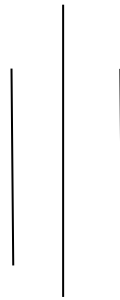# A COMPARATIVE ANALYSIS ON NON-PERFORMING LOAN OF COMMERCIAL BANKS IN NEPAL

SUBMITED BY:

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A
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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE MASTER'S DEGREE IN BUSINESS STUDIES (MBS)

BIRGUNJ, NEPAL

RECOMMENDATION

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And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirements for Master's in Business Studies (M.B.S)

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DECLARATION

I hereby declare that the work reported in this thesis entitled "**A COMPARATIVE ANALYSIS ON NON-PERFORMING LOAN OF COMMERCIAL BANKS IN NEPAL**

submitted to Faculty of Management, Thakur Ram Multiple Campus is my original work. It is done in the form of partial fulfillment of the requirements for the Master Degree in Business Studies under the supervision and guidance of Lecturer Mr. Rajeshwar Pd. Acharya , Faculty of Management, Thakur Ram Multiple Campus, Birgunj.

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LIST OF ABBREVIATIONS

A.D	:	Anno Domini
B.S	:	Bikram Sambat
C. A.	:	Current Asset
C. L.	:	Current Liabilities
C.V	:	Coefficient of Variance
CBS	:	Central Bureau of Statistics
COM	:	Commercial
DMUs	:	Decision Making Units
F/Y	:	Fiscal Year
HBL	:	Himalayan Bank Limited
JVBs	:	Joint Venture Banks
L/C	:	Letter of Credit
LTD	:	Limited
NABIL	:	Nabil Bank Limited
NIDC	:	Nepal Industrial Development Corporation
OBS	:	Off Balance Sheet
P.Er	:	Probable Error
PVT	:	Private
ROA	:	Return on Assets
ROE	:	Return on Equity
S.D	:	Standard Deviation
SCBNL	:	Standard Chartered Bank Nepal Limited

Chapter- I
INTRODUCTION

1. 1 Background of the study :-

We know that Nepal is a developing country. It is situated between India and China. Its economy is all most depend on agriculture. Although dependency on agriculture is decreasing day by day, approximately 81 percent people are still hanging on agriculture. Nepal is land locked country and home place of natural beauty with traces of artifacts. There are so many probabilities of tourism industry. But it has not been developed because of some problems like scarcity of capital, training and technology related to tourism. Because of poor economic condition, Nepal's per capita income is 240 U.S. dollar. So it is essential to modify agro-based economy into industrial based. Nepal has adopted mixed and liberal economic policy with the implicit object to help the state and private on the ground of open and liberal economic system. After the restoration of democracy, the concept of liberalization policy has been implemented in the country. It increases the establishment of many companies, Banks, financial institutions and manufacturing industries. In the emerging scenario of financial and economic reforms with increasing financial deregulation and industrial liberalization, the role of financial sector is very important for the private enterprise. An economy is governed by productive activity involving production, distribution and consumption of goods and services. In the process of production either through large scale or small scale industries, inputs are factors of production namely land, lab our, capital and enterprise. The capital is generated out of saving lending to investment which is a part of financial system of development.

National development of any country depends upon the economic development of that country and economic development is supported by financial institutions of that country. Banks play a vital role as financial institution of any country. Bank came into existence mainly with the objective of collecting the idle funds and mobilizing them to productive sectors causing overall economic development which finally leads to national development of the country. Bank pools the fund scattered in the economy and mobilize them to the productive sector in the form of loans and advances. Bank is a financial institution, which deals with money by accepting various types of deposits, dishbursing loan and rendering various

types of financial services. It is the intermediary between the deficit and surplus of the financial resources.

It can not be denied that the issue of development rests upon the mobilization of resources and banks deals in the process of channelising the available resources in the needed sector. Commercial banks collect deposits from the public and the largest portion of the deposited money is utilized in disbursing loans advances. The balance sheets of the commercial banks reflect deposits constitute a major portion of the liabilities and loans and advances constitute a major portion of the assets. Similarly the profit of the bank depends upon the spread that it enjoys between the interest it receives from the borrowers and that to be paid to the borrowers. An average bank generates 60 to 70 percent of its revenues through its lending activities. The return that the bank enjoys of deposit mobilization through loans and advances is very attractive but they do not come free of cost and free of risk . There is risk inherent in lending potfolio.Banking sector is exposed to number of risk like interest rate risk, liquidity risk, credit risk, borrower's risk etc. Such risks in excessive form had led many banks to go bankrupt in a number of countries.

Among the many risk that the bank faces one of the most critical is the borrower's risk the risk of non-payment of the disbursed loans and advances. Failure to collect money disbursed may sometimes results in the bank's inability to make repayment of the money to the depositors and return to shareholders. The risk involved is so high that it can bring bank to a verge of bankrupty. The bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society they are serving . If a bank behaves irresponsibility, the cost born by the economy is enormous.

1.2 Meaning of Banking:-

Different authors of books have defined bank in various ways. But, there is not actual definition in any books. Thus this researcher has made self-expression about finance company, under the basis of following definitions, given by the writers, in view of banking.

According to Bhuan&Sarita Dahal, "A bank can be defined as a financial department store, which renders a host of financial services besides taking deposits and giving loans."(2002)

According to M.Radhaswami&S.V. Vasudevan, "Banking when properly organized, aids and facilitates growth of trade and industry and hence of national economy.In the modern economy banks are to be considered not as dealers in money but as the leaders of development. Banks are not just the storehouses of the country's wealth but are the reservoirs of resources necessary for economic development."(1991)

According to Gandhi Pandit, "Banking system is volatile and sensitive sectors of national economy, which requires effective monitoring and efficient supervision . Smooth and effective regulation of banking activities is a must for sustainable economic growth of a country. The regulatory agency should always be watchful of banking activities carried out by governmental and non-governmental banking and financial institution."(2002)

In conclusion, due to their central role in the economy, government and central banks try their best to rescue banks from such situations. Hence to protect the banks from such situation and protect depositors and shareholders money, central bank issues various directives and guidelines from time to time with modifications and amendments for the sound regulation of the banking system. All the banks have to abide by the rules and regulation issued by the central bank. Among the many directives, there are ten directives relating to the banking prudential regulation/ norms to be followed by the banks.

As financial institutions for an instance "commercial bank" is one of the essential supporting structure of every economic transaction for the reason they collect saving as a deposit and invest for development of trade, business and industry. Thus, they help to bring about the growth of the nation as a whole.

1.3 Historical Background of Banking:-

The history of banking had been started a long time back. In past, there was reference to the activities of moneychangers in temple of Jerusalem in the New Testament. Similarly, the famous temple of Delphi and Olympia served as the great depositories for peoples' surplus funds and these were the centers of money lending transactions. However as a public enterprise, banking made its first beginning around the middle of twelfth century in Italy. The bank of Venice, founded in 1157 was supposed to be the most ancient bank. Following it were established the Bank of Barcelona and the Bank of Geneva in 1401 and 1407 respectively. In 1609, the Bank of

Amsterdam set up and became very popular. At the end of eighteenth century, the Bank of Venice and the Bank of Geneva continued to operate. Because of the expansion of commercial banking activities in Northern Europe, there sprang up a number of private banking houses in Europe and slowly it spread throughout the world.

In the contest of Nepal, landlords, moneylenders, merchant, goldsmith etc are the ancient bankers of Nepal. The establishment of banking industry was very recent; some crude banking operations were in practice even in the ancient times. The establishment of 'Tejarath Adda' during the year 1877 A.D. was the first step in institutional development of banking sector in Nepal. It did not collect deposit from public but granted loans to public against the collateral of bullions. The 'Udyog Parishad' was constituted in 1936 A.D.and it formulated the 'Company Act' and ' Nepal Bank Act' in 1937 A.D.which can act more widely to enhance the trade and commerce and to touch the remote non- banking sector in the economy. Nepal Bank Limited was established in 1934 A.D. However the stand of Nepal Bank Limited alone in total monetary and financial sector was not sufficient and satisfactory. Thus Nepal Rastra Bank was established 2013 B.S. under the Nepal Rastra Bank Act 2012. Similarly, Rastriya Banijya Bank was established in 2022 B.S. as a fully government owned commercial bank. Because of the emergence of RBB, banking services spread to both the urban and rural areas of the country. But customers failed to have taste of quality services because of excessive political and bureaucratic interference. In 2013 B.S., Industrial Development Centre was established for industrial development of the country. It was converted to Nepal Industrial Development Corporation in 2016 B.S. Similarly Agricultural Development Bank was established in 2024 B.S. for the development of agriculture sector of the country.

At first , the door of opening commercial bank was opened to the private sector with the establishment of Nepal Arab Bank Limited(Nabil Bank) . NABIL emerged as the first joint venture bank when the banking industry is totally dominated by Government and semi-Government banks mainly to revitalize the economy by accelerating productivity in various sectors and to provide efficient customer service. Nowadays, several commercial banks have been established for the economic development of the country due to the liberal economic policy adopted by the government. The lists of listed commercial banks are showed in the following table.

Table No.1
List of Licensed Commercial Banks
Mid- January 2008

S.N	Name of the Banks	Operation Date (A.D.)	Head Office
1.	Nepal Bank Limited.	1937-11-15	Kathmandu
2.	Rastriya Banijya Bank.	1966-01-23	Kathmandu
3.	Agriculture Development Bank.	1968-01-02	Kathmandu
4.	Nabil Bank Limited.	1984-07-16	Kathmandu
5.	Standard Chartered Bank Nepal Ltd.	1986-01-30	Kathmandu
6.	Nepal Investment Bank Limited.	1986-02-27	Kathmandu
7.	Himalayn Bank Limited.	1993-01-18	Kathmandu
8.	Nepal Bangladesh Bank Limited.	1993-06-05	Kathmandu
9.	Nepal SBI Bank Limited.	1993-07-07	Kathmandu
10.	Everest Bank Limited.	1994-10-18	Kathmandu
11.	Bank of Kathmandu Limited.	1995-03-12	Kathmandu
12.	Nepal Credit & Commerce Bank.	1996-10-14	Sidharthnagr.
13.	Lumbini Bank Limited.	1998-07-17	Narayangadh
14.	Nepal Ind.&Commercial Bank.	1998-07-21	Biratnagar
15.	Machhapuchhre Bank Limited.	2000-10-03	Pokhara
16.	Kumari Bank Limited.	2001-04-03	Kathmandu
17.	Laxmi Bank Limited.	2002-04-03	Birgunj
18.	Siddhartha Bank Limited.	2002-12-24	Kathmandu
19.	Global Bank Limited.	2007-01-02	Birgunj
20.	Citizens Bank Limited.	2007-06-21	Kathmandu
21.	Prime Bank Limited.	2007-09-24	Kathmandu
22	Sunrise Bank Limited.	2007-10-12	Kathmandu
23.	Bank of Asia Limited.	2007-10-12	Kathmandu

Source: Banking and financial statistics, Vol.41,(A journal of Banking Operation Department: NRB, Mid July 2003), p.30

1.4 A Brief Profile of Selected Banks:-

All the commercial Banks are established under the company Act. They have been providing dividend as well as bonus share to its stock holders. The increasing of non performing loan is the major problem of commercial banks because it decreases the profit and earning of the concerned bank. For

the analysis of NPL management three major commercial banks are taken as sample ie Nabil Bank Limited, Standard Chartered Bank Limited and Nepal Bank Limited. Short profiles of selected Nepalese commercial Banks are as follows.

