| 2002/03 | 7964.5 1 | 1013.27  | 63433419.54    | 1026716        | 8070199  |
| 2003/04 | 9644.69  | 1042.18  | 93020045.2     | 1086139        | 10051503 |
| 2004/05 | 9626.91  | 1 832.94 | 92677396. 1 5  | 3359669        | 17645548 |
| 2005/06 | 8478.78  | 1040.35  | 71889710.29    | 1082328        | 8820899  |
| 2006/07 | 5854.58  | 2235.87  | 34276106.98    | 4999115        | 13090080 |
| N=7     | 57012.2  | 9053.6   | 474798626.9    | 13556867       | 72503669 |

Source: Annual Report of NBBL and HBL from fiscal year 2000/01 to 2006/07

Here,

$$N = 7$$

$$\Sigma X = 57012.2$$

$$\Sigma Y = 9053.6$$

$$\Sigma X^2 = 474798627$$

$$\Sigma Y^2 \quad 13556866.7$$

$$\Sigma XY \quad 72503668.6$$

$$\text{Now, Coefficient of correlation (r)} = \frac{N \Sigma XY - \Sigma X \Sigma Y}{\sqrt{N \Sigma X^2 - (\Sigma X)^2} \times \sqrt{N \Sigma Y^2 - (\Sigma Y)^2}}$$

$$r = -0.28$$

According to the above calculation, the Karl Pearson's Correlation Coefficient (r) of NBBL between Loans and Advances and Non Performing Assets is -0.28, which denotes that there is negative correlation between them. That means if Loans & Advances increased then Non Performing Assets will decrease by 28% and vice versa. To clarify the significance of result, probable error is calculated as the following method:

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

Here, r = Correlation coefficient

N = Number of pairs of observations

$$\text{P.E.} = 0.23$$

$$6 \text{ times P.E.} = 1.41$$

Here, the correlation coefficient (r) is less than the six times probable error. That means there is no significant correlation between Loan and Advances and Non Performing Assets of NBBL.

Though correlation coefficient shows there is negative correlation between the creation of NPA and new loan availment, while calculating 6 multiple probable error, it shows figure 1.41 which is more than 'r'. So, the negative correlation as identified from correlation coefficient is not likely to be true. In other words, increase Loans & Advances may or may not decrease Non Performing Asset by 28%.

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**Table: 4.11**

**Correlation Coefficient of Loans and Advances and Non Performing Asset of Himalayan Bank Ltd**

| Year    | L&A(X)      | NPA (Y)  | X <sup>2</sup> | Y <sup>2</sup> | XY       |
|---------|-------------|----------|----------------|----------------|----------|
| 2000/01 | 9,015.55    | 1,090.84 | 81280091.23    | 1189921        | 9834474  |
| 2001/02 | 9,557.14    | 1,156.04 | 91338886.83    | 1336432        | 11048448 |
| 2002/03 | 10,844.60   | 1,092.84 | 117605327.2    | 1194298        | 11851406 |
| 2003/04 | 12,919.63   | 1,147.46 | 166916865      | 1316671        | 14824794 |
| 2004/05 | 13,451.17   | 1,001.35 | 180933927.7    | 1002696        | 13469291 |
| 2005/06 | 15,761.98   | 1,040.76 | 248439890      | 1083177        | 16404400 |
| 2006/07 | 17,793.72   | 641.62   | 316616608.9    | 411670.2       | 11416726 |
| N=7     | 89343.78339 | 7170.899 | 1203131597     | 7534865        | 88849539 |

Source: Annual Report of NBBL & HBL from fiscal year 2000/01 to 2006/07

Here,

N = 7

$\sum X$  = 89343.7834

$\sum Y$  = 7170.89904

$\sum X^2$  = 1203131597

$\sum Y^2$  = 7534865.01

$\sum XY$  = 88849538.9

$$\text{Coefficient of correlation (r)} = \frac{N\sum XY - \sum X\sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \times \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$r = -0.78$$

According to the above calculation, the Karl Pearson's Correlation Coefficient (r) of HBL between Loans and Advances and Non Performing Assets is -0.78, which denotes that there is negative correlation between them. That means if Loans and Advances increased then Non Performing Assets will decrease by 78% and vice versa. To clarify the significance of result, probable error is calculated as the following method:



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

Here,  $r$  = Correlation coefficient

$N$  = Number of pairs of observations

P.E. = 0.10

6 times P.E. = 0.61

Here, the correlation coefficient ( $r$ ) is higher than the six times probable error. That means there is significant correlation between Loan & Advances and Non Performing Assets of HBL.

Though correlation coefficient shows there is positive correlation between the creation of the NPA and new loan availment, while calculating 6 multiple probable error, it shows figure 1.41 which is more than 0.61. So, the negative correlation as identified from correlation coefficient is likely to be true. In other words, increase Loans and Advances will decrease Non Performing Asset by 78%.

#### **4.3.3 Correlation Coefficient between Non Performing Asset and Non Banking Asset**

The computation of Correlation Coefficient between Non Performing Assets and Non Banking Asset shows if there exist any relationship between Non Performing Loan and Non Banking Asset. The value of correlation coefficient always lies in between +1 to -1. If there is positive correlation it shows that an increase in Non Performing Asset will also increase Non Banking Asset and vice versa. On the other hand if there is negative correlation then it shows that an increase Non Performing Loan will decrease Non Banking Asset. Thus it shows the direction of the relationship between Non Performing Asset and Non Banking Asset.

**Table: 4.12**

**Correlation Coefficient of Non Performing Asset and Non- Banking Asset of  
Nepal Bangladesh Bank Ltd**

| Year    | NPA (X) | NBA (Y) | X <sup>l</sup> | Y <sup>2</sup> | XY        |
|---------|---------|---------|----------------|----------------|-----------|
| 2000/01 | 613.77  | 219.05  | 376713.6129    | 47982.9        | 1 34446.3 |
| 2001/02 | 1275.22 | 244.5   | 1626186.048    | 59780.25       | 31 1791.3 |
| 2002/03 | 1013.27 | 466.94  | 1026716.093    | 218033         | 473136.3  |
| 2003/04 | 1042.18 | 270.34  | 1086139.152    | 73083.72       | 281742.9  |
| 2004/05 | 1832.94 | 147.36  | 3359669.044    | 21714.97       | 270102    |
| 2005/06 | 1040.35 | 220.16  | 1082328.123    | 48470.43       | 229043.5  |
| 2006/07 | 2235.87 | 1 14.87 | 49991 14.657   | 13195.12       | 256834.4  |
| N=7     | 9053.6  | 1683.22 | 13556866.73    | 482260.3       | 1957097   |

Source: Annual Report of NBBL and HBL from fiscal year 2000/01 to 2006/07

Here.

N 7

$\Sigma X$  9053.6

$\Sigma Y$  1683.22

$\Sigma X^2$  13556866.7

$\Sigma Y^2$  482260.344

$\Sigma XY$  1957096.72

$$\text{Now, Coefficient of correlation (r)} = \frac{N \Sigma XY - \Sigma X \Sigma Y}{\sqrt{N \Sigma X^2 - (\Sigma X)^2} \times \sqrt{N \Sigma Y^2 - (\Sigma Y)^2}}$$

$$r = -0.58$$

According to the above calculation, the Karl Pearson's Correlation Coefficient (r) of NBBL between Non Performing Assets and Non Banking Asset is -0.58 which denotes that there is negative correlation between them. That means if Non Performing Assets increased then Non Banking Assets will decrease by 58% and vice versa. To clarify the significance of result, probable error is calculated as the following method:

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

Here,  $r$  = Correlation coefficient

$N$  = Number of pairs of observations

P.E. = 0.17

6 times P.E. = 1.01

Though the correlation coefficient shows negative relationship between creation of NBA and NPA, while calculating while calculating 6 multiple probable errors, it shows figure 1.01 which is more than  $r$ . So, the negative correlation as identified from correlation coefficient is not likely to be true. In other words, increase in Non Performing Asset is not likely to decrease NBA by 58%.

Here, the correlation coefficient ( $r$ ) is less than the six times probable error. That means there is no significant correlation between Non Performing assets and Non Banking Assets of NBBL.

**Table 4.13**  
**Correlation Coefficient of Non Performing Asset and Non Banking**  
**Asset of Himalayan Bank Ltd**

| Year    | NPA(X)      | NBA (Y)  | X <sup>2</sup> | Y <sup>2</sup> | XY        |
|---------|-------------|----------|----------------|----------------|-----------|
| 2000/01 | 1,090.84    | 39.39    | 1189920.997    | 1551.309       | 42964.34  |
| 2001/02 | 1,156.04    | 41.19    | 1336431.862    | 1696.752       | 47619.26  |
| 2002/03 | 1,092.84    | 36.46    | 1194298.144    | 1329.083       | 3984 1.21 |
| 2003/04 | 1,147.46    | 36.27    | 1316670.506    | 1315.165       | 41612.97  |
| 2004/05 | 1,001.35    | 31.93    | 1002696.455    | 1019.504       | 31972.69  |
| 2005/06 | 1,040.76    | 42.22    | 1083176.846    | 1782.11        | 43935.64  |
| 2006/07 | 641.62      | 40.10    | 411670.2009    | 1607.872       | 25727.67  |
| N=7     | 7170.899036 | 267.5431 | 7534865.011    | 10301.8        | 273673.8  |

Source: Annual Report of NBBL and HBL from fiscal year 2000/01 to 2006/07

$$\begin{aligned}
N &= 7 \\
\sum X &= 7170.89904 \\
\sum Y &= 267.54311 \\
\sum X^2 &= 7534865.01 \\
\sum Y^2 &= 10301.795 \\
\sum XY &= 273673.782
\end{aligned}$$

$$\text{Now, Coefficient of correlation (r)} = \frac{N\sum XY - \sum X\sum Y}{\sqrt{N\sum X^2 - (\sum X)^2} \times \sqrt{N\sum Y^2 - (\sum Y)^2}}$$

$$r = -0.11$$

According to the above calculation, the Karl Pearson's Correlation Coefficient (r) of HBL between Non Performing Assets and Non Banking Asset is -0.11 which denotes that there is negative correlation between them. That means if Non Performing Assets increased then Non Banking Assets will decrease by 11% and vice versa. To clarify the significance of result, probable error is calculated as the following method:

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

Here,

r = Correlation coefficient

N = Number of pairs of observations

P.E. = 0.25

6 times P.E. = 1.51

Here, the correlation coefficient (r) is less than the six times probable error. That means there is no significant correlation between Non Performing assets and Non Banking Assets of HBL.

It depicts that the correlation between NPA and NBA of HBL is not significant. Though

correlation coefficient shows negative correlation between the creation of NBA and NPA, while calculating 6 multiple probable error, it shows figure 1.5 I which is more than r. So, the negative correlation as identified from correlation coefficient is not likely to be true. In other words, increase in Non Performing Asset is not likely to decrease NBA by 11%.