I. Nabil Bank Limited:-

Nabil Bank Limited, the first joint venture bank in Nepal was established in 1984, under company act 1964. NABIL was incorporated with the objectives of extending international standard modern banking services to the various sectors of society. The bank provides a full range of commercial banking services through its 19 points of representation across the country and over the 170 reputed correspondent banks across the globe. The initial capital of Rs. 30 million has grown to 2,560.34 million as at mid July 2007. The highly qualified and experienced team is operating the bank including day to day operation and risk management. There are altogether 427 employees working in the bank. Bank is fully equipped with modern technologies, which include ATMs credit cards and state of art, internet banking system, tele banking system and other modern service using modern technologies. Other facilities are international trade, bank guarantee, safe deposit locker, western union money transfer and automatic teller machine. Its equity configuration showed that NB International Ltd Ireland owned 50% equity partner, local financial institutions owns 20% and Nepalese general public owns 30% share of the bank.

II. Standard Chartered Bank Nepal Limited :-

Standard Chartered Bank Nepal Limited has been in operation in Nepal since 1987 when it was initially registered as joint venture operation. Today the bank is an integral part of Standard Chartered Group who has 50% ownership in the company with 17% share owned by Nepalese public and 33% of its share owned by Nepal Bank Limited. The bank enjoys the status the largest international bank currently operating in Nepal. The bank is a leading financial institution in the country. With 15 points of representation and 9 ATMs across the nation and with over 351 local staff, SCBNL is in a position to service its customers through a large domestic network. In addition to which the global network of Standard Chartered Group gives the bank the unique opportunity to provide truly international banking in Nepal.

III. Nepal Bank Limited :-

Nepal Bank Limited, the first commercial bank in Nepal was established on 1994(B.S.) in the technical assistance of Imperial Bank of India under 'Nepal Bank Act 1937' was inaugurated by His Majesty King Tribhuan Bir Bikram Shah Dev. The establishment of NBL laid the foundation of institutional banking system in the country. Nepal Bank Limited was headquartered in Kathmandu and had altogether 117 braches in different part of the country. There are 3,415 employees working in the bank. As NBL was established prior to Nepal Rastra Bank, i.e. Central Bank, it carried out the function of commercial bank as well as of the Central Bank until the inception of NRB. Now in the presence of a separate central bank, it is providing wide range of commercial banking services. Now the government owns only 40.49% share with the suggestion of World Bank to transfer the ownership to the private sector for better functioning of the financial sector. Its 59.51% share is owned by Nepalese general public.

Even being one of the largest and oldest banks of the country, the financial health of the bank was very bad. Due to its ill health, under financial sector reform programme of NRB in technical assistant program of World Bank and DFID, a management team "ICCMT''consisting of International bankers from Bank of Scotland has been appointed in NBL in July 22, 2002 to restructure the bank for two years contract and it was renewed after two years. Recently NRB is looking for new management team . NBL was established as joint venture of government and private individuals.

1.5 Focus of the Study :-

Every loans and advances which was disbursed by bank has its maturity period of expiry date and the borrowers must repay the loans by the maturity period but there is no certainty that all the loans are recovered by the maturity date. Some loans are recovered within the maturity period but some loans cannot be recovered even after its maturity and remain as non-performing assets of the bank. Increasing non-performing assets is one of the several problems of the Nepalese banks. The total NPA of Nepalese Banking sector is estimated to be about 15%. As per the data of Credit Information Bureau there are altogether 2225 blacklisted borrowers as on 16 July 2007. Banks investment in the form of loans and advances are not giving desired return. Banks are facing problems in recovering the granted loans that had turned to NPA.The nationalized two commercial banks namely Nepal Bank

Limited and Rastriya Banijya Bank have non-performing assets to the extent of 20% and 30% respectively. Nowadays, in most of national newspaper, it can be seen that government owned commercial banks are publishing names of borrowers who defaulted in making payment of the bank loans. Even the private and joint venture banks are facing the problems of increasing NPAs. This problem may lead to bankruptcy of bank and failure of banking system. It also affects the depositors and other stockholders of the society. The NPL status of different banks is mentioned in the following table.

Table No. 2
The NPL Status of Different Banks
mid July 2007

S.N.	Name of the Banks	Total loans (in million)	NPL %	NPL Amount
1.	Nepal Bank Limited.	13,757	13.49	1,856
2.	Rastriya Banijy Bank.	25,395	29.16	7,405
3.	Agriculture Development Bank.	27,153	14.97	4,065
4.	NABIL Bank Limited.	15,903	1.12	178
5.	Nepal Investment Bank Limited.	17,769	2.37	422
6.	Standard Chartered Bank Nepal Ltd	10,790	1.83	197
7.	Himalyan Bank Limited.	17,794	3.61	642
8.	Nepal SBI Bank Limited.	10,065	4.56	459
9.	Nepal Bangladesh Bank Limited.	5,855	38.19	2,236
10.	Everest Bank Limited.	14,083	0.80	113
11.	Bank of Kathmandu Limited.	9,694	2.51	243
12.	Nepal Credit&Commerce Bank Ltd	5,122	30.63	1,569
13.	Lumbini Bank Limited.	4,945	20.37	1,007
14.	Nepal Industrial&commercial Bank Ltd	9,129	1.11	101
15.	Machhapuchhre Bank Limited.	7,320	1.16	85
16.	Kumari Bank Limited.	9,062	0.73	66
17.	Laxmi Bank Limited.	6,529	0.35	23
18.	Siddhartha Bank Limited.	6,320	0.34	22
19.	Global Bank Limited.	2,603	-	-
20.	Citizen Bank International Limited.	2,026	-	-

In order to rescue banks from financial distress, to safeguard depositors' interest and to ensure stability in the economy, NRB issues directives from time to time related to various aspects of the banks. NRB Directives No.2

(2001) is related to loan classification and provisioning of commercial banks. As per these directives commercial banks are supposed to categorize the loans disbursed into four different categories on the basis of ageing of its past dues and each category of loan requires certain percentage of it to be provisioned for the probable loss. Going through the old directives regarding loan loss provision, banks has to classify the loans into six different categories and as per that directive, for a loan to be bad the time period of past due was five years but with the new directive, that period has also been reduced. This means the previously categorized substandard loan will now be a doubtful loan and doubtful loan will be bad. Accordingly more provision has to be made for probable loss in years to come than previous years. The provisioning amount is taken by deducting from the profit of the bank. Hence there is great impact of loan loss provision (LLP) in the profitability of the banks. The provision of the loan means the net profit of the bank will come down by that amount. Increase in loan loss provision decrease the profit of the bank leading to decrease in dividends to the shareholders. However adequate loan loss provision strengthens the financial health of the banks by controlling credit risk and safeguards the depositors' money leading to overall economic development of the country.

1.6 Statement of the Problem :-

Nepal being listed among least developed countries, the commercial banks has played a catalytic role in the economic growth. After the liberalizations started in 1980, the financial sector made some progress and prudent regulatory measures have been introduced by central bank. However actual performance of the financial institution could not improve. Commercial banks in Nepal have been facing several problems like lack of smooth functioning of economy, different policies and guidelines of NRB, political instability, security problem, poor information system, over liquidity caused by lack of good lending opportunities, increasing non-performing assets etc. In the present context where Nepalese banks are facing the problem of increasing NPAs, more amounts have to be allocated for loan loss provision. As earlier mentioned, the provision amount is taken out by deducting from the profit of the bank; the bank's profit might come down. This study will try to sick the answer of the following questions.

I. What is proportion of non performing loan in the selected commercial banks?

II. What are the factors leading to accumulation of non-performing loan?
III. What are the guidelines and provision pertaining to loan classification and loan loss provisioning?
IV. What is the relation of loan and loan loss provision in selected commercial banks?
V. What is the impact of loan loss provision on the profitability of the concerned commercial banks?

1.7 Objectives of the Study :-

The basic objective of the study is to review the NPA management of commercial banks as well as to compare it. The main objectives of the study are given below.

I. To the study the proportion of non-performing loan in the selected commercial banks.
II. To find out the factors leading to accumulation of non-performing loan in commercial banks.
III. To analyze the guidelines and provisions pertaining to loan classification and loan loss provisioning.
IV. To analyze the relationship between loan and loan loss provision in the selected commercial bank.
V. To analyze the impact of loan loss provision on the profitability of the commercial banks.

1.8 Significance of the Study:-

Increasing non-performing loan followed by increased loan loss provision is one of the challenges faced by commercial banks in the present context. Proper classification of loans and adequate loan loss provisioning strengthens the financial health of the banks and also reflects the true picture of bank's asset. This research will be able to deliver some of the present issues, latest information and data regarding non-performing loan and loan loss provisioning. Hence this study will be significance to shareholders, bankers, depositors, students and further researchers.

1.9 Limitations of the Study :-

The study has been made to NPA management of commercial banks. Every study has its own limitations. The following points are the limitations of the study.

I. The study is mainly based on secondary data. The data published in annual reports of concerned banks, articles, publication, journals, NRB directives etc have been taken into consideration. So the result of all the analysis depends upon the information provides by the banks.

II. The reality of study depends on secondary source of data and questionnaires filled and responses given by the respondents.

III. The whole study is based on the data of five years period from 2002/03 to 2006/07 and hence the conclusion drawn confines only to the above period.

IV. Out of numerous affecting factors, only those factors are considered which is related to NPA management.

V. Out of many banks, three banks (NABIL Bank, Standard Chartered Bank and Nepal Bank Limited) are taken for the study.

1.10 Organization of the Study :-

This study work has been divided into five chapters, namely Introduction, Review of Literature, Research Methodology, Data presentation and Analysis and Summary, conclusion and Recommendation.

I. Introduction: - In the first chapter introduction of the study has been made. This includes the background of the study, focus of the study, statement of the problem, objectives of the study, significance of the study and limitations of the study.

II. Review of Literature: - The second chapter focuses on the review of literature, which includes review of theoretical and related literature regarding the subject matter.

III. Research Methodology: - The third chapter deals with research methodology that has been followed for undertaking the study. It includes research design, sources of data, population and sample along with different statistical and financial tools used in the study.

IV.   Data Presentation and Analysis: - In the fourth chapter, collected data has been analyzed. It includes presentation and analysis of data using different statistical tools and major findings.

V.   Summary, Conclusion and Recommendation: - The fifth or last chapter deals with the final observations that include summary, conclusion and recommendation of the study based on the analysis of the data.

Chapter II
REVIEW OF LITERATURE

The chapter highlights on the literature that is available in the topic. Actually there is not sufficient literature in the topic especially other financial institution. But here it is being tried to review the third men's thoughts which have been given by them through various books, articles, journals, papers, related thesis , NRB directives and other related books and booklets etc.The relevant findings of academicians, researchers and professionals of related field are reviewed through the chapter. This chapter will be helpful to provide the foundation of knowledge in order to undertake this research more precisely. Then, the inference is drawn out from them.

2.1 Conceptual Framework:-

NPL management can be considered as a heart of the commercial banks. The growth and development of any bank mainly depends upon its profit and profit depends upon the non-performing loan because creation of non-performing loan decreases profit of the banks. Loans and advances dominate the asset side of the balance sheet of any bank and earnings from such loan and advances occupy a major space in income statement. Most of the banks failures in the world are due to shrinkage in the value of the loan and advances. Hence loan is known as risky assets. Risk of non-repayment of loan is known as credit or default risk. Performing loans have multiple benefit of the society while non-performing loan erodes even existing capital. If loan is given to viable project not only lenders and borrower but also the whole society gets benefit but society losses its scare capital if loan is given to project which is not viable. There is risk inherent in every loan and efforts should be made to have proper control in every step of loan management. The bank should not take risk above certain degree irrespective of returns prospects. Though all the loans are good at the time of disbursement, with the passage of time, they show the sign of problem. Based on the health of loan, the loan should be classified and provided accordingly. Provisioning is made as cushion against possible losses and to reflect the true picture of bank's assets.

In brief, the concept and meaning of some important terms used in the study has been explained below.

2.1.1 Performing Loans:-

Those loans that repay principle and interest timely to the bank are called performing loans. In the context of Nepal, the loan of ' Pass' category is known as performing loan.

2.1.2 Non-performing Loans or Non-performing Asset:-

Those loans that do not repay principle and interest timely to the bank are called non-performing loan. The meaning of NPL is differing from country to country. In some countries non-performing loan means, the loan is impaired. In some countries, it means that the payments are past due, but there are significant differences among countries how many days a payment should be in arrears before past due status is triggered. In Nepal, if the loan is past due for over 3 months, it is non-performing loans. Substandard, Doubtful and Loss categories of loan are regarded as non-performing loan as per NRB.

2.1.3 Loan Loss Provision:-

The accumulated fund that is provided as a safeguard to cover possible losses upon classification of risk inherited by individual loans is called loan loss provision. There is risk inherent in every loan. Hence provisioning is made as cushion against possible losses and to reflect the true picture of the bank's asset.Hence there practice of showing net loan (Total loan - Loan loss provision) in financial statements. The amount required for provisioning depends upon the level of NPAs and their quality. High amount of provision is an indication of that bank's credit portfolio needs serious attention. One percent provision of total credit is an ideal position as it is the minimum requirement for all good loans. In Nepal, Pass 1%, Substandard 25%, Doubtful 50% and Loss loan 100% provisioning should be made.

2.1.4 Loans and Advances:-

Loans and advances are regarded as risky assets of banks because it always carries a certain degree of risk. The main function of commercial banks is to collect money from depositors and provide loan to the several sectors. The bank doing so converts its liability into active asset. Loan and advances are the assets coming from such activities. Loan and advances dominate the asset side of the balance sheet of any bank and also constitute the primary

source of income to the banks. They are also the least liquid of the bank's entire asset. Loan and advances may take different forms and are allowed against various types of securities. Loan, overdrafts, discounting of bills of exchange etc are some of the forms of bank lending.

2.1.5 Past Due:-

When the loans and advances have not been paid on the due date fixed by the bank is called past due or overdue. In other words, an amount due under any credit facility is treated as past due.

2.1.6 Loan Classification:-

The classification of loan refers to the process banks use to review their loan portfolio and assign loans to categories or grades based on the perceived risk and other relevant characteristics of loans and as per guidelines of central banks. The process of continual review and classification of loans enables banks to monitor the quality of their loan portfolios and when necessary to take remedial action to counter deterioration in the credit quality of their portfolios. In most of the countries, a number of days a past due payments represents a minimum condition for loan classification purposes. However some criteria which exhibit forward looking features are also considered. Loans are classified into four categories namely, Pass, Substandard, Doubtful and Loss as per guidelines of Nepal Rastra Bank.

2.2   Review of Books:-

NPL management is crucial part of all the banks and financial institution. Banking activities regarding to NPL, directly influence other transaction of the bank too. Different authors of books have analyze NPL management in various way. But , there is no actual analysis of the NPL management in any book. Thus this researcher has made self expression about NPL management, under the basis of following analysis, given by the writers.

According to Mr.Bhuwan and Mrs. Sarita Dahal (2002), " A bank is judged on the basis of Capital, Assets Quality, Management, Earning , Liquidity and Sensitivity to market risk (CAMELS). Almost all the government banks are running at loss. Though almost all the private sector banks are showing profit, it is very difficult to call them sound if appraised from CAMELS approach. Some banks have very low Capital Adequacy

Ratio (CAR) while some banks have piled up Non-performing Assets (NPAs). Similarly banks do not have proper system in place for management of market risks. The have been raising questions over the correctness of credit classification and provisioning of some banks. Should the suspicion come true, it will prove very costly to the depositors, creditors and national economy as a whole. I (t would be prudent to advise NRB to strictly implement its recently introduced directive so that other banks avert the fate of NBL, RBB and NIDC."

Ibid (p.29, p.54), "Banks and financial institution invoke penal measure when an installment of a term loan is defaulted. This is simply a banking procedure to offend the borrowers in case of defaults; however it is not the complete panacea for project failures. The follow up machinery to enquire into the reasons for the default is generally slow in movement or maximum time would have already been consumed when banks normally acknowledge the failure of the projects. The consequence is that by the time, lending institution is able to ascertain the causes for the first default, more installments are overdue.

Delays in implementation schedule, cost escalation in mid-stream, inadequate cash generation or siphoning of fund are few of the factors responsible for default. A lending institution unless it had an effective monitoring system may miss these signs of potential sickness. The first default should be ample evidence that something is out of order and the term lending institution should take immediate steps to review the position detail before go out of hand."

According to Mr. Shakespeare Vaidy (1998), "Nepalese financial institutions have made significant progress especially during this decade, although they are still far behind the developed markets. In spite of having great risk management i.e. focused on collateral rather than on project, credit culture is a new aspect both to the investors and corporate. Unless we have a credit culture, they will end up nowhere.--How to identify a good bank? Huge deposits, high technology, strong marketing, broad branching network etc? Finally we arrive the point- collection of the loans; on the whole, private sector banks have lower non-performing assets (NPAs) than their public sector counterparts. NPAs are the loans that can not be or have not been recovered. The government owned banks suffer acutely from this, as they have to lend to various priority sectors, at the whims of their political and forget everything about the money forever."

With the growing number of financial institutions, market economy, economic liberalization etc industrial sickness in Nepal has phenomenal proportions in the last few years. Much of the amounts of almost all leading financial institutions are blocked in sick company, which can be witnessed from the auction notice published regularly in newspaper. Credit risk is the first risk, which keeps the bank moving in the market. The loans provided against the securities are simply a promise to pay. When borrowing customers fail to make part or all of their promised interest and principal payments, these defaulted loans and securities result in losses that can eventually erode banks capital. Because owner's capital is usually no more than ten percent of the volume of loans and risky securities, and often much less than that, it can not absorb too many defaults on loans and securities before bank capital simply becomes inadequate to absorb further losses. At this point, the bank fails and will close unless the regulatory authorities elect to keep it afloat with government loans until a buyer can be found or until the bank becomes viable by reducing its non-performing assets.

On the basis of above explanations, we can say that, in order to safeguard the banks from the financial crisis likely to be arise from the project failures and sick units, that is, non-performing loans, the government needs to do a number of things and fast. It must bring a broad rules for poor financial institutions, transferring bad loans to bridge bank or loan recovery agency, remove many non-performing loans from even healthier bank's balance sheets, beef up regulation, supervision and disclosure, improve ability to banks to sell the collateral that backs soured loans, and recapitalize the banking system.

2.3 Review of Articles/Journals:-

In this section, efforts has been made to examine and review of some related articles in different economic journals, magazine, newspapers and other related books.

Mr. Bhishma Raj Dhungana, in his article titled, "Why Asset Management Company is considered the best option to resolve the non-performing loan problem?" AMCs seem as the only realistic option when the financial sector recovery is the underlying objective in financial system where the institution fail to resolve the NPL problem through their own efforts. As per him , AMC is the specialized financial intermediary to manage the non-performing and distress loans of banks and financial institutions who buy the

NPL from financial institution and take necessary steps to recover the maximum value from the acquired assets. According to him, if NPLs are not resolved in time there would be inherent direct of indirect costs to the economy. As stated by him NPL may arise due to the external factors like decreases in market value of collateral, deterioration in borrower's repayment capacity, economic slowdown, borrower's misconduct, improper credit appraisal system, lack of risk management practice, ineffective credit monitoring and supervision system. He suggested that, NPL should be kept at minimum level and the specialized institution such as AMCs should manage the distressed loans.

He says that, both traditional and AMC are available to deal with NPL problem. Under traditional approach, bank handles the NPLs in its own way especially through recovery unit who focus on continuing negotiation with the borrower and give top priority to the loan recovery. As opined by the writer, this approach is useful in dealing with small business loans where personal touch is adopted but for big loans this approach does not work. In the case of big loan, AMCs are the best option. He states that the main advantage of establishing AMC is that AMC is able to move in an expeditious manner removing the distraction of managing NPAs from the banking system and frees up resources within the financial institutions allowing them to concentrate on their core activities.