#### 4.4 Trend Analysis

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

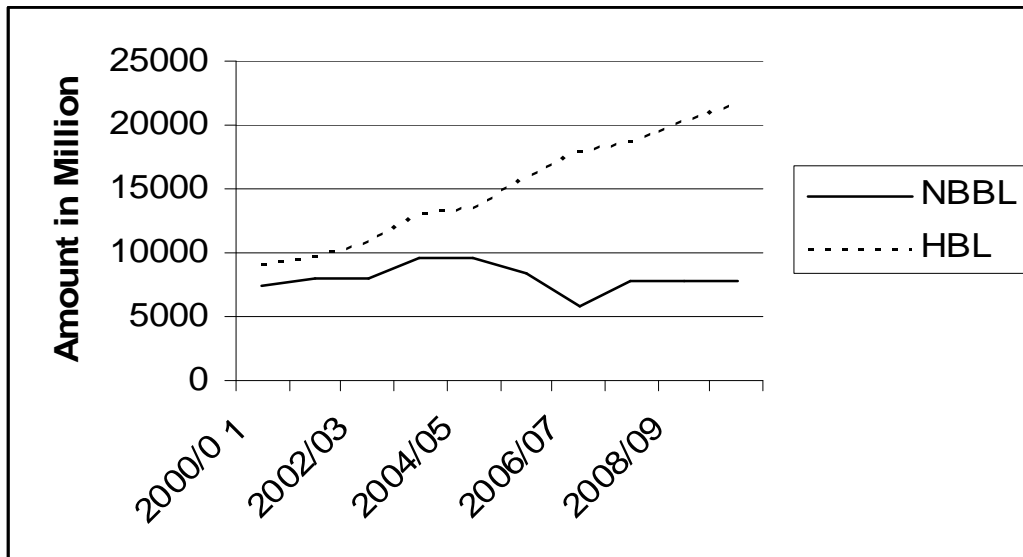
**Table 4.14**  
**Trend Analysis of Loans and Advances**

| Year    | NBBL     | HBL       |
|---------|----------|-----------|
| 2000/01 | 7,358.74 | 9,015.55  |
| 2001/02 | 8,083.99 | 9,557.14  |
| 2002/03 | 7,964.51 | 10,844.60 |
| 2003/04 | 9,644.69 | 12,919.63 |
| 2004/05 | 9,626.91 | 13,451.17 |
| 2005/06 | 8,478.78 | 15,761.98 |
| 2006/07 | 5,854.58 | 17,793.72 |
| 2007/08 | 7,850.24 | 18,670.65 |
| 2008/09 | 7,776.65 | 20,147.46 |
| 2009/10 | 7,703.06 | 21,624.28 |

Source: Annual Report of NBBL & HBL from fiscal year 2000/01 to 2006/07

**Figure4.1**

**Trend of Loans & Advances**



**Table 4.15**

**Trend Analysis of Non Performing Asset**

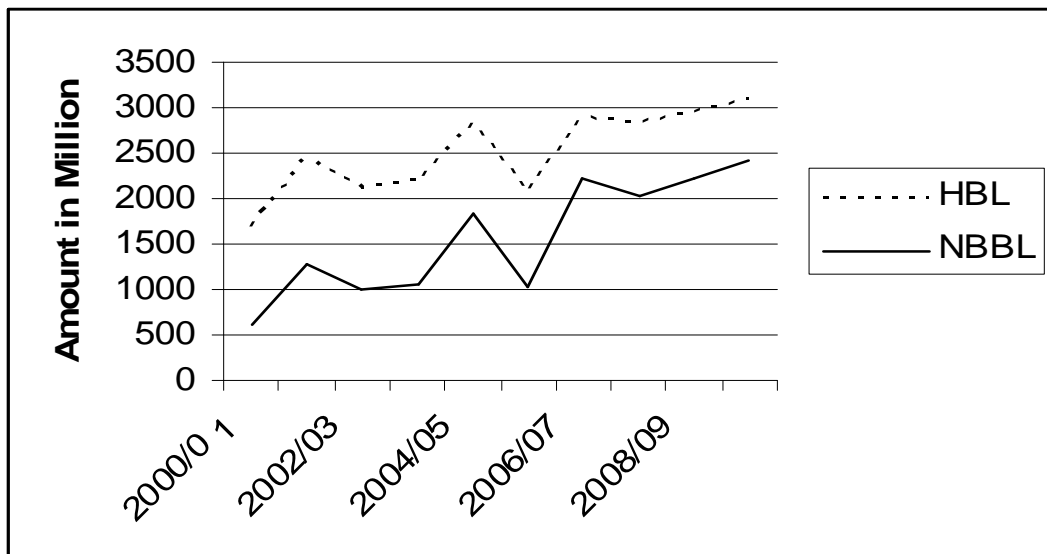
| Year    | NBBL    | HBL     |
|---------|---------|---------|
| 2000/01 | 613.77  | 1090.84 |
| 2001/02 | 1275.22 | 1156.04 |
| 2002/03 | 1013.27 | 1092.84 |
| 2003/04 | 1042.18 | 1147.46 |
| 2004/05 | 1832.94 | 1001.35 |
| 2005/06 | 1040.35 | 1040.76 |
| 2006/07 | 2235.87 | 641.62  |
| 2007/08 | 2038.55 | 785.88  |
| 2008/09 | 2224.84 | 726.25  |
| 2009/10 | 2411.14 | 666.62  |

Source: Annual Report of NBBL and HBL from fiscal year 2000/01 to 2006/07

Above table shows the trend of Non Performing Loans of the sample banks in coming three fiscal years viz 2007/08, 2008/09 and 2009/10. NBBL has fluctuating trend of Non Performing Asset and it ranges from Rs.613.77 to 2235.87 (in Million). Hence, in coining

fiscal years also Non Performing Asset of NBBL will have fluctuating trend. It is expected to decrease to Rs.2038.55 in fiscal year 2007/08 (See appendix XXIV for computation) and then increase as high as to Rs.241 1.14 in fiscal year 2009/10. Whereas in case of HBL Non Performing Asset is found increasing in Second year of study i.e. 2001/02 and then it starts to decrease and hence in coming three fiscal years also it is expected to decrease to Rs.666.62(in Millions) (See appendix XXV for computation). As Non Performing Asset is block the capital of the banks and does not produce any income it is recommended to always keep the NPA figure as low as possible. Here, NBBL has increasing trend of Non Performing Asset so it is suggested to decrease Non Performing Asset figure by undertaking rigorous follow up in case of already default loan and undertaking detailed credit analysis of firm and borrowers while disbursing new loans. The above table can also be presented in form of line chart as under:

**Figure 4.2**  
**Trend Analysis of Non Performing Asset**



**Table: 4.16**  
**Trend Analysis of Net Profit**

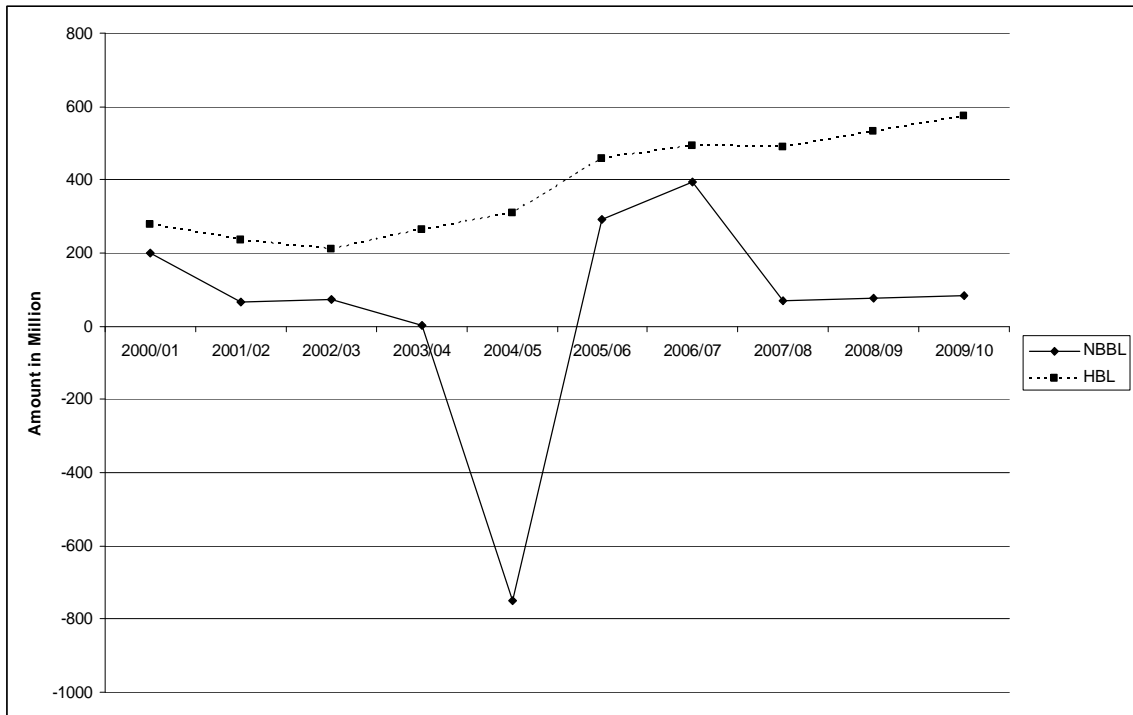
| Year    | NBBL     | HBL    |
|---------|----------|--------|
| 2000/01 | 198.75   | 277.04 |
| 2001/02 | 65.78    | 235.02 |
| 2002/03 | 71.50    | 212.13 |
| 2003/04 | 2.64     | 263.05 |
| 2004/05 | (749.54) | 308.28 |
| 2005/06 | 291.51   | 457.46 |
| 2006/07 | 392.70   | 491.82 |
| 2007/08 | 69.37    | 490.02 |
| 2008/09 | 76.95    | 532.36 |
| 2009/10 | 84.54    | 574.69 |

Source: Annual Report of NBBL and HBL from fiscal year 2000/01 to 2006/07

Above table shows the trend of Net Profit of the sample banks in coming three fiscal years viz 2007/08, 2008/09 and 2009/10. NBBL has been seeing decrease in its Net Profit and it ranges from Rs.198.75 to 392.70 (in Million). In fiscal year 2004/05 it has suffered loss of Rs.749.54 (in Million) and then after the Net Profit figure is found increasing. Following this trend in coming fiscal years Net Profit of NBBL will decrease in fiscal year 2007/08 to Rs.69.37 (in Million) and then after it starts to increase to Rs.84.54 (in Million) in fiscal year 2009/10. (See appendix XX for computation). Whereas, HBL has been maintaining increasing trend in past years. Hence, maintaining this trend HBL is expected to observe increase on its Net Profit in coming fiscal years. (See appendix XXI for computation). Net profit is the combination of both interest income and other income. However, as interest income plays the major role in contributing to Net profit it is the banks are always suggested to increase its interest income for increasing its Net Profit. Here, comparatively NBBL has very low Net Profit figure so it is recommended that NBBL decrease its investment in non productive sector and increase its interest income by disbursing new loans making detailed credit analysis only. The above table can also be presented in form of line chart as under:



**Figure 4.3**  
**Trend of Net Profit**



**Table: 4.17**  
**Trend Analysis of Loan Loss Provision**

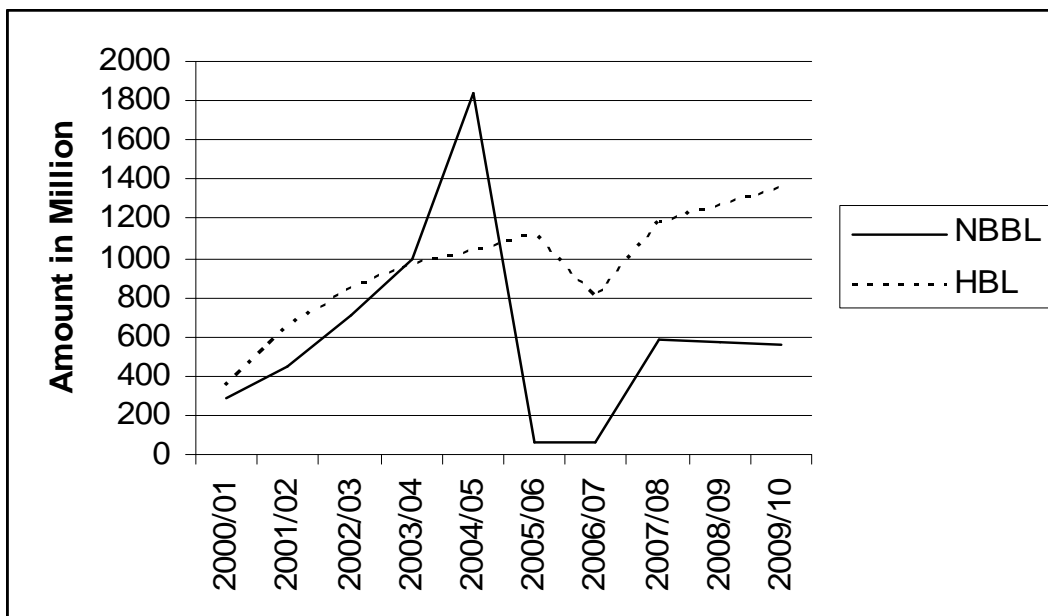
| Year    | NBBL     | HBL      |
|---------|----------|----------|
| 2000/01 | 283.93   | 344.48   |
| 2001/02 | 451.57   | 643.41   |
| 2002/03 | 713.53   | 842.75   |
| 2003/04 | 995.95   | 967.76   |
| 2004/05 | 1,839.22 | 1,026.65 |
| 2005/06 | 65.33    | 1,119.42 |
| 2006/07 | 62.99    | 795.73   |
| 2007/08 | 586.13   | 1,175.69 |
| 2008/09 | 575.07   | 1,264.61 |
| 2009/10 | 564.02   | 1,353.52 |