Mr. Deependra Bahadur Chhetri, in his article, titled "Non-performing Assets: A need for rationalization" has attempted to analyze the term NPA and its potential sources, implication of NPA in financial sector in the South East Asian Region. He has also given possible measures to contain NPA. Loans and advances of financial institutions are meant to be serviced either part of principal of the interest of the amount borrowed in stipulated time as agreed by the parties at the time of loan settlement. Since the date becomes past dues, the loan becomes non-performing asset. The book of the account with lending institution should be effectively operative by means of real transaction effected on the part of the debtor in order to remain loan performing. As per the writer, the definition of NPA differs from country to country. In some of the developing countries of Asia Pacific Economic Corporation (APEC) forum, a loan is classified as non-performing only after it has been arrear for at least for at least 6 months. Similarly it is after three months in India. Loans thus defaulted ate classified into different categories having their differing implication on the asset management of financial institution. He also stated that NPAs are classified according to international practice into three categories. They are Substandard, Doubtful and Loss

depending on the temporal position of loan default. Thus the degree of loan NPA depends on the length of time the asset has been in the form of non obliged by the loanee. The more time it has elapsed the worse condition of asset is being perceived and such assets are treated accordingly. According to the writer, failure of business for which loan was used, defective and below standard credit appraisal system, credit programme sponsored by Government, slowdown in economy/recession, diversion of fund are some of the factors leading to accumulation of NPAs. As stated by him, there is serious implication of NPAs, on financial institution. The liability of credit institution does not limit to the amount declared as NPA but extend to extra amount that requires by regulation of supervisory authority in the form of provisioning as the amount required for provisioning depends upon the level of NPAs and their quality. Rising level of NPAs create a psyche of worse environment especially in the financial sector. NPAs can be reduced by reviving the activities of the financial institution like waiving interest, rescheduling the loan, writing off the loan, appointing private recovery agent, taking help of tribunals and law of land etc.

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

The Kathmandu Post, Sep.21, 2007, a report titled "Loan Loss Provision Rises Notably" published. The reporter had made an Endeavour to highlight some facts and figures regarding loan loss provision of commercial banks. The banking sector is witnessing a huge surge in loan loss provisioning reserves lately. The increment is primarily a result of a directive issued by Nepal Rastra Bank in 2001 that introduced stringent loan provisioning criteria for commercial banks. As per data recently released by the central bank, the total loan loss provision in the country's banking sector increased from around Rs. 21,313 million in mid July 2001 to Rs. 23,956.06 million in mid July 2007. The increment is over 12.40%. The reporter added that apart from the two technically insolvent government invested banks, loan provision of other joint venture private banks has also risen significantly and the notable increments seen in the loan loss provisioning amounts is due to

the eight point prudential directives that the central bank issued in mid July 2001 to all commercial banks.

Mr. Him Prasad Neupane, in his article, titled "Bad Loans of Banking Sector-Challenges and Efforts to Resolve it" has expressed some views regarding bad loans of banking sector. According to him there were various types of risk inherent in the credit. One, who manages risk, earns profit. The recent financial crisis is due to weak accounting procedures, defect in loan classification, lack of transparency, loss control measures etc in banking sector. Mr. Neupane has also stated that NPL is the indicator of financial crisis and the factors leading to NPL is economic slowdown, recession, bad intention of the borrower, lack of credit policy, increase in interest rate etc. NPL increases resource mobilization cost and reduce profit earning capacity of the bank. He has also mentioned that the international standard of acceptable NPA is 4% but there is about 16% NPL in Nepalese banking sector which is due to high level of NPL of two rationalized banks. As stated by the writer, the major implications of NPL are banks can not return depositors money on demand and it limits lending capacity of the bank. The writer has suggested internal and external measures for reducing NPL and its effect internal measures comprise classification of loans and advances and providing provisions for probable loss and external measures comprises of help from Credit Information Bureau, appointment of Asset Management Company and Debt Recovery Tribunal. In his opinion, Banks must give priority for reducing NPA. Many countries are adopting various measures for reducing loan loss. Recently the president of Philippines has announced tax rebate system for reducing NPA. Now it is high time to improve bad debts of banking sector with firm determination.

Mr. Binam Ghimire, in his article titled "Credit Sector reform and NRB" has analyzed the effects of change or amendment in NRB directives regarding loan classification and loan loss provisioning. Although the circumstances leading to financial problem or crisis in many Nepalese banks differ in many respects, but the increasing of non-performing assets is common issue of the commercial banks. Nepal Rastra Bank, as the central bank, amended several old directives and issued many new circulars in the recent year to solve the problem of NPL. Since majority of the loans of most of the commercial banks of the country at present falls under substandard, doubtful and even loss categories, loan loss provisioning now compared to previous arrangement would be dramatically higher. The new classification and provisioning norms are very lendable as they help to strengthen banks

financially. He added that we also must remember that the old system remained in force from 1991 to 2001, which was probably the most volatile decade of the business operation of the country. Loan loss provisioning as a percentage of total credit of mid July 2001 was 5.2% but as mid July 2007, it has jumped to 10.84%. If only private banks are considered, it was 2.12% of mid July 2001 where as it is 5.22% as of mid July 2007. The total increment in LLP is Rs. 2,643.06 million and the total increment in credit is Rs. 120,661.92. He has also stated that tightening provisioning requirements on NPL is essential to ensure that banks remain liquid even during economic downturns.

In the recent years NRB has worked for management and reform of the credit of the financial institution more seriously and NRB has adopted reforms aimed not just at dealing with problem banks but also at strengthening banking supervision to reduce future crisis. All prudential directives of NRB in connection of credit sector reform have been made revised on after April 2001. To adopt to such changes there can be some difficulties and for a better and harmonized reform NRB should continue to be supportive proactive and also participative to take opinions of bankers for a change in policy taking place in the future.

Mr. Shiv Raj Shrestha, in his article titled "Modus Operandi of Risk Appraisal in Bank Lending" has tried to express different aspects of credit risk management. According to him, as the effective risk management is central to good banking, the tradeoff between risk and return is one of the prime concerns of any investment decision whether long term or shot term. He says that, Effective credit risk management allows a bank to reduce risks and potential NPAs. It also offers other benefits. Once banks understand their risk and their costs, they will be able to determine their most profitable business, thus, price products according the risk. Therefore, the banks must have an explicit credit risk strategy and supported by organizational changes, risk measurement techniques and fresh credit process and systems. There are five crucial areas that management should focus. i.e. credit sanctioning and monitoring process, approach to collateral, credit risk arises from new business opportunities, credit exposures relative to capital or total advances and concentration on correlated risk factors. Apart from these, the bank management should regularly review all asset quality issues including portfolio composition, big borrower exposures and development in credit management policy and process. He is hopeful that the banks will be able to reap both strategic and operational benefit by adopting good risk management practices.

Mr. Gopal Tiwari, in his article titled "Financial sector hobbled with chaos, fragility" has stated that the financial sector of Nepal moving like a 'sinking boat'. Financial institution have failed in delivering beneficial services to needy people by developing credit giving centers in rural areas without which sustained economic growth is impossible. On the other hand banks and financial institutions have enough liquidity but they are finding it difficult to find suitable places for investment. Problem such as insecurity lack of market research from banks, low investment opportunities, weak operational policies for carrying out financial transaction, among others have contributed to the problems of this sector. Despite central bank's directives regulating banks and financial institution, private and government banks are functioning haphazardly. Nepal Bank Limited and Rastriya Banijya Bank, the two largest banks, occupy about 30% of the country's banking assets. Effective reform of these two is key to improve performance of the whole sector. The process currently underway to reform these two institutions, despite paying huge amounts to foreign experts, has not given expected results. Besides NBL and RBB, the Non-performing Assets of some private banks also very high. If the government and central bank allow the financial sector reforms to focus only on RBB and NBL, it might become a futile effort. The current management of RBB and NBL have not been able to reduce their NPL even after two years, which have crossed over 40%. Earlier NPL was calculated at 30-35 percent. The central bank itself says, despite efforts NBL has high NPLs and negative capital of Rs. 9.75 billion.

In conclusion, the forthcoming budget should not remain a document merely but should address financial sectors ills with a wide vision. The government should look to build upon its indigenous strength and improve upon its regional ties to improve its efficiencies in order to create a well regulated, prudent, market oriented, competitive and strong financial system in Nepal.

Mr. Suman Sapkota, in his article titled "Doubtful Debtors and Changed New Provision" has analyzed the main purpose of establishment of bank in to collect idle fund general public disburses them to needy sector in the form of loans and advances. Loans and advances are given for a certain period of time but it is not sure that all the loans are recovered within time. The function of any commercial bank is considered successful only when the loans advances are recovered easily within stipulated time. Hence it is often said that, it is easy to disburse loans but as much hard to recover loans and interest. He stated that as per new provision, loans and advances are classified on the basis of ageing or past dues and collateral value. On that

basis of loans and advances need to be classified into four categories. They are Pass, Substandard, Doubtful, and Loss. With the change in time and demand, change was made in provision of loan classification and provisioning. He has also mentioned that previously loans and advances are categorized into six categories as Pass, Acceptable, Indicative substandard, substandard, Doubtful and Loss. With the old provision the loan would be non-performing only if it is past due for more that one year but as per new provision, the loan would be non-performing if the loan is past due for more than three months.

Lastly, these changed provisions would contribute to healthy, transparent and increased risk bearing capacity of the banks. If NPL increases it affects adversely to the various sectors. The new provision if properly implemented would help to reduce NPL and helps banks from financial crisis.

Mr. Rudra Sharma and Basu Dev, in his article titled "Failed state vis-à-vis, failed banking system" has stated that, banks in Nepal are in poor health and the ill health of the banking system is seen in its worst form in the nationalized and specialized public sector. They have large amount of classified loan burden and hence the survival of the nationalized banks is at stake. Banking sector is in need of sustained efforts to pull it out of deepening crisis and the laws governing loan recovery should be corrected. The directive regarding loan classification and loan loss provisioning is tighter than it was proposed previously. Nepal Rastra Bank is pressuring banks to enforce prudential norms from which ordinary shareholders and depositors stand to benefit but investors are in risk. Investors want NPAs being recovered. They had also stated the saying of Dr. Tilak Rawal "For worse economic crisis is inevitable in the country if leading banks of Nepal fail to introduce immediate reform to counter growing NPAs. NPL is the cause of banking distress." "Political pressure to lend to uncreditworthy borrowers and poor accounting practices is the main reason why the government owned banks have incurred substantial levels of NPL. NPL have accounted for between 40 to 50 % of total loans of government owned banks in Nepal.