Source: Annual Report of NBBL and HBL from fiscal year 2000/01 to 2006/07

Above table shows the trend of Loan Loss Provision of the sample banks in coming three fiscal years viz 2007/08, 2008/09 and 2009/10. NBBL's Loan Loss Provision trend is found

fluctuating in the past years and it ranges from Rs. -283.93 to 62.99 (in Million). Following this trend in coming fiscal years Loan Loss Provision of NBBL will increase in fiscal year 2007/08 i.e. up to 586.13 and then after it will start to decrease to Rs.564.02(in Million) until fiscal year 2009/10.(See appendix XVIII for computation). Whereas in case of HBL Loan Loss figure is found increasing in past fiscal years i.e. until 2005/06. Then after it decreases to Rs.795.73 (in Million).Hence, maintaining this trend HBL is expected to observe increase on its Loan Loss Provision in coming fiscal years i.e. up to Rs.1353.52 (In Millions) (See appendix XIX for computation). Loan Loss Provision is the provision maintained for mitigating any loss in future due to default of loan. However, Loan Loss Provision decreases the profit figure of banks as well. So, keeping this balanced amount of Loan Loss provision is always suggested. The above table can also be presented in form of line chart as under:

**Figure 4.4**  
**Trend of Loan Loss Provision**



**Table: 4.18**

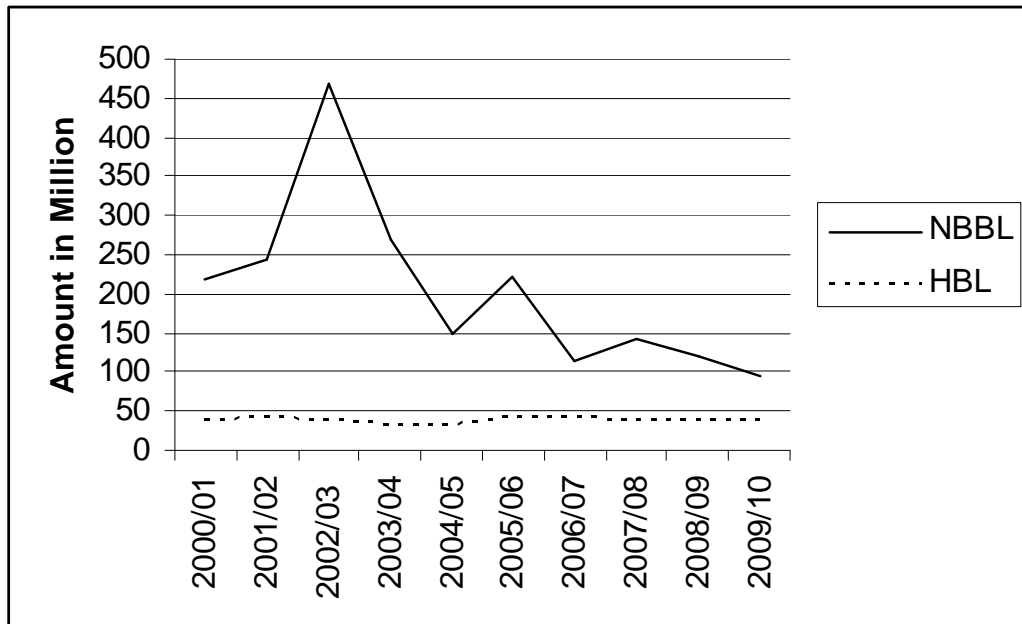
**Trend Analysis of Non Banking Asset**

| Year    | NBBL   | HBL   |
|---------|--------|-------|
| 2000/01 | 219.05 | 39.39 |
| 2001/02 | 244.50 | 41.19 |
| 2002/03 | 466.94 | 36.46 |
| 2003/04 | 270.34 | 31.93 |
| 2004/05 | 147.36 | 31.93 |
| 2005/06 | 220.16 | 42.22 |
| 2006/07 | 114.87 | 40.10 |
| 2007/08 | 143.20 | 38.17 |
| 2008/09 | 118.89 | 38.16 |
| 2009/10 | 94.57  | 38.15 |

Source: Annual Report of NBBL & HBL from fiscal year 2000/01 to 2006/07

Above table shows the trend of Non Banking Asset of the sample banks in coming three fiscal years viz 2007/08,2008/09 and 2009/10.NBBL's Non Banking Asset trend is found fluctuating in the past years and it ranges from Rs.219.05 to I 14.87(in Million). Following this trend in coming fiscal years Non Banking Asset of NBBL will increase in fiscal year 2007/08 i.e. up to Rs.143.20 and then after it will start to decrease to Rs.94.57(in Million) until fiscal year 2009/10.(See appendix XXII for computation). Whereas in case of HBL Non Banking Asset figure is found decreasing in first 5 years of study period i.e. until 2004/05 and then after it starts to increase in fiscal year 2005/06 and again decrease in fiscal year 2006/07.Hence, maintaining this trend HBL is expected to observe decrease on its Non Banking Asset in coming fiscal years i.e. up to Rs.38.15 (In Million). (See appendix XXIII for computation). Non Banking Asset is the unproductive assets which have been transferred in the name of bank as there was no buyer while auctioning its property. . The above table can also be presented in form of line chart as under:

**Figure 4.5**  
**Trend Analysis of Non Banking Asset**



[NOTE: (i) amounts are in the figure of '000000']

#### 4.5 Primary Data Analysis

In order to find out various opinions of existing employees of the sampled commercial banks regarding their non-performing assets, 40 selected employees (20 employees from each bank) were approached randomly and asked to fill up the questionnaires as mentioned in the annex. Out of them 30 employees (15 employees from each bank) were convinced to fill up the questionnaire and provide response. However, only 20 of them filled up themselves and the rest responded verbally.

##### **Credit Problem**

In respect to the credit related problem in sample bank majority of respondents (100%) opined that there is credit related problem in their bank. (See Appendix XVI & XVII)

### **Status of NPA**

In relation to the question as to the information regarding the status of NPA majority of respondents of NBBL (80%) opined that they have perfect knowledge about the status of NPA in their bank but rest 20% of respondents do not have any information of the same. On the other hand out of total survey respondents of HBL only about 60% of responded that they have knowledge of the status of NPA whereas rest 40% of respondents do not have any knowledge of NPA in their bank. (See Appendix XVI & XVII)

### **NPA Categorization**

In context of question regarding whether the bank categorize their NPA or not about 60% of sample respondents of NBBL responded positively whereas 33.33% of respondents opined that they have no idea and rest 6.67% were not clear about the question itself. In case of HBL only about 60% of survey respondent opined that they have perfect knowledge about categorization of the NPA whereas rest 40% has no information in this matter. (See Appendix XVI & XVII)

### **Loan Loss Provision and its relationship with NPA.**

With respect to the question regarding Loan loss provision its relationship with NPA out of total sample respondents of HBL majority i.e. 93.3% respondents opined that they do have information in this aspect whereas rest 6.67% respondents opined that they have no information. In case of NBBL, majority of respondents i.e. 93.33% of respondents have knowledge of loan loss provision whereas 6.67% have no ideas what loan loss provision is. Similarly, in regard to the relationship of Loan loss provision with NPA only 66.66% respondents answered positively. Whereas 6.67% were not clear about the question itself and rest 2.67% do not have any knowledge. (See Appendix XVI & XVII)

### **Recovery of bad loan**

As for the question regarding recovery of bad loan, majority of sample respondents of both sample bank i.e. 100% opined that the process for recovery of bad loan need to be changed. (See Appendix XVI & XVII)

### **Following NRB directives**

With respect to the question regarding following NRB Directive sincerely out of the total survey respondents of HBL 46.66% opined that the bank has been following the directives properly and 40% responded negatively and rest 13.34% were not clear about the question. (See Appendix XVI & XVII)

### **Major Credit related Problems**

The main problems at the time of credit granting were lack of credit information of borrowers, more valuation of collateral and bargaining on interest rate as well as recovering process.

### **Types of loans availed and loans with more chances of turning into NPA**

Both bank's respondents replied that HBL. as well as NBBL has been providing all types of loans listed in questionnaire in Annex I except for deprived sector and priority sector which has been stopped by NRB. It is observed that the banks majorly focus on business loans and consumer loans rather than consortium and personal loan. The reasons as identified are the high benefit associated with the loans and adequate demand for such loans. Moreover, consortium loans involve lots of investments, lots of documents hassles ad is highly risky. In the same manner, personal loan also involve high risk as bank cannot check cash inflow/outflow, so banks do not prefer to provide this loan.

In response to the question regarding which type of loan has more chances of being NPA, the sample respondents has agreed that business loans is most likely to become NPA and is hence ranked no. 1. Then after Personal Loan. Deprived Sector Loan, Consortium Loans, Consumer Loan and Other Loan has been ranked 2,3,4,5, 6 and 7 respectively.

### **Sector wise loan with more chances of turning into NPA**

In response to the question for finding out sectoral loans with more chances of being NPA, the sample respondents of HBL and NBBL agreed that industrial sector loans are most likely to become NPA. The reasons for this was particularly related to long term of loan, long gestation period in case of industry and also the unstable political situation which always leads to frequent closure of the industry. Similarly, trade sector has been given rank-2, service sector rank-3 and other sector rank-4 respectively on the basis of chances of being NPA.

### **Factors taken into consideration for loan disbursement**

The survey respondents of both, HBL, and NBBL voted for similar alternatives for questionnaire of which factor are taken into consideration by your organization at the time of floating loans. The respondents or employees of both banks totally agree with financial strength of the borrower is a basis for floating loan. Likewise, both bank's respondents totally agree with loan is floated on the basis of security offered by the borrower. Similarly, all sampled respondents of both banks were agreeing with that personal integrity of the borrower is also taken into consideration while floating loan. But all of the sampled respondents disagree with relationship of the client with the bank's top authority sometimes compel you to float the loan during the loan flotation time. As like as, both bank's respondents were agree with that banks give priority on portfolio management during the loan flotation time and monitoring as well as control system is adequately adopted by the banks.

### **External factors causing NPA**

The survey respondents of both banks were totally agreed with economic and industrial recession is the caused of increasing NPA. But the employees of HBL as well as NBBL were only slightly agreed with that inconsistency government policy is one of the causes for NPA increment. Likewise, they disagreed with that high and conservative provisioning requirement has caused for increment on NPA level. The employees of both banks agreed on the point that lack of monitoring and supervision from NRB as well as in the absence of strong legal provision for loan recovery ultimately leads to high NPA. But the respondents disagreed with loan is being floated without being choosy and this has cause for NPA increment.

### **Internal Reasons for booking or NPA**

Most of the sampled employees of IIBL and NBBL viewed that good loan might be turned into bad loan due to high interest rates. So the respondents rank that it as 1. Similarly, collusion and carteling is ranked as 2, bad intension of borrower is ranked as 3, weak monitoring is ranked as 4, liberal credit policy is ranked as 5 and shortfall on collateral is ranked as 6 respectively because those factors were responsible to turn good loan into bad loan.

### **Recovery Process**

All of the sampled respondents agreed on that there should be needed to change in the process of recovering bad loan. First, they recommended potholing the list of bad debtors by notifying to pay the due amount with in certain date. Secondly, they recommended taking strict action towards those credit customers who did not refund the loan amount by selling their collaterals and thirdly, they recommended providing information of those customers to the credit information bureau. Some of the respondents viewed that those customers were sacrificed by the society also so that other could not have courage to do that type of work. Some of the respondents of HBL and NBBL replied that if the borrower



became overdue outstanding, the bank starts to follow up within seven days of overdue but most of the survey respondents of HBL and NBBL replied that the bank starts to follow up within fifteen days of overdue.

#### **4.6 Major Findings of the Study**

Based on the presentation, interpretation and analysis of data, the major findings are summarized as follows:

- i. The average non-performing asset to total loan & advances ratio of HBL is 0.09 times where as the ratio of NBBL is 0.17 times.
- ii. The average non-performing assets to total assets ratio of HBL is 0.04 times where as the ratio of NBBL is 0.11 times.
- iii. The average loan loss provision to non-performing assets ratio of HBL is 83.26% where as the ratio of NBBL is 5 1.01 %.
- iv. The average return on total assets ratio of HBL is 1.25% where as it is only 0.48% in are of NBBL.
- v. The average return on shareholder's equity of HBL is 15.11%. On the other hand NBBL has average return on shareholder's equity of 11.55%.
- vi. The average non-performing assets to net profit ratio of HBL is 3.60 times where as the ratio of NBBL is 62.95 times.
- vii. Average NBA to total asset ratio of HBL is as low as 0.16% whereas average NBA to total asset ratio of NBBL is as high as 2.24%. This shows the quality of asset of HBL is better than that of NBBL.
- viii. In case of both sample banks the Correlation Coefficient between Non Performing Asset and Net Profit was found to be negative. This means when Non Performing Asset of banks increase there is negative impact on Net Profit which results into decrease in profit figure of the banks. However, when Probable error was calculated to test the reliability of the relationship it was observed that significance of the correlation coefficient so derived was likely to be true in case of HBL only. In case of NBBL the Correlation Coefficient was the negative which might not be

always true as evident from the Probable error.

- ix. Similarly, the Correlation Coefficient between loans and advances and Non Performing Asset was found negative which means if new loans are provided then non performing asset will decrease and vice versa. However, when Probable error was calculated to test the reliability of the results it was found that the negative relation so obtained was not likely to be true in case of NBBL so increase in Loans and Advances might or might not decrease Non Performing Asset. Whereas in case of HBL the negative relationship between Loans and Advances and Non Performing Asset was likely to be true as the Probable Error shows significant result.
- x. Similarly, the Correlation Coefficient between Non Performing Asset and Non Banking Asset for both sample banks was found negative which means if Non Performing Assets are created Non Banking Asset will decrease and vice versa. However, when Probable error was calculated to test the reliability of the results it was found that the negative relation so obtained was not likely to be true in case of both HBL and NBBL so increase in Non Performing Asset might or might not decrease Non Banking Asset.
- xi. As per the trend analysis loans and advances of HBL is expected to show increasing trend and reach as high as Rs.21.624.28 (in Million) whereas in case of NBBL the Loans and Advances will have fluctuating trend with that is it will increase in first year and then start decreasing p to Rs.7.703.06 until fiscal year 2009/10.
- xii. Similarly, Non Performing Asset of HBL. is expected to have decreasing trend in coming three fiscal years whereas in case of NBBL it is expected to show increasing trend and rise as high as Rs.241 1.14 (in Million).
- xiii. Likewise, Net Profit trend of both sample banks is expected to have increasing trend in coming three fiscal years viz: 20047/08, 2008/09 and 2009/10. However, the net profit figure of NBBL is comparatively very lower than that of HBL.
- xiv. Loan Loss Provision is expected to have increasing trend in case of HBL in coming fiscal years with the Loan Loss Provision rising as high as Rs.1353.52 (in

Million). Whereas in case of NBBL the Loan loss Provision is expected to have fluctuating trend. It will increase in first fiscal year i.e. 2007/08 and then start decreasing.

- xv. Non Banking Asset of HBL is expected to decrease in coming three fiscal years viz: 2007/08, 2008/09 and 2009/10 whereas in case of NBL it is expected to increase in fiscal year 2007/08 i.e. up to Rs.143.20 (in Million) and then starts decreasing to Rs.94.57 (in Million) until fiscal year 2009/10.
- xvi. According to the primary survey, all of the employees of HBL were agreed with that they had credit related problems in their bank. More than 60% respondents had knowledge about the status of non-performing assets and loan loss provision kept by their bank. More than 90% respondents were agreed with that there is positive relationship between non-performing assets and loan loss provision. All of the respondents voted in favour of there should be needed to change in the process of recovering bad loan. But only 46% respondents replied that HBL is following NRB Directives sincerely during the non-performing loan categorization time.
- xvii. According to the primary survey, all of the respondents of NBBL agreed with the } had credit related problems in their bank. More than 80% employees had knowledge about the status of non-performing loan and loan loss provision kept by their bank because of management intervention by NRB. More than 66% respondents were agreed on that there is positive relationship between non-performing assets and loan loss provision. But can percent respondents agreed on the matter of that change should be brought in the process of recovering bad loan. Only 40% employees viewed that NBBL follows the NRB Directives sincerely during the categorization of NPA. Rest percentage did not agreed with that option.
- xviii. The main credit related problems were lack of credit information bureau of credit customers, more valuation of collateral and bargaining on interest rate etc.
- xix. HBL as well as NBBL will provide business loan and consumer loan than consortium loan, priority sector loan, deprived sector loan and personal loan because of high benefit and adequate demand.
- xx. As per the survey respondents financial strength and security offered are given top

priority while floating loan. Likewise personal integrity of borrower and portfolio management is also taken into consideration while floating loan. However, relationship of client with top authority is least emphasized or is not the factor taken into due account for floating of loan.

- xxi. Among the different types of loans availed to borrowers, business loan has more chances of turning into bad loan in comparison to personal loan, consumer loan, consortium loan , priority sector and deprived sector loan. On the other hand, if we analyze sector wise loan with more chances of being NPA. it is loan availed to industry which is more likely to be NPA hence has been ranked 1 by the survey respondents. Similarly trade sector, service sector and other sector loan has been ranked in order then after.
- xxii. The survey respondents have identified that high interest rate is the main internal reason for turning good loan into bad. Then after, collusion and cartelling, weak monitoring, liberal credit policy and bad intension of borrower had been ranked consecutively.
- xxiii. The survey respondents of both banks totally agree that economic and industrial recession is the main external reason for NPA increment. Similarly, respondents agree that with lack of monitoring and supervision form NRB ad inconsistent government policy also plays significant role for growth of NPA. On the other hand respondents totally disagree with the reason that high and conservative provisioning requirement has caused for increment in level of NPA and loans floated under the external and political pressure has led to growth of NPA.
- xxiv. The survey respondents of sample banks agree that there should he change in the process of recovering bad loan. The respondents suggested publishing the names of defaulters in the daily national newspaper will be the best way of recovering bad loan as this will isolate the individual from society. Selling of the collateral held with the bank and blacklisting the client with Credit Information Center are some other suggestions given by the respondents.
- xxv. It was found that regular follow up is very necessary for recovering bad loans and sample banks normally start follow up within seven days of overdue.

## CHAPTER-V

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Summary

The study evaluates the Non Performing Assets of commercial banks with reference of Himalayan Bank Limited and Nepal Bangladesh Bank Limited. The researcher has tried to find the effect of Non Performing Asset on profitability of banks and the reasons behind the creation of Non Performing Assets. The study also oversees the relationship of Non Performing Assets with Total Loans and Advances, profitability and Non Banking Assets and finally the researcher has also tried to predict the trend of Loans and Advances, Non Performing Asset, Loan Loss Provision, Net Profit and Non Banking Asset. Non Performing Asset is the major issue for any commercial bank as it adversely affects the profitability of banks by blocking the capital. Another major issue is the management of Non Performing Assets. Commercial Banks are forced to undertake rigorous recovery actions which ultimately may cause auctioning of the security held under the bank's custody. Due to less participation of the bidder or due to less bid amount of the collateral under the auction the banks are compelled to accept the security on its own name. Continuous acceptance of the ownership led to piling up of the volume of Non Banking Asset. There are several reasons for conversion of good loan into bad loan. Among the various reasons the researcher has tried to identify the most emphasized reasons. For this the researcher has prepared questionnaire and distributed it to the employees of the banks. Questions of both open end and closed end have been included in the questionnaire. In some cases primary data are also taken from verbal interviews with the officers of the concerned banks, their clients and general public too. The researcher has collected all the secondary data by consulting books, booklets, magazines, newspapers, published and unpublished dissertations etc.

In this study simple financial tools viz ratio analysis, correlation Coefficient and trend

analysis have been used to compare the results of the sample banks. For this the data of only seven fiscal years that is from 2000/01 to 2006/07 have been covered. It is anticipated that this research will work as the partial fulfillment of requirement of Master's Degree and will be of benefit to general reader, new students, research department of banks and general public. The researcher summarized the whole task into five chapters including this chapter.

## **5.2 Conclusion**

Non-Performing Assets is the yardstick to measure the performance of the banks. The lower the figure of Non-Performing Assets reflects better the future of the bank. Based on the analysis of the data collected it was found that NBBL has comparatively higher amount of bad credit than HBL. Though the banks have been undertaking recovery actions against defaulters NBBL has average NPA of 17 percentage whereas HBL has only 9 percentage of bad credit in an average. Higher Non Performing Asset means more blockage of capital and it requires the banks to make higher amount of provisioning. Maintenance of Loan Loss Provision is necessary to mitigate any future loss that may arise due to default of loan. However, this ultimately decrease the net profit of the banks. The researcher has found that an average ROA of NBBL is 0.48 percentage whereas HBL has maintained average ROA of 1.25 percentage. Similarly, when NPA to Net Profit of the bank ratio is calculated it is found that mean ratio of NBBL is as high as 62.95 times whereas in case of HBL it is 3.60 times only.

The researcher has also tried to find the relationship between Non Performing Asset and Net profit. In lay man's term Non Performing Asset decreased the net profit as it requires the maintenance of provisioning. Correlation Coefficient of Non Performing Asset with net profit for NBBL and HBL is both found to be negative which means Non Performing Assets and Net profit is correlated in inverse direction. When significance of error was calculated it was found that this relationship is likely to be true in case of HBL only. Similarly, correlation coefficient of Loans and Advances with Non Performing Asset of both NBBL and HBL is also found negative. It means creation of Non Performing Asset and avilment of new loans is inversely related., When significance of error is calculated

this negative relationship is likely to be true in case of NBBL only. The researcher has also tried to find the relationship of Non Performing Asset and Non Banking Asset of sample banks. Borrowers put some fixed assets as security while borrowing loans. When loan turns into bad credit the bank tries to recover the bad loan by selling the security held under its custody. However if no buyer comes to bid the security or if the price offered by the bidder is not acceptable to the bank the bank has to accept the security in its own name. Such fixed assets are then termed as Non Banking Asset. The researcher has tried to find the relationship of Nonperforming Asset with Non Banking Asset which is found to be negative. However, this relationship is not likely to be true as per the significance of the error.

The trend analysis of Loan and Advances shows that HBL is expected to show increasing trend in coming fiscal year whereas in case of NBBL Loan and Advances is expected to have fluctuating trend. NPA of HBL is expected to have decreasing trend in coming fiscal years whereas it is expected to show increasing trend in case of NBBL. Likewise, Net Profit of both sample banks is expected to have increasing trend in coming fiscal year. However, the figure of Net profit of NBBL is relatively very low than that of HBL. Though NPA of both sample banks is expected to have decreasing trend in coming fiscal year, loan loss provisioning for HBL is expected to have increasing trend in coming fiscal year. Whereas in case of NBBL, Loan Loss Provisioning figure is expected to have fluctuating trend. Similarly, Non-Banking Assets of HBL is expected to have decreasing trend in coming fiscal years. Whereas in case of NBBL, Non-Banking Assets is expected to show fluctuating trend.