In conclusion, Nepalese banking system is not a successful one. "Poor performance in banking system has triggered more problems to other economic fundamentals. As these problems were coupled with other political problems and increasing insurgency, it went up to the extent of talks being made about the vicinity of Nepal towards a failed state."

Mr. Narayan Sapkota has written in his article titled "Portion of NPA in Commercial Banks- High in Public, Low in Private" that the problem of NPL is seen less in private banks in comparison to public banks. The NPA of two big rationalized banks being about 30 percent of the total loans is very serious situation. He further stated that in order to improve this situation and to make healthy banking environment financial reform programme has been brought as its consequences, the management of two big banks was handed to foreign company on a contract but the ratio of NPA was not reduced. Even most of the privately owned banks has NPA within international standard, some privately owned bank's NPA is higher that international standard. As per international standard 4 percent NPA is acceptable. He also states that, Nepal's total NPA of banking sector is 16 percent, which is very high.

2.4 Review of Thesis:-

As the special guidelines are needed for this study, the researcher of this study has made a quick to several thesis with view to gather knowledge part for a goal oriented and successful thesis to prepare. This researcher has found thesis uniform to this form TU library, some of them are analyzed as given below.

a) A thesis made by Ms. Anjana Shilpakar.
The subject of her thesis is "A study on Lending Practices of Finance Companies of Nepal". The main objective of the study is as follows.

I.   To analyze the performance of finance company regarding lending quantity, quality and its contribution in profitability.

Summary, findings and conclusions:-
I.   Loans and advances is one of the main sources of income of finance companies, which is shown by the high degree positive correlation between total income and Loans and advances.
II.   Loan loss provision is like a by-product of Loans and advances, thus, with Loans and advances, Loan loss provision does increase in synchronize.

Recommendations:-
I.   Loans and advances of finance companies are increasing and so are the Non-performing Loan and Loan loss provision.
II.   Extra efforts should be enforced to control over NPL.

b) **A thesis made by Ms. Anju Khadka.**

She has carried out research on "A Comparative Study on Investment Policy of Commercial Banks." The main objective of the study is as given below.

    I.   To find out the relationship between deposits, investment, loans and advances and net profit.

Summary, findings and conclusions:-

    I.   NBL is comparatively less successful in on balance sheet as well as off balance sheet operations than that of other commercial banks.

    II.   In the coming days if it could not mobilize and utilize its resources as efficiently as other commercial banks to maximize the returns, it would lag behind in the competitive market of banking.

    III.   A profitability position of NBL is comparatively worse than that of other commercial banks.

    IV.   NBL may not maintain the confidence of shareholders, depositors and its all customers if it can not increase its volume even in future.

Recommendations:-

    I.   As the banks experience many difficulties in recovering the loans and advances and their large amount is being blocked as non performing assets.

    II.   There is an urgent need to workout a suitable mechanism through which the overdue loan can be realized.

c) A thesis made by Mr. Lila Prasad Ojha. (2002)

The subject of this thesis is "Lending Practices: A study on Nabil Bank Limited, Standard Chartered Bank Nepal Limited and Himalayan Bank Limited" His main objectives of the study are as follows.

    I.   To analyze the various aspects of bank's lending in various sector of economy.

    II.   To analyze the individual bank's performance regarding the lending quantity, efficiency and its contribution in total income.

Summary, findings and conclusions:-

    I.   Over liquidity caused due to lack of good lending opportunities.

    II.   Risk arising due to mismanagement of lending portfolio, increasing non-performing assets etc is some of the problems that is facing by Nepalese banking sector.

    III.   The highest growth rate, proportionately high volume of loans and advances, the best contribution in policy and agricultural sector

and the high level of deposits mobilization of HBL has put this bank in the top position in the lending function.

IV. However the better activity ratio of SCBNL has proved this bank the best in managing the lending portfolio according to the demand of profit oriented business.

V. The high volume of lending activities and high volume of productive sector loan of NABIL has put the bank in the top position in absolute terms.

VI. The increasing provision on loan loss and high attention of any person interested with these banks.

VII. The high volume of NPA of HBL may have caused due to the failure of industrial and sector.

VIII. NABIL's increased NPA may have caused due to the accumulated bad debts that is kept behind the curtain to show the high efficiency of management.

Recommendations:-

I. The normal guidelines of NRB and acting upon this also reduce many of the credit risk arising from borrowers.

II. Banks to be more cautious and realistic while granting loans and advances.

III. The major solution of reducing the risk is to avoid lending in more risky area until the bank does not fully satisfy itself regarding the future viability of the project.

IV. The establishment of Asset Management Company which helps commercial banks in collecting their debts and improving their credit rating efficiency should be initiated.

V. Lack of proper credit appraisal default by blacklisted borrower and professional defaulter, the over confidence in commercial banks regarding credit appraisal efficiency and negligence in taking information from credit information bureau has caused many of the bad debts in these banks.

d) A thesis made by Ms. Shama Bhattarai. (2004)

The subject of this thesis is "Implementation of Directives Issued by Nepal Rastra Bank: A Comparative Study of Nepal SBI Bank Limited and Nepal Bangladesh Bank Limited". The main objective of the study is as follow.

I. To analyze the various aspects of NRB Directives with respect to Capital Adequacy and Loan Classification and provisioning.

Summary, findings and conclusions:-
 I.   The process of continual review and classification of loans and advances enables banks to monitor the quality of their loan portfolios and to take remedial action to counter deterioration in the credit quality of their portfolios.
 II.   With the new provisions the banks will have its provision amount increasing in coming years and subsequently profitability of the banks will also come down.
 III. The true picture of the quality of the assets will be painted in the coming years to come.

Recommendations:-
 I.   The banks should be very careful while analyzing the paying capacity of its credit clients.
 II.   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.

e) A thesis made by Mr. Santosh Pandey. (2002)
He has carried out study on "Nepal Rastra Bank- Directives Their Implementation and Impact on the commercial Banks- A Case Study of Himalyan Bank Limited". The main objectives of the study are as follows.
 I.   To find out the impact of changes in NRB directives on the performance of the commercial banks.
 II.   To find out whether the directives were implemented or not.

Summary, findings and conclusions:-
 I.   The bank will be financially healthy and stronger in the future.
 II.   HBL will be able to withstand tougher economic situations in the future with adequate capital and provision for losses.
 III. The tough time through which the bank is undergoing at present will prevail only for a couple of years but in the long run, it will be strong enough to attract more deposits and expose itself to more risk with capital cushion behind it.
 IV.   The quality of the assets of the banks will become better as banks will be careful before creating credit.
 V.   The changes in the directives will bring prosperity not only to the shareholders but also to the depositors, the employees and the economy of the country as a whole.

Recommendations:-
 I.   The bank has to make its monitoring and follow up department stronger needs to give priority in human resource development

through training to its staffs and make them efficient enough to monitor and collect already disbursed loans.

f) A thesis made by Mr. Raja Ram Khadka. (1998)

The subject of this thesis is "A Study on the Investment Policy of Nepal Arab Bank Limited in comparison to other Joint Venture Banks of Nepal". The main objective of the study is as follow.

I. To compare the balance sheet utilization as well as of balance sheet operation of the commercial banks.

Summary, findings and conclusions:-

I. NABIL is comparatively less successful in on balance sheet utilization as well as off balance sheer operations than that of other joint venture banks.

Recommendations:-

I. In coming days NABIL may be behind in the competitive market if it can not mobilize its resources as efficiently as other joint venture banks.

II. The bank must utilize depositors' money as Loans and Advances to get success in competitive banking environment.

III. The largest item of the bank in the asset side is Loans and Advances.

IV. Negligence in administrating this asset could be the main cause of a liquidity crisis in the bank and one of the main reasons of a bank failure.

g) A thesis made by Ms. Sabitri Shrestha(2003)

The title of her thesis is "Impact and Implementation of Nepal Rastra Bank(NRB)'s Guidelines(Directives) on Commercial Banks: A Study of Nebil Bank Limited and Nepal SBI Bank Limited." The main objectives of the study are as follow.

I. To find out the impact of NRB directives on commercial banks.

II. To find out whether the directives are actually implemented and are being monitored by NRB or not.

Summary, findings and conclusions:-

I. Both NABIL and Nepal SBI are implementing the NRB directives.

II. All the changes in NRB directives made both positive and negative impacts on the commercial banks.

III. The new directives issued by NRB make good impact more than bad impact on the various aspects of the banks.

IV. The provision has been changed and the increased provisioning amount has decreased the profitability of commercial banks.
V. Apart from, loan exposure has been cut down to customers due to the borrower limits have been brought down by NRB.
VI. Reduction in loan amount results to decrease the interest income from loans , which will decrease the profits of the banks in coming years.
VII. Decreasing profitability push towards lesser dividends to shareholders and lesser bonus to employees.
VIII. The problems of banks are increasing operating cost and decreasing loan amount resulting decrease in profits of the banks.
IX. The directives are more effective to project the banks from bad loans, which protect the banks from bankruptcy as well as protection of deposits of depositors.
X. Increase in capital adequacy ratio strengthen the bank's financial position, loan related provision will made safety of loans except the risk reducing provisions will protect the bank from liquidation.
XI. Newly issued directives are more effective than previous one although it has brought some problems towards banks.

Recommendations:-
I. To decrease the decreasing profits of the banks, they should research the alternatives such like more investments in other business.
II. Bank should adopt new technology according to the demand of time and must not depend on only interest income for profit.

2.5 Review of NRB Directives:-
Various directives relating banking regulations and prudential norms are issued by NRB. Out of them the directives issued in 2001 directive No. 2 relating to loan classification and provisioning, analyzed as given below.

Directive Relating to Loan Classification & Provisioning(Directive No.2)

2.5.1 Classification of Loan and Advances:-
Effective Fiscal Year 2058/59(2001/02), banks shall classify outstanding loan and advances on the basis of aging of principle amount into the following four categories.

a) Pass:
Loan and Advances whose principle amount are not past due and past due for a period upto 3(three) months shall be included in this category. These are classified and defined as Performing Loans.

b) Substandard:
All loans and advances which are past due for a period of 6 months to 1(one) year shall be included in this category.

c) Doubtful:
All loans and advances which are past due for a period of more than 1(one) year as well as advances which have least possibility of recovery or considered unrecoverable and those having thin possibility of even partial recovery in future shall be included in this category.

Loans and Advances failing in the category of Substandard, Doubtful and Loss are classified and defined as Non-performing Loan.

The respective overdue periods of Pass, Substandard and Doubtful Loans shall be considered for higher classification from the next day of expiry of the overdue period provided for each class.