The primary data was collected by distributing questionnaires with employees of sample banks. It was found that more than 50% of employees were fully aware of the credit related problems of banks. The major credit related problems identified were lack of credit in formations of clients, more valuation of collateral and bargaining on interest rate. Both banks give more priority on business loan and consumer loan than consortium loan, priority sector loan and personal loan. While, availing credit the banks give priority to financial strength and positioning and marketability of security offered. Personal

integrity of borrower, relationship of the client with top authority is least emphasized. While floating loan out of different types of loans business loan has more chances of turning into bad loan in comparison to personal loan, consumers loan, priority sector loan and deprived sector loan. On other hand the sectorwise loan with more chances of turning into bad, industry loan hold the first number. Similarly, trade sector, services sector and other sector loan has been ranked in order then after. Among the various internal causes for creation of NPA, high interest rate has been identified as the main reason. Then after collusion and cartelling, weak monitoring, liberal credit policy and bad intension of borrower has been ranked consecutively. Similarly, the major external reasons for creation of NPA have been identified as economic and industrial recession. Lack of monitoring and supervision from NRB, inconsistent government policy, high and conservative credit policy regarding provisioning requirement, political pressure for availing loan and been ranked in order then after. The survey respondents also agreed on need of changing recovery process by the banks for speedy recovery of NPA. Publishing the names of defaulters in the daily national newspaper, selling the collateral, blacklisting the client with credit information center are some suggestions given by survey respondents for recovery of bad loan. Regular follow up is also one of the other suggestions for recovering bad loan.

### **5.3 Recommendations**

Based on the above analysis and major findings deduced from the study of impact of non-performing assets with respect to HBL and NBBL, we can have the following suggestions on behalf of the banks as:

1. Both banks should have to make effort in order to minimize their non-performing credits, NBBL, especially, must be more conscious on this part. Making credit policy more transparent, standard and less risky would increase the quality of credit.
2. Both banks should try to increase their profitability by investing in more profitable sectors, and by increasing the quality of their extended credits. They should have



to investigate thoroughly the wide range of investment opportunities in the market in order to improve their profitability situation. Especially, NBBL should immediately be more conscious on this part as it is having continuous loss over the years.

3. As formation of price is a very complex process, some extremely outstanding sectors such as management efficiency, profitability status, and future perspective bank's investment strategy, etc should be improved. NBBL must have to follow this scheme immediately.
4. There is direct and inverse relationship of NPA on profitability. That means increase in NPA decreases the profitability and decrease in NPA increases the profitability of bank because of loan loss provision. Therefore, both banks should minimize its NPA level so that they are able to increase profitability.
5. Loans and Advances being the major source of income the sample banks should always try to increase its income by investing in the productive sectors, for it due care should be taken while flowing loans. Detailed credit analysis of the business and borrowers should be undertaken so that the loan does not go bad and save any default on part from borrowers. Banks should always keep adequate amount of Loan Loss Provision so as to mitigate any loss from the default of loan that may arise in the future. However, as Loans Loss Provision decreases the profit the banks should maintain only balance amount of provision so that other stakeholders can also be enjoy the share of bank's income in form of dividend, bonus etc. Non Banking Assets being the mortgaged property of the defaulters which could not be disposed off by the banks. the banks should always try to keep it as low as possible as this is not going to generate any income rather will increase the banks expenses in form of guard's cost, electricity cost, tax expenses etc. Hence the banks should timely dispose such Non Banking Assets or lake due care while accepting any property as mortgage for availing loans.
6. As economic and industrial recession and inconsistency of government policy plays major role in converting good loan into bad loan, the same should be duly taken into consideration wile floating loan and aggressive loan disbursement in only one sector should be controlled.
7. Similarly. HBL and NBBL should take due care while charging interest on loans.

High interest rate has been found to be major cause of turning good loan into bad loan. So, while assessing the borrowers' credibility due care should be taken to check the interest paying ability of the borrower, intension of borrower, collateral security provided by the borrower should also be checked properly to avoid any inconvenience while in future in case of default of loan . Policy of strict monitoring should be followed to check default of loan.

8. Similarly, initiating follow ups for loan interest payment as soon as it becomes due. Blacklisting of borrowers with credit information center could also help in controlling increase in NPA.
9. In regard to NBA, establishment of Asset Recovery Management Company would be of great help. This recently established company could help bank to dispose off NBA by purchasing and acquiring assets. It is also established with an objective to recover overdue loans, facilitating banks and financial institute to manage NPA and to assist in restructuring of loans and advances.

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## Appendix II

### Worksheet for calculation of Mean, Standard Deviation and Covariance of Nepal Bangladesh Bank Ltd considering NPA and Loan and Advances

| Year    | NPA     | L&A     | Ratio (X) | (X - $\bar{X}$ ) | (X - $\bar{X}$ ) <sup>2</sup> |
|---------|---------|---------|-----------|------------------|-------------------------------|
| 2000/01 | 613.77  | 7358.74 | 0.08      | -0.08            | 0.0070                        |
| 2001/02 | 1275.22 | 8083.99 | 0.16      | -0.01            | 0.0001                        |
| 2002/03 | 1013.27 | 7964.51 | 0.13      | -0.04            | 0.0016                        |
| 2003/04 | 1042.18 | 9644.69 | 0.11      | -0.06            | 0.0035                        |
| 2004/05 | 1832.94 | 9626.91 | 0.19      | 0.02             | 0.0005                        |
| 2005/06 | 1040.25 | 8478.78 | 0.12      | -0.04            | 0.0020                        |
| 2006/07 | 2235.87 | 5854.58 | 0.38      | 0.21             | 0.0460                        |
|         |         | Total   | 1.17      | 0.00             | 0.0608                        |

$$\text{Mean } \frac{\sum X}{N} = 0.17$$

$$\text{S.D () } \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}} = 0.1007$$

$$\text{C.V } \frac{\sigma}{\bar{X}} = 0.6016$$

Here,

L&A = Loans and advances

S.D = Standard Deviation

C.V = Coefficient of Variance

**Appendix III**

**Worksheet for calculation of Mean, Standard Deviation and Covariance of Himalayan Bank Ltd considering NPA and L&A**

| Year    | NPA     | L&A         | Ratio (X) | (X - $\bar{X}$ ) | (X - $\bar{X}$ ) <sup>2</sup> |
|---------|---------|-------------|-----------|------------------|-------------------------------|
| 2000/01 | 1090.84 | 9015.5472   | 0.12      | -0.05            | 0.0021                        |
| 2001/02 | 1156.04 | 9557.138    | 0.12      | -0.05            | 0.0022                        |
| 2002/03 | 1092.84 | 10844.599   | 0.10      | -0.07            | 0.0044                        |
| 2003/04 | 1147.46 | 12919.631   | 0.09      | -0.08            | 0.0062                        |
| 2004/05 | 1001.35 | 123451.1683 | 0.07      | 0.09             | 0.0086                        |
| 2005/06 | 1040.76 | 15761.97    | 0.07      | -0.10            | 0.0103                        |
| 2006/07 | 641.62  | 17793.7239  | 0.04      | 0.13             | 0.0172                        |
|         |         | Total       | 0.61      | -0.56            | 0.0510                        |

$$\text{Mean} = \frac{\sum X}{N} = 0.09$$

$$\text{S.D ()} = \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}} = 0.03$$

$$\text{C.V} = \frac{\sigma}{\bar{X}} = 0.35$$

Here,

L&A = Loans and advances

S.D = Standard Deviation

C.V = Coefficient of Variance



Appendix IV

**Worksheet for calculation of Mean, Standard Deviation and Covariance of Nepal  
Bangladesh Bank Ltd considering NPA and Total Asset**

| Year    | NPA     | Total Asset | Ratio | $(X - \bar{X})$ | $(X - \bar{X})^2$ |
|---------|---------|-------------|-------|-----------------|-------------------|
| 2000/01 | 613.77  | 10593.92    | 0.06  | -0.11           | 0.0120            |
| 2001/02 | 1275.22 | 11102.23    | 0.11  | -0.05           | 0.0028            |
| 2002/03 | 1013.27 | 11932.61    | 0.08  | -0.08           | 0.0068            |
| 2003/04 | 1042.18 | 14257.97    | 0.07  | -0.09           | 0.0089            |
| 2004/05 | 1832.34 | 12377.15    | 0.14  | -0.03           | 0.0009            |
| 2005/06 | 1040.35 | 14481.99    | 0.07  | -0.10           | 0.0091            |
| 2006/07 | 2235.87 | 10118.11    | 0.22  | -0.05           | 0.0029            |
|         |         | Total       | 0.76  | -0.87           | 0.0433            |

$$\text{Mean} = \frac{\sum X}{N} = 0.11$$

$$\text{S.D ()} = \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}} = 0.0567$$

$$\text{C.V} = \frac{\sigma}{\bar{X}} = 0.5209$$

Here,

NPA = Non Performing Asset

S.D = Standard Deviation

C.V = Coefficient of Variance

### Appendix V

**Worksheet for calculation of Mean, Standard Deviation and Covariance of Himalayan  
Bank Ltd considering NPA and Total Asset**

| Year    | NPA     | L&A       | Ratio (X) | (X - $\bar{X}$ ) | (X - $\bar{X}$ ) <sup>2</sup> |
|---------|---------|-----------|-----------|------------------|-------------------------------|
| 2000/01 | 1090.84 | 18,870.80 | 0.06      | -0.11            | 0.0120                        |
| 2001/02 | 1156.04 | 20,672.43 | 0.06      | -0.11            | 0.0124                        |
| 2002/03 | 1092.84 | 23,279.34 | 0.05      | -0.12            | 0.0145                        |
| 2003/04 | 1147.46 | 24,762.02 | 0.05      | -0.12            | 0.0146                        |
| 2004/05 | 1001.35 | 27,418.16 | 0.04      | -0.13            | 0.0171                        |
| 2005/06 | 1040.76 | 29,460.39 | 0.04      | -0.13            | 0.0174                        |
| 2006/07 | 641.62  | 33,519.14 | 0.02      | -0.15            | 0.0220                        |
|         |         | Total     | 0.30      | -0.87            | 0.1101                        |

$$\text{Mean} = \frac{\sum X}{N} = 0.04$$

$$\text{S.D ()} = \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}} = 0.01$$

$$\text{C.V} = \frac{\sigma}{\bar{X}} = 0.32$$

Here,

NPA = Non Performing Asset

S.D = Standard Deviation

C.V = Coefficient of Variance

**Appendix VI**

**Worksheet for calculation of Mean, Standard Deviation and Covariance of Nepal Bangladesh Bank Ltd considering Loan Loss Provision to Non-Performing Asset**

| Year    | LLP     | L&A     | Percentage (X) | (X - $\bar{X}$ ) | (X - $\bar{X}$ ) <sup>2</sup> |
|---------|---------|---------|----------------|------------------|-------------------------------|
| 2000/01 | 283.93  | 613.77  | 46.26          | 46.09            | 2124.5326                     |
| 2001/02 | 451.57  | 1275.22 | 35.41          | 35.24            | 1242.1252                     |
| 2002/03 | 713.53  | 1013.27 | 70.42          | 70.25            | 4935.2309                     |
| 2003/04 | 995.95  | 1042.18 | 95.56          | 95.40            | 9100.54 5                     |
| 2004/05 | 1839.22 | 1832.94 | 100.34         | 100.18           | 10035.0850                    |
| 2005/06 | 65.33   | 1040.35 | 6.28           | 6.1 1            | 37.3598                       |
| 2006/07 | 62.99   | 2235.87 | 2.82           | 2.65             | 7.0220                        |
|         |         | Total   | 357.09         | 355.92           | 27481.8970                    |

$$\text{Mean} = \frac{\sum X}{N} = 51.01$$

$$\text{S.D ()} = \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}} = 39.5489$$

$$\text{C.V} = \frac{\sigma}{X} = 0.7753$$

Here,

LLP = Loans Loss Provision

S.D = Standard Deviation

C.V = Coefficient of Variance

**Appendix VII**

**Worksheet for calculation of Mean, Standard Deviation and Covariance of Himalayan Bank Ltd considering Loan Loss Provision to Non-Performing Asset**