2.5.2 Additional arrangement in respect of Pass Loan
Loans and advances fully secured by gold, silver, fixed deposit receipts and Nepal Government's securities shall be included under "Pass" category. However, where collateral of fixed deposit receipt or Nepal Government's securities or NRB Bonds is placed as security against loan for other purposes, such loan has to be classified on the basis of ageing. Loans against FDRs of other banks shall also qualify for inclusion under Pass Loan.

2.5.3 Additional arrangement in respect of Loss Loan
Even if the loan is not past due, loans having any or all of the following discrepancies shall be classified as 'Loss'.
    a) No security at all or security that is not in accordance with the borrower's agreement with the bank.
    b) The borrower has been declared bankrupt.
    c) The borrower is absconding or can not be found.
    d) Purchased or discounted bills are not realized within 90 days from the due date.
    e) The credit has not be used for the purpose originally intended.

f) Owing to non-recovery, initiation as to auctioning of the collateral has passed six months and if the recovery process is under litigation.

g) Loans provided to the borrowers included in the blacklist and where the credit information Bureau blacklists the borrower.

Note:

Bills Purchased/Discounted are to be classified into Loss Loan where they are not realized within 90 days from due date. This is departure from the normal classification rules applicable to other loans. Accordingly, it Bills would have only two classification Viz. Pass and Loss.

2.5.4 Additional arrangement in respect of term loan

In respect of term loans, the classification shall be made against the entire outstanding loan on the basis of the past due period of overdue installment.

2.5.5 Loan Loss Provisioning

The loan loss provisioning, on the basis of the outstanding loans and advances and bills purchases classified as per this directives, shall be provided as follows.

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

Loan Loss provision set aside for Performing loan is defined as "General Loan Loss Provision" and Loan loss provision set aside for Non performing loan is defined as " Specific Loan Loss Provision".

Where the banks provide for loan loss provisioning in excess of the proportion as required under the directives or NRB, the whole amount of such additional provisioning may be included in General Loan Loss Provision under the supplementary Capital.

2.5.6 Additional Provisioning in the case of Personal Guarantee Loan

Where the loan is extended only against personal guarantee, a statement of the assets, equivalent to the personal guarantee amount not claimable by any other shall be obtained. Such loans shall be classified as per above and where the loans fall under the category of Pass, Substandard and Doubtful to

the normal loan loss provision applicable for the category, an additional provision by 20-percentage point shall be provided. Classification of such loans and advances shall be prepared separately. Hence the loan loss provision required against the personal guarantee loan will be 21%, 45% and 70% for Pass, Substandard and Doubtful category respectively.

2.5.7 Rescheduling and restructuring of Loan

In respect of loans and advances falling under the category of Substandard, Doubtful or Loss, banks may reschedules or restructure such loans only upon receipt of a written plan of action from the borrower citing the following reason.

    a) The internal and external causes contributing to deteriotration of the quality of loan.

    b) The reduced degree of risk inherent to the borrower/enterprise determined by analyzing its balance sheet and profit and loss account in order to estimate recent cash flows and to project future ones, in addition to estimate recent cash flows and to project future ones, in addition to assessing market conditions.

    c) Evidence of existing of adequate loan documentation.

    d) An evaluation of the borrower/enterprise's management with particular emphasis on efficiency, commitment and high standards of business ethics.

2.5.8 LLP in respect of rescheduled, restructured or swapped loan

a) Except for priority sector, in respect of all types of rescheduled or restructured or swapped loan, if such crdit falls under Pass category according to NRB directives, loan loss provisioning shall be provided at minimum 12.5%.

b) In case of rescheduling or restructuring or swapping of insured or guaranteed priority sector credit, the loan loss provisioning shall be provided at one fourth of the percentage mentioned in clause(a).

c) In respect of swapped loans, the bank accepting the loans in swapping has to provide loan loss provision classifying the loan under the same classification as were existing . The bank accepting the loan in swapping shall obtain certification from the concerned bank of financial institution as to the existing classification.

2.5.9 Provisioning Against Priority Sector Credit

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

Substandard	5%
Doubtful	12.5%
Loss	25%

In case of rescheduling, restructuring or swapping of insured or guaranteed priority sector credit, the proportion of loan loss provision would be 3.125%(being 25% of 12.5%).

Chapter III
RESEARCH METHODOLOGY

3.1 Introduction:-

Methodology states the method with which data have been extracted and discuss the tools of that have been used in interpretation of such data to fulfill the objectives. More specifically, it describes about the research design. The population and sample, nature and source of data and tools, which is be used to analyze data.

The main objective of this study is to find the relationship between NPL and the other variables. The research methodology should be used to accomplish the research objectives, which is described in this unit. Research methodology refers to the various sequential steps adopted by a researcher in studying a problem with certain objectives in view. In other words research methodology describes methods and processes applied in the entire part of the study.

3.2 Research Design:-

The research study attempts to analyze the NPL management adopted by commercial banks in Nepal. Hence analytical and descriptive research is applied. Descriptive research is essentially a fact finding approach relative largely to present and abstracting generalization by the cross section study of the current situation. Analytical approach is followed to parametric and non-parametric test of data. It is the process of microanalysis and appraisal to the data.

The research design is more prescriptive and less descriptive. Annual reports and financial statements published by related banks and other necessary information were collected from the concerned banks. The study period covers five years accordingly data were collected from the year 2002/2003 to 2006/2007.

3.3 Population and Sample:-

There are altogether 23 commercial banks operating all over the nation. All commercial banks, whole shares of stocks are traded in Nepal Stock Exchange Limited (NEPSE) i.e. that is listed in NEPSE as form the population of this study. Three of them have been selected as sample. Population and sample of this study are as follow.

Population
Table No. 3
List of Licensed Commercial Banks
Mid- January 2008

S.N	Name of the Banks	Operation Date (A.D.)	Head Office
1.	Nepal Bank Limited.	1937-11-15	Kathmandu
2.	Rastriya Banijya Bank.	1966-01-23	Kathmandu
3.	Agriculture Development Bank.	1968-01-02	Kathmandu
4.	Nabil Bank Limited.	1984-07-16	Kathmandu
5.	Standard Chartered Bank Nepal Ltd.	1986-01-30	Kathmandu
6.	Nepal Investment Bank Limited.	1986-02-27	Kathmandu
7.	Himalayn Bank Limited.	1993-01-18	Kathmandu
8.	Nepal Bangladesh Bank Limited.	1993-06-05	Kathmandu
9.	Nepal SBI Bank Limited.	1993-07-07	Kathmandu
10.	Everest Bank Limited.	1994-10-18	Kathmandu
11.	Bank of Kathmandu Limited.	1995-03-12	Kathmandu
12.	Nepal Credit & Commerce Bank.	1996-10-14	Sidharthnagr.
13.	Lumbini Bank Limited.	1998-07-17	Narayangadh
14.	Nepal Ind.&Commercial Bank.	1998-07-21	Biratnagar
15.	Machhapuchhre Bank Limited.	2000-10-03	Pokhara
16.	Kumari Bank Limited.	2001-04-03	Kathmandu
17.	Laxmi Bank Limited.	2002-04-03	Birgunj
18.	Siddhartha Bank Limited.	2002-12-24	Kathmandu
19.	Global Bank Limited.	2007-01-02	Birgunj
20.	Citizens Bank Limited.	2007-06-21	Kathmandu
21.	Prime Bank Limited.	2007-09-24	Kathmandu
22	Sunrise Bank Limited.	2007-10-12	Kathmandu
23.	Bank of Asia Limited.	2007-10-12	Kathmandu

Source: Banking and financial statistics, Vol.41,(A journal of Banking Operation Department: NRB, Mid July 2003), p.30

Sample selected for this Study

I.   Nepal Bank Limited (NBL).
II.   Standard Chartered Bank Nepal Limited(SCBNL).
III.   Nebil Bank Limited (NABIL).

3.4 Nature and Sources of data:-

The study is based on secondary data. The required data were directly obtained from financial statements, such as balance sheet and profit & loss account of the concerned banks.
The major sources of information collections are as follows.

I.   Annual reports of related companies and security board of Nepal.
II.   Financial statistics of listed companies, published by security board of Nepal.
III.   Laws, guidelines and directives regarding subject matter.
IV.   Various reports published by Nepal Rastra Bank, CIB etc.
V.   Journals, Government and Non government publication other supportive books and mostly website of the companies.
VI.   Other related published and unpublished documents.
VII.   Other necessary information were collected from various institutions.

3.5 Data Collection Techniques:-

Secondary data has been obtained through the annual reports of NABIL & SCBNL were collected from concerned banks. The annual reports of NBL were published in Gorkhapatra and the same was referred for the study. Various publications of NRB were collected from the website of NRB. Similarly reports of Credit Information Bureau have been collected from the website CIB. The reference of NRB directives and guidelines has been executed from Nabil Bank Limited and website of NRB. Various reports, textbooks, journals and unpublished dissertation have been obtained by visiting TU Central Library and Thakur Ram Campus Library.

3.6 Data Analysis Tools:-

In this study, only financial and statistical tools are used for the analysis of data that is already stated in the limitation of the study. The procedures of analyzing data are described as follows.

3.6.1 Financial Tools :-

The focus of financial analysis is on key figures in the financial statement and the significant relationship that exist between them. The analysis of financial statements is a process of evaluating the relationship between component parts of financial statements to obtain a better understanding the firm's position and performance. Financial analysis is the

process of selection, relation and evolution. Financial tools like ratio analysis have been used in this study.

3.6.1.1 Ratio Analysis:-

Financial ratio analysis is a widely and frequently used tool of financial analysis. It establishes the numerical relationship between the two relevant accounting figures derived from the financial statement/reports in the form of quotient, proportion or percentages and based on that, an assessment is made about the financial performance and position of an organization. Count less ratios can be formulated from financial statements/reports. A ratio reflecting a quantitative relationship should help to form qualitative judgments. It is possibly only when the relationships between two figures are meaningful or some reference can be drawn from such relationship. There are many ratios, only those ratios have been covered which are related to investment operation of the banks. The study contains following ratios.

A) Loans and Advances to Total Assets Ratio

Loans and advances of any commercial banks represent the major portion in volume of total assets. The ratio of loans and advances to total assets measure the volume of loans and advances in the structure of total assets. The high degree of ratio indicates the good performance of the banks in mobilizing its fund by way of lending functions. However in its reverse side, the high degree is representative of low liquidity ratio. Granting loans and advances always carries a certain degree of risk. Thus this asset of banking business is regarded as risky assets. Hence this ratio measures the management attitude towards risky assets. The low ratio is indicative of low productivity and high degree of safety in liquidity and vice versa. This ratio is calculated as follows.