| Year    | LLP      | L&A      | Percentage (X) | (X - $\bar{X}$ ) | (X - $\bar{X}$ ) <sup>2</sup> |
|---------|----------|----------|----------------|------------------|-------------------------------|
| 2000/01 | 344.48   | 1,090.84 | 31.58          | 31.41            | 986.7473                      |
| 2001/02 | 643.41   | 1,156.04 | 55.66          | 55.49            | 3079.0674                     |
| 2002/03 | 842.75   | 1,092.84 | 77.12          | 76.95            | 5921.0487                     |
| 2003/04 | 967.76   | 1,147.46 | 84.34          | 84.17            | 7084.9130                     |
| 2004/05 | 1,026.65 | 1,001.35 | 102.53         | 102.36           | 77.4219                       |
| 2005/06 | 1,119.42 | 1,040.76 | 107.56         | 107.39           | 11532.7157                    |
| 2006/07 | 795.73   | 641.62   | 124.02         | 123.85           | 15339.3064                    |
|         |          | Total    | 582.80         | 581.62           | 54421.2202                    |

$$\text{Mean} = \frac{\sum X}{N} = 83.26$$

$$\text{S.D ()} = \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}} = 31.87$$

$$\text{C.V} = \frac{\sigma}{\bar{X}} = 0.38$$

Here,

LLP = Loans Loss Provision

S.D = Standard Deviation

C.V = Coefficient of Variance

Appendix VIII

**Worksheet for calculation of Mean, Standard Deviation and Covariance of Nepal  
Bangladesh Bank Ltd considering Net Profit to Total Asset ratio**

| Year    | Net Profit | Total Asset | Percentage (X) | (X - $\bar{X}$ ) | (X - $\bar{X}$ ) <sup>2</sup> |
|---------|------------|-------------|----------------|------------------|-------------------------------|
| 2000/01 | 198.75     | 10593.92    | 1.88           | 1.71             | 2.9198                        |
| 2001/02 | 65.78      | 11102.23    | 0.59           | 0.43             | 0.1807                        |
| 2002/03 | 71.5       | 11932.61    | 0.60           | 0.43             | 0.1865                        |
| 2003/04 | 2.64       | 14257.97    | 0.02           | -0.15            | 0.00222                       |
| 2004/05 | -749.54    | 13277.15 1  | -5.65          | -5.85            | 33.7873                       |
| 2005/06 | 291.51     | 14481.99    | 2.01           | 1.85             | 3.4061                        |
| 2006/07 | 392.7      | 10118.11    | 3.88           | 3.71             | 13.7924                       |
|         |            | Total       | 3.34           | 2.16             | 54.2950                       |

$$\text{Mean } \frac{\sum X}{N} = 0.48$$

$$\text{S.D () } \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}} = 2.9896$$

$$\text{C.V } \frac{\sigma}{\bar{X}} = 6.2750$$

Here,

S.D = Standard Deviation

C.V= Coefficient of Variance

**Appendix IX**

**Worksheet for calculation of Mean, Standard Deviation and Covariance of Himalayan Bank Ltd considering Net Profit to Total Asset ratio**

| Year    | Net Profit | Total Asset | Percentage (X) | $(X - \bar{X})$ | $(X - \bar{X})^2$ |
|---------|------------|-------------|----------------|-----------------|-------------------|
| 2000/01 | 277.04     | 18,870.80   | 1.47           | 1.30            | 1.6919            |
| 2001/02 | 235.02     | 20,672.43   | 1.14           | 0.97            | 0.9400            |
| 2002/03 | 212.13     | 23,279.34   | 0.91           | 0.74            | 1.5534            |
| 2003/04 | 263.05     | 24,762.02   | 1.06           | 0.89            | 0.8010            |
| 2004/05 | 308.28     | 27,418.16   | 1.12           | 0.96            | 0.9158            |
| 2005/06 | 457.46     | 29,460.39   | 1.55           | 1.39,           | 1.9194            |
| 2006/07 | 491.82     | 33,519.14   | 1.47           | 1.30            | 1.6898            |
|         |            | Total       | 8.72           | 7.55            | 8.5 114           |

$$\text{Mean } \frac{\sum X}{N} \quad 1.25$$

$$\text{S.D () } \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}} \quad 0.25$$

$$\text{C.V } \frac{\sigma}{\bar{X}} \quad 0.20$$

Here,

S.D = Standard Deviation

C.V= Coefficient of Variance

**Appendix X**

**Worksheet for calculation of Mean, Standard Deviation and Covariance of Nepal  
Bangladesh Bank Ltd considering Net Profit to Shareholders Equity ratio**

| Year    | Net Profit | Shareholders<br>Equity | Percentage (X) | (X - $\bar{X}$ ) | (X - $\bar{X}$ ) <sup>2</sup> |
|---------|------------|------------------------|----------------|------------------|-------------------------------|
| 2000/01 | 198.75     | 595.12                 | 33.40          | 33.23            | 1104.1849                     |
| 2001/02 | 65.78      | 626.5                  | 10.50          | 10.33            | 106.7555                      |
| 2002/03 | 71.5       | 683.93                 | 10.45          | 10.29            | 105.8211                      |
| 2003/04 | 2.64       | 656.58                 | 0.40           | 0.23             | 0.0551                        |
| 2004/05 | -749.54    | 234.58                 | -319.52        | -319.69          | 102202.7215                   |
| 2005/06 | 291.51     | 526.09                 | 55.41          | 55.24            | 3051.8248                     |
| 2006/07 | 392.7      | -1169.89               | -33.57         | -33.73           | 1138.0236                     |
|         |            | Total                  | -242.93        | -244.10          | 107709.3865                   |

$$\text{Mean } \frac{\sum X}{N} = -34.70$$

$$\text{S.D () } \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}} = 128.5803$$

$$\text{C.V } \frac{\sigma}{\bar{X}} = -3.7051$$

Here,

S.D = Standard Deviation

C.V= Coefficient of Variance

**Appendix XI**

**Worksheet for calculation of Mean, Standard Deviation and Covariance of Himalayan Bank Ltd considering Net Profit to Shareholders Equity ratio**

| Year    | Net Profit | Shareholders Equity | Percentage (X) | (X - $\bar{X}$ ) | (X - $\bar{X}$ ) <sup>2</sup> |
|---------|------------|---------------------|----------------|------------------|-------------------------------|
| 2000/01 | 277.04     | 720.59              | 38.45          | 38.28            | 1465.2725                     |
| 2001/02 | 235.02     | 858.11              | 27.39          | 27.22            | 740.9830                      |
| 2002/03 | 212.13     | 1,063.13            | 19.95          | 19.79            | 391.4784                      |
| 2003/04 | 263.05     | 1,324.17            | 19.87          | 19.71            | 388.0209                      |
| 2004/05 | 308.28     | 1,541.75            | 20.00          | 19.83            | 393.1434                      |
| 2005/06 | 457.46     | 1,766.18            | 25.90          | 25.73            | 662.2225                      |
| 2006/07 | 491.82     | 2,146.50            | 22.91          | 22.75            | 517.3550                      |
|         |            | Total               | 174.46         | 173.29           | 4558.4757                     |

$$\text{Mean } \frac{\sum X}{N} = 24.92$$

$$\text{S.D () } \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}} = 6.69$$

$$\text{C.V } \frac{\sigma}{\bar{X}} = 0.27$$

Here,

S.D = Standard Deviation

C.V= Coefficient of Variance



**Appendix XII**

**Worksheet for calculation of Mean, Standard Deviation and Covariance of Nepal  
Bangladesh Bank Ltd considering Non Performing Asset to Net Profit ratio**

| Year    | NPA     | Net Profit | Ratio  | $(X - \bar{X})$ | $(X - \bar{X})^2$ |
|---------|---------|------------|--------|-----------------|-------------------|
| 2000/01 | 613.77  | 198.75     | 3.09   | 2.92            | 8.5311            |
| 2001/02 | 1275.22 | 65.78      | 19.39  | 19.22           | 369.6164          |
| 2002/03 | 1013.27 | 71.5       | 14.17  | 14.00           | 196.1193          |
| 2003/04 | 1042.18 | 2.64       | 394.77 | 394.60          | 55707.4269        |
| 2004/05 | 1832.94 | 0          |        | -0.7            | 0.0280            |
| 2005/06 | 1040.35 | 291.51     | 3.57   | 3.40            | 11.5701           |
| 2006/07 | 2235.87 | 392.7      | 5.69   | 5.53            | 30.5393           |
|         |         | Total      | 440.67 | 439.50          | 156323.5765       |

$$\text{Mean} = \frac{\sum X}{N} = 62.95$$

$$\text{S.D} () = \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}} = 157.5470$$

$$\text{C.V} = \frac{\sigma}{X} = 2.5026$$

Here,

S.D = Standard Deviation

C.V= Coefficient of Variance

**Appendix XIII**

**Worksheet for calculation of Mean, Standard Deviation and Covariance of Himalayan Bank Ltd considering Non Performing Asset to Net Profit ratio**

| Year    | NPA      | Net Profit | Ratio | $(X - \bar{X})$ | $(X - \bar{X})^2$ |
|---------|----------|------------|-------|-----------------|-------------------|
| 2000/01 | 1,090.84 | 277.04     | 3.94  | 3.77            | 14.2138           |
| 2001/02 | 1,156.04 | 235.02     | 4.92  | 4.75            | 22.5766           |
| 2002/03 | 1,092.84 | 212.13     | 5.15  | 4.98            | 24.8446           |
| 2003/04 | 1,147.46 | 263.05     | 4.36  | 4.19            | 17.5959           |
| 2004/05 | 1,001.35 | 308.28     | 3.25  | 3.08            | 9.4918            |
| 2005/06 | 1,040.76 | 457.46     | 2.28  | 2.11            | 4.4426            |
| 2006/07 | 641.62   | 491.82     | 1.30  | 1.14            | 1.2933            |
|         | -        | Total      | 25.20 | 24.30           | 94.4585           |

$$\text{Mean } \frac{\sum X}{N} \quad 3.60$$

$$\text{S.D () } \sqrt{\frac{\sum (Xn - \bar{X})^2}{N-1}} \quad 1.41$$

$$\text{C.V } \frac{\sigma}{X} \quad 0.39$$

Here,

S.D = Standard Deviation

C.V= Coefficient of Variance

**Appendix XIV**

**Worksheet for calculation of Mean, Standard Deviation and Covariance of Nepal  
Bangladesh Bank Ltd considering Non Banking Assets Total Assets ratio in percentage**

| Year    | NPA    | Net Profit | Ratio | $(X - \bar{X})$ | $(X - \bar{X})^2$ |
|---------|--------|------------|-------|-----------------|-------------------|
| 2000/01 | 219.05 | 10593.92   | 2.07  | 1.90            | 3.6113            |
| 2001/02 | 244.5  | 11102.23   | 2.20  | 2.03            | 4.1409            |
| 2002/03 | 466.94 | 11932.61   | 3.91  | 3.75            | 14.0310           |
| 2003/04 | 270.34 | 14257.97   | 1.90  | 1.73            | 2.9885            |
| 2004/05 | 147.36 | 13277.15   | 1.11  | 0.94            | 0.8884            |
| 2005/06 | 220.16 | 14481.99   | 1.52  | 1.35            | 1.8303            |
| 2006/07 | 114.87 | 10118.11   | 1.14  | 0.97            | 0.9369            |
|         |        | Total      | 25.20 | 24.03           | 94.4585           |

$$\text{Mean } \frac{\sum X}{N} = 1.98$$

$$\text{S.D () } \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}} = 0.9560$$

$$\text{C.V } \frac{\sigma}{\bar{X}} = 0.4833$$

Here,

NBA = Non Banking Assets

S.D = Standard Deviation

C.V= Coefficient of Variance

**Appendix XV**

**Worksheet for calculation of Mean, Standard Deviation and Covariance of I Himalayan Bank Ltd considering Non Banking Asset to Total Assets ratio in percentage**

| Year    | NPA   | Net Profit | Ratio | $(X - \bar{X})$ | $(X - \bar{X})^2$ |
|---------|-------|------------|-------|-----------------|-------------------|
| 2000/01 | 39.39 | 18.870.80  | 0.21  | 0.04            | 0.0017            |
| 2001/02 | 41.19 | 20,672.43  | 0.20  | 0.03            | 0.0010            |
| 2002/03 | 36.46 | 23.279.34  | 0.16  | -0.01           | 0.0001            |
| 2003/04 | 36.27 | 24.762.02  | 0.15  | -0.02           | 0.0004            |
| 2004/05 | 31.93 | 27.418.16  | 0.12  | -0.05           | 0.0026            |
| 2005/06 | 42.22 | 29.460.39  | 0.14  | -0.02           | 0.0006            |
| 2006/07 | 40.10 | 33,519.14  | 0.12  | -0.05           | 0.0023            |
|         |       | Total      | 1.09  | -0.08           | 0.0087            |

$$\text{Mean } \frac{\sum X}{N} \quad 0.16$$

$$\text{S.D () } \sqrt{\frac{\sum (X_n - \bar{X})^2}{N-1}} \quad 0.04$$

$$\text{C.V } \frac{\sigma}{\bar{X}} \quad 0.23$$

Here,

NBA = Non Banking Assets

S.D = Standard Deviation

C.V= Coefficient of Variance

### Appendix XVI

#### Trend Analysis of Loans and Advances of NBBL

| Year    | X  | L & A (Y) | XY      | X <sup>2</sup> |
|---------|----|-----------|---------|----------------|
| 2000/01 | 1  | 7358.74   | 7358.74 | 1              |
| 2001/02 | 2  | 8083.99   | 16168   | 4              |
| 2002/03 | 3  | 7964.51   | 23893.5 | 9              |
| 2003/04 | 4  | 9644.69   | 38578.8 | 16             |
| 2004/05 | 5  | 9626.91   | 48134.6 | 25             |
| 2005/06 | 6  | 8478.78   | 50872.7 | 36             |
| 2006/07 | 7  | 5854.58   | 40982.1 | 49             |
|         | 28 | 57012.2   | 225988  | 140            |

Here,

|                 |         |
|-----------------|---------|
| n               | 7       |
| ΣX              | 28      |
| ΣY              | 57012.2 |
| ΣXY             | 225988  |
| ΣX <sup>2</sup> | 140     |

$$a = \frac{\Sigma Y}{n} - b \frac{\Sigma X}{n} = 8438.96$$

$$b = \frac{n \Sigma XY - \Sigma X \Sigma Y}{n \Sigma X^2 - (\Sigma X)^2} = -73.59$$

Now the formula derived for trend forecasting is

$$Y = 8438.96 + (-73.59) X$$

If the bank follows the same trend, then in next 3 years the Loans and Advances level of NBBL will be as under

|         |          |
|---------|----------|
| 2007/08 | -7850.24 |
| 2008/09 | 7776.65  |
| 2009/10 | 7703.06  |

## Appendix XVII

### Trend Analysis of Loans & Advances of HBL

| Year    | X  | L & A (Y)   | XY       | X <sup>2</sup> |
|---------|----|-------------|----------|----------------|
| 2000/01 | 1  | 9,015.55    | 9015.547 | 1              |
| 2001/02 | 2  | 9,557.14    | 19114.28 | 4              |
| 2002/03 | 3  | 10,844.60   | 32533.8  | 9              |
| 2003/04 | 4  | 12,919.63   | 51678.52 | 16             |
| 2004/05 | 5  | 13,451.17   | 67255.84 | 25             |
| 2005/06 | 6  | 15,761.98   | 94571.86 | 36             |
| 2006/07 | 7  | 17,793.72   | 124556.1 | 49             |
|         | 28 | 89343.78339 | 398725.9 | 140            |

Here,

$$\begin{aligned}n &= 7 \\ \Sigma X &= 28 \\ \Sigma Y &= 89343.7 \\ \Sigma XY &= 398725.9 \\ \Sigma X^2 &= 140\end{aligned}$$

$$a = \frac{\Sigma Y}{n} - b \frac{\Sigma X}{n} = 6856.14$$

$$b = \frac{n \Sigma XY - \Sigma X \Sigma Y}{n \Sigma X^2 - (\Sigma X)^2} = 1476.81$$

Now the formula derived for trend forecasting is

$$Y = 6856.14 + 1476.81 X$$

If the bank follows the same trend, then in next 3 years the NPA level of NBL will be as under

|         |          |
|---------|----------|
| 2007/08 | 18670.65 |
| 2008/09 | 20147.46 |
| 2009/10 | 21624.28 |

### Appendix XVIII

#### **Trend Analysis of Loan Loss Provision of NBBL**

| Year    | X  | LLP (Y) | XY       | X <sup>2</sup> |
|---------|----|---------|----------|----------------|
| 2000/01 | 1  | 283.93  | 283.93   | 1              |
| 2001/02 | 2  | 451.57  | 903.14   | 4              |
| 2002/03 | 3  | 713.53  | 2140.59  | 9              |
| 2003/04 | 4  | 995.95  | 3983.8   | 16             |
| 2004/05 | 5  | 1839.22 | 9196.1   | 25             |
| 2005/06 | 6  | 65.33   | 391.98 I | 36             |
| 2006/07 | 7  | 62.99   | 440.93   | 49             |
|         | 28 | 4412.52 | 17340.47 | 140            |

Here,

$$\begin{aligned}n & 7 \\ \sum X & 28 \\ \sum Y & 4412.52 \\ \sum XY & 17340.74 \\ \sum X^2 & 140\end{aligned}$$

$$a = \frac{\sum Y}{n} - b \frac{\sum X}{n} = 6856.14$$

$$b = \frac{n \sum XY - \sum X \sum Y}{n \sum X^2 - (\sum X)^2} = -11.06$$

Now the formula derived for trend forecasting is

$$Y = 674.59 + -11.06 X$$

If the bank follows the same trend, then in next 3 years the NPA level of NBL will he as under

|         |           |
|---------|-----------|
| 2007/08 | 586.13    |
| 2008/09 | 2575.0725 |
| 2009/10 | 564.015   |

## Appendix XIX

### Trend Analysis of Loan Loss Provision of HBL

| Year    | X  | LLP (Y)     | XY       | X <sup>2</sup> |
|---------|----|-------------|----------|----------------|
| 2000/01 | 1  | 344.48      | 344.4844 | 1              |
| 2001/02 | 2  | 643.41      | 1286.829 | 4              |
| 2002/03 | 3  | 842.75      | 2528.252 | 9              |
| 2003/04 | 4  | 967.76      | 3871.047 | 16             |
| 2004/05 | 5  | 1,026.65    | 5133.238 | 25             |
| 2005/06 | 6  | 1,119.42    | 6716.499 | 36             |
| 2006/07 | 7  | 795.73      | 5570.088 | 49             |
|         | 28 | 5740.202247 | 25450.44 | 140            |

Here,

|              |          |
|--------------|----------|
| n            | 7        |
| $\Sigma X$   | 28       |
| $\Sigma Y$   | 5740.202 |
| $\Sigma XY$  | 25450.44 |
| $\Sigma X^2$ | 140      |

$$a = \frac{\Sigma Y}{n} - b \frac{\Sigma X}{n} = 464.37$$

$$b = \frac{n \Sigma XY - \Sigma X \Sigma Y}{n \Sigma X^2 - (\Sigma X)^2} = -88.92$$

Now the formula derived for trend forecasting is

$$Y = 464.37 + 88.92 X$$

If the bank follows the same trend, then in next 3 years the Loans and Advances level of HBL will be as under

|         |          |
|---------|----------|
| 2007/08 | 1175.69  |
| 2008/09 | 1264.605 |
| 2009/10 | 1353.521 |



**Appendix XX**

**Trend Analysis of Net Profit of NBBL**

| Year    | X  | Net Profit (Y) | XY      | X <sup>2</sup> |
|---------|----|----------------|---------|----------------|
| 2000/01 | 1  | 198.75         | 198.75  | 1              |
| 2001/02 | 2  | 65.78          | 131.56  | 4              |
| 2002/03 | 3  | 71.5           | 214.5   | 9              |
| 2003/04 | 4  | 2.64           | 10.56   | 16             |
| 2004/05 | 5  | -749.54        | -3747.7 | 25             |
| 2005/06 | 6  | 291.51         | 1749.06 | 36             |
| 2006/07 | 7  | 392.7          | 2748.9  | 49             |
|         | 28 | 273.34         | 1305.63 | 140            |

Here,

|                 |         |
|-----------------|---------|
| n               | 7       |
| ∑X              | 28      |
| ∑Y              | 273.34  |
| ∑XY             | 1305.63 |
| ∑X <sup>2</sup> | 140     |

$$a = \frac{\sum Y}{n} - b \frac{\sum X}{n} = 8.72$$

$$b = \frac{n \sum XY - \sum X \sum Y}{n \sum X^2 - (\sum X)^2} = -7.58$$

Now the formula derived for trend forecasting is

$$Y = 8.72 + 7.58 X$$

If the bank follows the same trend, then in next 3 years the Net Profit level of NBBL will be as under

|         |          |
|---------|----------|
| 2007/08 | 69.37286 |
| 2008/09 | 76.95393 |
| 2009/10 | 84.535   |

## Appendix XXI

### Trend Analysis of Net Profit of HBL

| Year    | X  | Net Profit (Y) | XY       | X <sup>2</sup> |
|---------|----|----------------|----------|----------------|
| 2000/01 | 1  | 277.04         | 277.0402 | 1              |
| 2001/02 | 2  | 235.02         | 470.047  | 4              |
| 2002/03 | 3  | 212.13         | 636.3855 | 9              |
| 2003/04 | 4  | 263.05         | 1052.214 | 16             |
| 2004/05 | 5  | 308.28         | 1541.376 | 25             |
| 2005/06 | 6  | 457.46         | 2744.746 | 36             |
| 2006/07 | 7  | 491.82         | 3442.76  | 49             |
|         | 28 | 2244.801436    | 10164.57 | 140            |

Here,

|                 |          |
|-----------------|----------|
| n               | 7        |
| ∑X              | 28       |
| ∑Y              | 2244.801 |
| ∑XY             | 10164.57 |
| ∑X <sup>2</sup> | 140      |

$$a = \frac{\sum Y}{n} - b \frac{\sum X}{n} = 151.35$$

$$b = \frac{n \sum XY - \sum X \sum Y}{n \sum X^2 - (\sum X)^2} = -42.33$$

Now the formula derived for trend forecasting is

$$Y = 151.35 + 42.33 X$$

If the bank follows the same trend, then in next 3 years the Net Profit level of HBL will be as under

|         |          |
|---------|----------|
| 2007/08 | 490.0235 |
| 2008/09 | 532.3579 |
| 2009/10 | 574.6923 |

## Appendix XXII

### Trend Analysis of Non Banking Asset of NBBL

| Year    | x  | NBA (Y) | XY      | X <sup>2</sup> |
|---------|----|---------|---------|----------------|
| 2000/01 | 1  | 219.05  | 219.05  | 1              |
| 2001/02 | 2  | 244.5   | 489     | 4              |
| 2002/03 | 3  | 466.94  | 1400.82 | 9              |
| 2003/04 | 4  | 270.34  | 1081.36 | 16             |
| 2004/05 | 5  | 147.36  | 736.8   | 25             |
| 2005/06 | 6  | 220.16  | 1320.96 | 36             |
| 2006/07 | 7  | 114.87  | 804.09  | 49             |
|         | 28 | 1683.22 | 6052.08 | 140            |

Here,

$$\begin{aligned}n &= 7 \\ \sum X &= 28 \\ \sum Y &= 1683.22 \\ \sum XY &= 6052.08 \\ \sum X^2 &= 140\end{aligned}$$

$$a = \frac{\sum Y}{n} - b \frac{\sum X}{n} = 337.72$$

$$b = \frac{n \sum XY - \sum X \sum Y}{n \sum X^2 - (\sum X)^2} = -24.31$$

Now the formula derived for trend forecasting is

$$Y = 337.72 + -2421 X$$

If the bank follows the same trend, then in next 3 years the NBA level of NBBL will be as under

|         |          |
|---------|----------|
| 2007/08 | 143.2029 |
| 2008/09 | 118.8886 |
| 2009/10 | 94.57429 |