Loans and advances to total assets ratio= <u>Loans and advances</u>
                                                                    Total Assets

B) Loans and Advances to Total Deposit Ratio(CD Ratio)

The core banking function is to mobilize the funds obtained from the depositors to borrowers and earn profit and CD ratio is the fundamental parameter to ascertain fund deployment efficiency of commercial bank. In other words this ratio is calculated to find out how successfully the banks are utilizing their total deposits on credit or loans and advances for profit generating purpose as loans and advances yield high rate of return. Greater

CD ratio implies the better utilization of total deposits and better earning, however, liquidity requirements also needs due consideration. Hence 70 to 80% CD ratio is considered as appropriate. This ratio is calculated by dividing total credit by total deposit of the bank.

Loans and Advances to Total Deposit Ratio = $\dfrac{\text{Loans and advances}}{\text{Total Deposit}}$

C) Non-Performing Loans to Total Loans and Advances Ratio

This ratio determines the proportion of non-performing loans in the total loan portfolio. Higher ratio implies the bad quality of assets of banks in the form of loans and advances. Hence lower NPL to total credit ratio is preferred. As per international standard only 4% NPL is allowed but in the context of Nepal 10% NPL is acceptable. It is calculated as follows.

Non performing loans to total loans and advances= $\dfrac{\text{Non performing loans}}{\text{Total loans and advances}}$

D) Loan Loss Provision to Total Loans and Advances Ratio

This ratio describes the quality of assets in the form of loans and advances that a bank is holding. Since there is risk inherent in loans and advances, NRB has directed commercial banks to classify its loans into different categories and accordingly to make provision for probable loss. Loan loss provision signifies the cushion against future contingency created by the default of the borrower in payment of loans and ensures the continued solvency of the banks. Since high provision has to be made for non performing loan, higher provision for loan loss reflects increasing non performing loan in volume of total loans and advances. The low ratio signifies the good quality of assets in the volume of loans and advances. It indicates how efficiently it manages loan and advances and makes efforts to cope with probable loan loss. Higher ratio implies, higher portion of NPL in the total loan portfolio. This ratio is calculated as follows.

Loan Loss Provision Ratio = $\dfrac{\text{Loan Loss Provision}}{\text{Total loan and advances}}$

E) Provision Held to Non-Performing Loan

This ratio determines the proportion of provision held to non-performing loan of the bank. This ratio measures up to what extent of risk inherent in NPL is covered by the total loan loss provision. Higher ratio

signifies that the banks are safeguarded against future contingencies that may creat due to non-performing loan or in other words banks have cushion of provision to cope the problem that may be cause due to NPL. Hence higher the ratio better is the financial strength of the bank . This ratio is calculated as follows.

Provision Held to Non performing loan= $\dfrac{\text{Total Loan Loss Provision}}{\text{Non performing loan}}$

F) Return on Loans and Advances

This ratio indicates how efficiently the bank has employed its resources in the form of loans and advances. It is the ratio of net profit and total loans and advances of a bank. Net profit refers to that profit which is obtained after all types of deduction like employee bonus, tax, provision etc. Hence this ratio measures bank's profitability with respect to loans and advances. Higher the ratio better is the performance of the bank. It is calculated as follows.

Return on loans and advances= $\dfrac{\text{Net Profit}}{\text{Total Loans and Advances}}$

3.6.2 Statistical Tools:-

Statistical tools are also very important tools for the analysis. Some important statistical tools are used in this study to achieve the objectives. Statistical tools such as percentage, mean, standard deviation, co-relation co-efficient, co-efficient of variation, trend value analysis have been used. They are as follows.

A) Percentages

A percent is a number of hundredth parts one numbers to another. Uses of percentages make the data much simpler and grasp. It is the simplest statistical device used in interpretation of phenomenon. It can reduce everything to a common base and thereby helps in meaningful presentation. Mathematically, let A represent the base used for comparison, B represent the given data to be compared with the base, then the percentage of given number in the base may be calculated as follows.

$$\text{Percentages}(P\%) = \dfrac{B}{A} \times 100$$

B) Arithmetic Mean

An average is a single value selected from a group of values to represent them in same way, which is supposed to stand for a whole group of which it is a part , as typical of all the values in the group. Out of various measures of statistical tools, arithmetic mean is one of the useful tools applicable here. It is easy to calculate and understand and based on all observations. Arithmetic mean of a given set of observations is their sum divided by the number of observations. The following formula is used to calculate mean.

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

Where,

$\sum X$ = Summation for total values of the variable.

N = Number of items.

C) Standard Deviation

The measurement of the scatter ness of the mass of figures in a series about an average is known as dispersion. The standard deviation measures the absolute dispersion. The greater the amount of dispersion, greater the standard deviation mean of high degree of uniformity of the observation as well as homogeneity of the series a large standard deviation means just the opposite. In this study standard deviation of different ratio are calculated. The following formula is used to calculate.

$$\text{Standard Deviation } (\sigma) = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

Where,

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

N = Number of items.

D) Co-efficient of Variation

The percentage measure of co-efficient of standard deviation is called coefficient of variation. The less is the CV the more is the uniformity and consistency and vice versa. Standard deviation gives an absolute measure of dispersion. Hence where the mean value of the variable is not equal it is not appropriate to compare two pairs of variables based in SD only. The coefficient of variation measures the relative measures of dispersion, hence

capable to compare two variables independently in terms of their variability. The CV measured by the using following formula.

$$\text{Coefficient of Variation (CV)} = \frac{SD}{\text{Mean}} \times 100$$

Where,

SD = Standard Deviation.

E) Co-efficient of Correlation

The correlation (co-ordinate) indicates the relationship between two such variables in which changes in the values of one variable, the values of the other variable also change. Karl person's Co-efficient of correlations is calculated to study the extent or degree of correlation between two variables. It can be either perfect positive or negative. The both series move in the same directions and variations are proportionate there would be perfect positive correlation between them. On the other hand, two series moves in reverse directions, and the variations in their value are proportionate, it is example of perfect negative correlation. It is also likely that there may be no relationship between the variations of the two series in which case there is said to be no correlations between them.

The coefficient of correlation always varies between the two limits of +1 and -1. When there is perfect positive correlation, its value will be +1 and when there is perfect negative correlation, the value will be -1. Its midpoints are 0, which indicate absence of correlation. Lastly, the value of this co-efficient of correlation is always between +1 and -1. It can not exceed unity.

The formula for the calculation of co-efficient of correlation is given below.

$$r = \frac{\sum xy}{\sqrt{\sum x^2 \cdot \sum y^2}}$$

Where,

r = Co-efficient of correlation.

$\sum xy$ = The total of the product of items in the two series.

$\sum x^2 \cdot \sum y^2$ = The total of squares of items in x and y series respectively.

Probable error of the co-efficient of correlation:

After the calculation of coefficient of correlation the next thing is to find out the extent to which is dependable. For this purpose the probable error of the coefficient of correlation is calculated. If the probable error is added to and subtracted from the coefficient of correlation it would give two such limits with in which we can reasonably accept of error of the Karl person's co-efficient of correlation is:

$$P.Er. = \frac{0.6745 \,(1 - r^2)}{\sqrt{N}}$$

Where,

P.Er. = Probable error of coefficient of correlation.
 r   = Co efficient of correlation.
 n   = Number of pairs of observation.

In order to conclude whether the coefficient of correlation is significant or not. The following points should be kept in mind.

I.   If the co-efficient of correlations is less than its probable error, it is not at all significant.
II.   If the co-efficient of correlation is more than six times its probable error, it is definitely significant.
III. If the probable error is not much and if the co-efficient of correlation is 0.5 or more it is generally to be significant.

It should be remembered that the co-efficient of correlation expresses the relationship between two series, and not between individual items of the series.

F) Trend Analysis

Trend Analysis is one of the statistical tools which is used to determine the improvement or deterioration of its financial situation. Trend analysis informs about the expected future values of various variables. The Least square method has been adopted to measure the trend behaviors of these selected banks. This method is widely used in practices. The formula of least square method for the straight line is represented by the following formula.

$$Yc = a + bx$$

Where,

Yc = Trend Value.

a = Y intercept or the computed trend figure of the Y variable when X= 0.

b = Slope of the trend line of the amount of change in Y variable that is associated with change in 1 unit in X variable.

X = Variable that represent time i.e. time variable.

The variable of the constants "a" and "b" can be determined by solving the following two normal equations.

$$\sum Y = Na + b\sum X \ldots\ldots\ldots\ldots(I)$$
$$\sum XY = a\sum X + b\sum X \ldots\ldots..(II)$$

Where, N= Number of years.

But for simplification, if the time variable is measured as a deviation from its means i.e. mid point is taken as the origin, the negative value in the first half of the series balance out the positive values in the second half so that $\sum X = 0$. The values of constant "a" and "b" can easily be determined by using following formula.`

$$a = \frac{\sum Y}{N}$$

$$b = \frac{\sum XY}{X^2}$$

G)Diagrammatic & Graphic Presentation

Graphic presentation is a powerful and effective way for highlighting variables. Diagrams and graphs are visual aids that give a bird eye view of a given set of numerical data. They represent the data in simple and readily comprehensible form. So, various graphs, diagrams and pie chart have been used for presentation and analysis of data.

Chapter IV
PRESENTATION AND ANALYSIS OF DATA

To achieve the objective, which are set in introduction chapter, the data are presented and analyzed in this touch chapter. Hence the secondary data, which are available, one properly analyzed and evaluated with the help of various financial and statistical tools. This chapter is also called nervous system, which helps to provide conclusion after detailed analyzed, so proper recommendations can be given. The gist of research work is presented in the form of major findings, vital issues and recomendative in the fifth chapter. In this way an effort is made to make proper linkage of every chapter.

4.1 Financial Tools:

Financial tools help to identify the financial strength and weakness of the firm. In spite of various financial tools available, the researcher has primary stressed on ratio analysis assuming that it is the most suitable tools. Many financial ratios related to the NPL management are evaluated and analyzed here to identify the performance of three commercial banks, Nepal Bank Limited, Nebil Bank and Standard Chartered Bank Nepal Limited.

4.1.1 Ratio Analysis:

Ratio is a mathematical relationship between the numbers dividing one by another. Ratios are designed here to show the relationship between financial accounts. The ratio which are essential for the study are given below.

I.   Loans and Advances to Total Asset Ratio.
II. Loans and Advances to Total Deposit Ratio.
III. Non Performing Loans to Total Loans and Advances Ratio.
IV. Loan Loss Provision to Total loans and Advances Ratio.
V.   Provision Held to Non Performing Loan Ratio.
VI. Return on Loans and Advances Ratio.