### Appendix XXIII

#### Trend Analysis of Non Banking Asset of HBL

| Year    | X  | NBA (Y)   | XY       | X <sup>2</sup> |
|---------|----|-----------|----------|----------------|
| 2000/01 | 1  | 39.39     | 39.38666 | 1              |
| 2001/02 | 2  | 41.19     | 82.38331 | 4              |
| 2002/03 | 3  | 36.46     | 109.3698 | 9              |
| 2003/04 | 4  | 36.27     | 145.0608 | 16             |
| 2004/05 | 5  | 31.93     | 159.6484 | 25             |
| 2005/06 | 6  | 42.22     | 253.2903 | 36             |
| 2006/07 | 7  | 40.10     | 280.6879 | 49             |
|         | 28 | 267.54311 | 1069.827 | 140            |

Here,

|                 |          |
|-----------------|----------|
| n               | 7        |
| ΣX              | 28       |
| ΣY              | 267.5431 |
| ΣXY             | 1069.827 |
| ΣX <sup>2</sup> | 140      |

$$a = \frac{\sum Y}{n} - b \frac{\sum X}{n} = 38.27$$

$$b = \frac{n \sum XY - \sum X \sum Y}{n \sum X^2 - (\sum X)^2} = -0.01$$

Now the formula derived for trend forecasting is

$$Y = 38.27 + -0.01 X$$

If the bank follows the same trend, then in next 3 years the NBA level of HBL will be as under

|         |          |
|---------|----------|
| 2007/08 | 38.17112 |
| 2008/09 | 38.15879 |
| 2009/10 | 38.14646 |

**Appendix XXIV**

**Trend Analysis of Non Performing Asset of NBBL**

| Year    | X  | NBA (Y) | XY       | X <sup>2</sup> |
|---------|----|---------|----------|----------------|
| 2000/01 | 1  | 613.77  | 613.77   | 1              |
| 2001/02 | 2  | 1275.22 | 2550.44  | 4              |
| 2002/03 | 3  | 1013.27 | 3039.81  | 9              |
| 2003/04 | 4  | 1042.18 | 4168.72  | 16             |
| 2004/05 | 5  | 1832.94 | 9164.7   | 25             |
| 2005/06 | 6  | 1040.35 | 6242.1   | 36             |
| 2006/07 | 7  | 2235.87 | 15651.06 | 49             |
|         | 28 | 9053.6  | 41430.63 | 140            |

Here,

|                 |          |
|-----------------|----------|
| n               | 7        |
| ΣX              | 28       |
| ΣY              | 9053.6   |
| ΣXY             | 41430.63 |
| ΣX <sup>2</sup> | 140      |

$$a = \frac{\sum Y}{n} - b \frac{\sum X}{n} = 548.20$$

$$b = \frac{n \sum XY - \sum X \sum Y}{n \sum X^2 - (\sum X)^2} = 182.29$$

Now the formula derived for trend forecasting is

$$Y = 548.20 + 186.29 X$$

If the bank follows the same trend, then in next 3 years the NPA level of NBBL will be as under

|         |          |
|---------|----------|
| 2007/08 | 2038.547 |
| 2008/09 | 2225.841 |
| 2009/10 | 2411.135 |

**Appendix XXV**

**Trend Analysis of Non Performing Asset of HBL**

| Year    | X  | NBA (Y)  | XY       | X <sup>2</sup> |
|---------|----|----------|----------|----------------|
| 2000/01 | 1  | 1090.84  | 1090.835 | 1              |
| 2001/02 | 2  | 1156.04  | 2312.083 | 4              |
| 2002/03 | 3  | 1092.84  | 3278.518 | 9              |
| 2003/04 | 4  | 1147.46  | 4589.851 | 16             |
| 2004/05 | 5  | 1001.35  | 5006.737 | 25             |
| 2005/06 | 6  | 1040.76  | 6244.547 | 36             |
| 2006/07 | 7  | 641.62   | 4491.307 | 49             |
|         | 28 | 7170.899 | 27013.88 | 140            |

Here,

|                 |          |
|-----------------|----------|
| n               | 7        |
| ΣX              | 28       |
| ΣY              | 7170.899 |
| ΣXY             | 27013.88 |
| ΣX <sup>2</sup> | 140      |

$$a = \frac{\sum Y}{n} - b \frac{\sum X}{n} = 1262.95$$

$$b = \frac{n \sum XY - \sum X \sum Y}{n \sum X^2 - (\sum X)^2} = -59.63$$

Now the formula derived for trend forecasting is

$$Y = 1262.95 + (-59.63) X$$

If the bank follows the same trend, then in next 3 years the NPA level of NBL will be as under

|         |          |
|---------|----------|
| 2007/08 | 785.8829 |
| 2008/09 | 726.2501 |
| 2009/10 | 666.6173 |

## Appendix XXVI

### Analysis of responses given by employees of HBL

| <b>Particulars</b>  | <b>Yes<br/>%<br/>(No.)</b> | <b>Yes<br/>%<br/>(No.)</b> | <b>Yes<br/>%<br/>(No.)</b> |
|---|----------------------------|----------------------------|----------------------------|
| I there credit related problems in your bank?   | 100<br>(15)                | -<br>-                     | -<br>-                     |
| Do you know about the status of NPA of your bank?   | 60<br>(9)                  | 40<br>(6)                  | -<br>-                     |
| Does your bank categorize the NPA?  | 60<br>(9)                  | 40<br>(6)                  | -<br>-                     |
| Does your bank make provision for loan loss?  | 93.33<br>(14)              | -<br>-                     | 6.67<br>(1)                |
| Do you know relationship between NPA and loan provision?                                  | 93.33<br>(14)              | -<br>-                     | 6.67<br>(1)                |
| Do you see any changes needed in the process of recovering bad loan in your organization? | 100<br>(15)                | -<br>-                     | -<br>-                     |
| Does your organization follow 'NRB Directives' sincerely while categorizing NPA?          | 46.66<br>(7)               | 40<br>(6)                  | 13.34<br>(2)               |

**Appendix XXVII**

**Analysis of responses given by employees of NBBL**

| <b>Particulars</b>  | <b>Yes<br/>%<br/>(No.)</b> | <b>Yes<br/>%<br/>(No.)</b> | <b>Yes<br/>%<br/>(No.)</b> |
|---|----------------------------|----------------------------|----------------------------|
| I there credit related problems in your bank?   | 100<br>(15)                | -<br>-                     | -<br>-                     |
| Do you know about the status of NPA of your bank?   | 80<br>(12)                 | 20<br>(3)                  | -<br>-                     |
| Does your bank categorize the NPA?  | 60<br>(9)                  | 33.33<br>(5)               | 6.67<br>(1)                |
| Does your bank make provision for loan loss?  | 93.33<br>(14)              | -<br>-                     | 6.67<br>(1)                |
| Do you know relationship between NPA and loan provision?                                  | 66.33<br>(14)              | 26.67<br>(4)               | 6.67<br>(1)                |
| Do you see any changes needed in the process of recovering bad loan in your organization? | 100<br>(15)                | -<br>-                     | -<br>-                     |
| Does your organization follow 'NRB Directives' sincerely while categorizing NPA?          | 40<br>(6)                  | 53.33<br>(8)               | 6.67<br>(1)                |



## ANNEX-1

### Questionnaire

Dear respondents (employees),

The following questions have been put forwarded to you for your independent views and opinions about your bank. The responses and views obtained will be kept confidential and will be used for this study purpose only. Please be kind and provide the rational information on the basis of your experience, knowledge and your capacity without any hesitation.  
Thank You.

-----  
(Researcher)

#### **A. Questionnaires for Sample Survey**

1. Is there credit related problems in your bank?

- a. Yes                       b. No                       c. I don't know

2. If yes please mentions top three such problems you have been facing in your organization.

- a. ....  
b. ....  
c. ....

3. Do you know about the meaning of NPA (non-performing assets)?

- a. Yes                       b. No                       c. I don't know

4. Do you know the status of NPA of your bank?

- a. Yes                       b. No                       c. I don't know

5. Does your bank categorize the NPA?

- a. Yes                       b. No                       c. I don't know

6. Does your bank make provision for loan loss?

- a. Yes                       b. No                       c. I don't know

7. Do you know the relationship between NPA and Loan loss provision?

- a. Yes                       b. No                       c. I don't know

8. Please tick marks the types of loan your bank avails.

- i) Business Loan
  - a) Overdraft    b) Demand Loan                      c) Term Loan    d) Others (please mention)
- ii) Consumer Loan
  - a) Hire Purchase                      b) Housing                      c) Education                      d) Others (please mention)
- iii) Consortium Loan
- iv) Deprived Sector Loan
- v) Priority Sector Loan
- vi) Personal Loan
- vii) Others (Please mention)

9. In your opinion which type of loan has more chances of being NPA? Please rank from 1-8. [Note; According to your bank's perspective giving 1 to the most chances of being NPA, 2 to the next and so on.

|                      |                         |                      |                      |
|----------------------|-------------------------|----------------------|----------------------|
| <input type="text"/> | Business Loan           | <input type="text"/> | Consumer Loan        |
| <input type="text"/> | Consortium Loan         | <input type="text"/> | Deprived Sector Loan |
| <input type="text"/> | Priority Sector Loan    | <input type="text"/> | Personal Loan        |
| <input type="text"/> | Others (Please mention) |                      |                      |

.....

10. In your opinion loans floated in which sector has more chances of being NPA? Please rank from 1-8 to the following factors according to your bank's perspective giving 1 to the most chances of being NPA, 2 to the next and so on.

|                      |          |                      |        |
|----------------------|----------|----------------------|--------|
| <input type="text"/> | Industry | <input type="text"/> | Trade  |
| <input type="text"/> | Service  | <input type="text"/> | Others |

11. The factors that your organization takes into consideration for floating loan. Some statements are given below. Please locate your view with tick mark on one field in each case.

| Range  | Totally Agreed (1) | Agreed (2) | Neutral (3) | Disagree (4) | Totally Disagree (5) |
|--|--------------------|------------|-------------|--------------|----------------------|
| a. Financial strength of the borrower is a basis for floating loan.                          |                    |            |             |              |                      |
| b. While floating loan you take basis of security offered.                                   |                    |            |             |              |                      |
| c. Personal integrity of the borrower is taken into consideration.                           |                    |            |             |              |                      |
| d. Relationship of the client with your top authority sometime compels you to float the loan |                    |            |             |              |                      |
| e. While floating loan portfolio management is given priority.                               |                    |            |             |              |                      |
| f. Monitoring and control system is adequately adopted in your organization.                 |                    |            |             |              |                      |

12. The external factors that may cause for NPA growth are given below. Please give your view with tick mark on any one of the following according to their significance in your organization.

| Range  | Totally Agreed | Agreed | Slightly Agreed | Neutral | Slightly Disagreed | Disagreed | Totally Disagreed |
|--|----------------|--------|-----------------|---------|--------------------|-----------|-------------------|
| a. Economic and industrial recession is the cause of increasing NPA.                             |                |        |                 |         |                    |           |                   |
| b. In consistency Govt. policy is one of the causes for NPA increment.                           |                |        |                 |         |                    |           |                   |
| c. High and conservative provisioning requirement has caused for increment in NPA.               |                |        |                 |         |                    |           |                   |
| d. Lacking on monitoring and supervision from NRB has played significance role on NPA increment. |                |        |                 |         |                    |           |                   |
| e. In absence of strong legal provision for  |                |        |                 |         |                    |           |                   |

|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
| loan recovery, there is some lacking, which ultimately leads to high NPA.  |  |  |  |  |  |  |  |
| f. Due to Political, Bureaucratic and external pressure loan is being floated without being choosy and this has cause for NPA increment. |  |  |  |  |  |  |  |

13. Few reasons of turning a god loan into bad loan are listed below. Please mark the reason from on the basis of significance. 1 for the reason with most significance, 2 to the next and so on.

- a. High interest rate.
- b. Short fall on collateral.
- c. Liberal credit policy.
- d. Collusion and cartelling.
- e. Weak monitoring.
- f. Bad intension of borrower.

14. Do you see any changes needed in the process of recovering bad loan in your organization?

- a. Yes
- b. No
- c. I don't know

15. If yes, please mention the process.

- a. ....
- b. ....
- c. ....

16. If no, what action does your organization take to recover NPA? Please mention few,

- a. ....
- b. ....
- c. ....
- d. ....