4.1.1.1 Loans and Advances to Total Asset Ratio

Loans and advances of any commercial banks represent the major portion in volume of total assets. The ratio of loans and advances to total assets measures the volume of loans advances in structure of total assets.

The high degree of ratio indicates the good performance of the banks in mobilizing its fund by way of lending functions. However in its reverse side, the high degree is representative of low liquidity ratio. Granting loans and advances always carries a certain degree of risk. Thus this asset of banking business is regarding as risky assets. Hence this ratio measures the management attitude towards risky assets. The low ratio is indicative of low productivity and high degree of safety in liquidity and vice versa.

Table No. 4
Loans and Advances to Total Asset Ratio (%)

Fiscal Year	NBL	NABIL	SCBNL
2002/03	45.54	49.11	28.57
2003/04	40.62	51.05	28.31
2004/05	35.85	63.68	37.98
2005/06	35.86	59.46	35.71
2006/07	32.27	57.56	37.11
Mean	38.03	56.17	33.54
S.D.	4.60	5.39	4.22
C.V.	12.10	9.60	12.59

The above table no.4 shows the ratio of loans and advances to total assets of the three commercial banks for five fiscal year. This ratio shows that NBL is in decreasing trend where as SCBNL and NABIL are in fluctuating trend. The overall ratio of the three banks has been ranged from 28.31% of SCBNL in 2003/04 to 63.68% of NABIL in 2004/05. The mean ratio of NBL, NABIL and SCBN is 38.03%, 56.17% and 33.54% respectively. Among the three banks, NABIL has the highest proportion of loans and advances in the total asset structure followed by NBL and then SCBNL. It refers that SCBNL has the lowest degree of investment in risky assets. The management of SCBNL is risk averse as they have invested higher proportion of their asset in risk free or normally risky assets like treasury bills, debentures, National Saving Bonds etc.

The standard deviation of NBL, NABIL and SCBNL are 4.60, 5.39 and 4.22 respectively. Similarly, the CV of NBL, NABIL and SCBNL are 12.10, 9.60 and112.59 respectively. So it can be interpreted that NBL has higher deviation than NABIL and SCBNL. This is due to the decreasing trend in loan and advances. But SCBNL has the higher variation

among three banks. NABIL is moderate in terms of deviation and variability of ratio during the study period.

Figure No. 1
Loans and Advances to Total Asset Ratio (%)
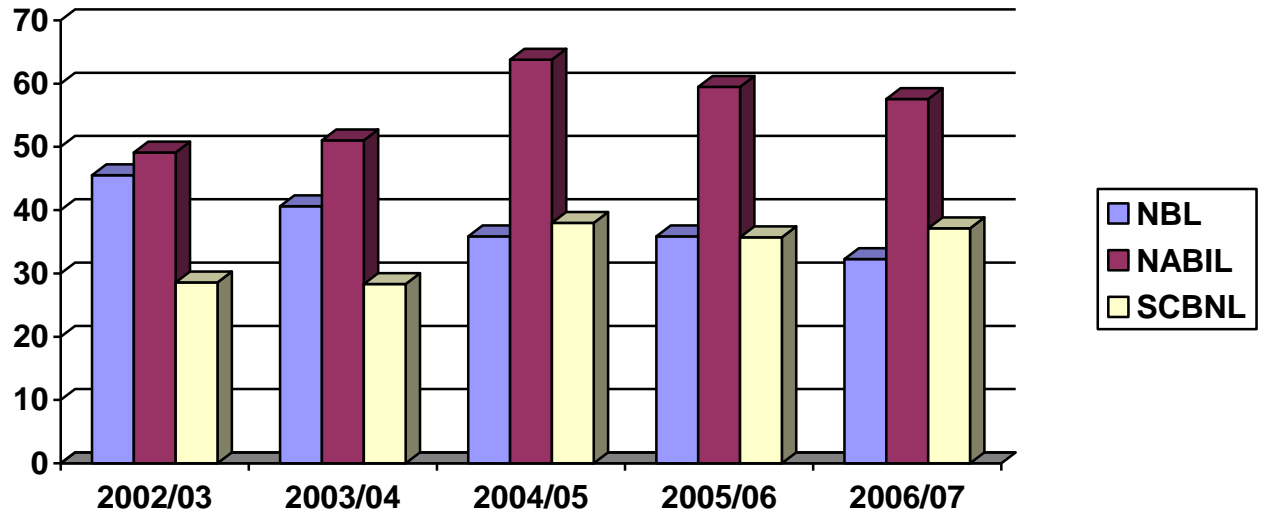
4.1.1.2 Loans and Advances to Total Deposit Ratio

This ratio is often called Credit Deposit Ratio. The core banking function is to mobilize the funds obtained from the depositors to borrowers and earn profit and CD ratio is the fundamental parameter to ascertain fund deployment efficiency of commercial bank. In other words this ratio is calculated to find out how successfully the banks are utilizing their total deposits on credit or loans and advances for profit generating purpose as loans and advances yield high rate of return. Greater CD ratio implies the better utilization of total deposits and better earning, however, liquidity requirements also needs due consideration. Hence 70 to80% CD ratio is considered as appropriate. This ratio is calculated by dividing total credit or loans and advances by total deposit of the bank.

Table No. 5
Loans and Advances to Total Deposit Ratio (%)

Fiscal Year	NBL	NABIL	SCBNL
2002/03	51.79	60.34	31.99
2003/04	50.20	60.55	31.63
2004/05	46.94	75.03	43.55
2005/06	35.94	68.63	39.92
2006/07	35.25	68.13	43.79
Mean	44.02	66.53	38.18
S.D.	7.06	5.54	5.38
C.V.	16.04	8.32	14.08

The above table shows the loans and advances to total deposit of three banks for five fiscal years. This ratio shows NABIL and SCBNL are in increasing trend where as NBL is in decreasing trend. The overall ratio of the three banks has been ranged from 31.99% of SCBNL in 2002/03 to 75.03% of NABIL in 2004/05. NABIL has the highest ratio for the whole period. The mean ratio of NBL, NABIL and SCBNL is 44.02%, 66.53% and 38.18% respectively. Among the three banks, NABIL has the highest proportion of loans and advances in the total deposit followed by NBL and them SCBNL. It signifies that NABIL and NBL have been ahead in utilizing depositor's money on loans and advances with the objective to earn profit. On the basis of above analysis we can say that SCBNL has very low investment in the form of loans and advances. The management of SCBNL is risk averse as they have invested higher proportion of their deposit in risk free or nominally risky assets like treasury bills, debentures, National Saving Bonds etc.

The SD of NBL, NABIL and SCBNL are 7.06, 5.54 & 5.38 and CVs are 16.04%, 8.32% & 14.08 respectively. Thus it refers that NBL has higher deviation with higher degree of variation in this ratio. Even though SCBNL has least deviation but moderate in terms of variation. NABIL is moderate in terms of deviation and has least variability during the study period.

Figure No. 2
Loans and Advances to Total Deposit Ratio (%)
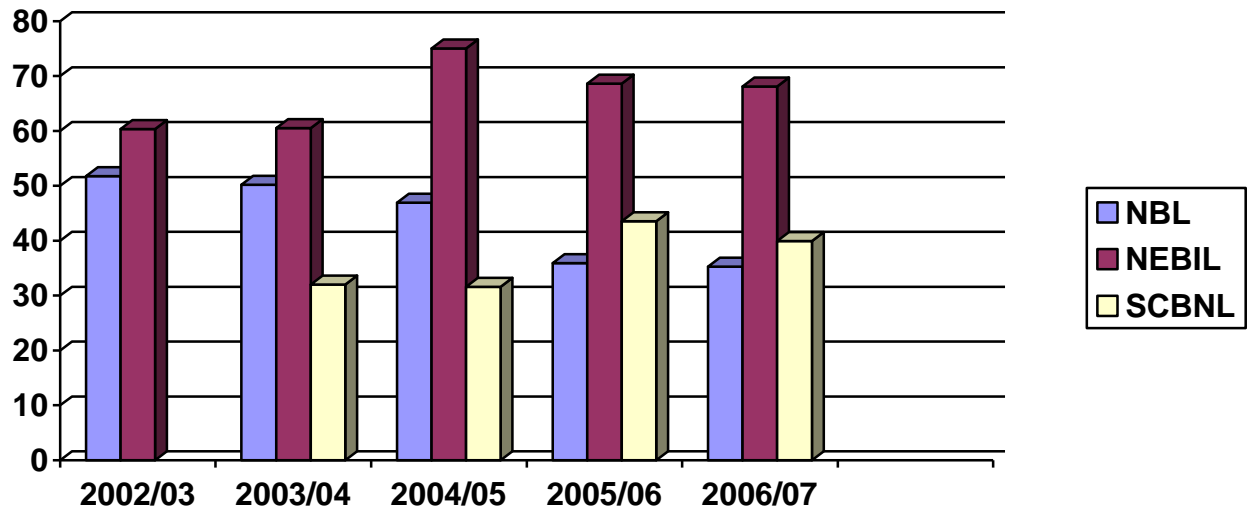
4.1.1.3 Non-Performing Loans to Total Loans and Advances Ratio

Non-performing loans to total loans and advances ratio determines the proportion of non-performing loans in the total loan portfolio. As per NRB directives the loans falling under category of substandard, doubtful and loss are regarded as non-performing loan. Higher ratio implies the bad quality of assets of banks in the form of loans and advances. Hence lower NPL to total credit ratio is preferred. As per international standard only 5% NPL is allowed but in the context of Nepal maximum 10% NPL is acceptable.

Table No. 6
Non-Performing Loans to Loans and Advances (%)

Fiscal Year	NBL	NABIL	SCBNL
2002/03	60.47	5.55	4.13
2003/04	26.61	3.21	3.61
2004/05	24.19	1.28	2.69
2005/06	13.77	1.34	2.07
2006/07	15.20	1.10	1.83
Mean	28.05	2.50	2.87
S.D.	16.95	1.71	0.88
C.V.	60.43	68.35	30.73

The above table shows the ratio of non-performing loans to loans and advances of NBL, NABIL and SCBNL for five fiscal years. The figure

represented in the above table no. 6 shows that NBL has the highest ratio through out the study period. SCBNL is moderate in this ratio and shows decreasing trend. NABIL's and SCBNL's decreasing trend of NPL is the result of effective credit management of bank and its efforts of recovering bad debts through establishment of Recovery Cell. The overall ratio has been ranged from 1.10% of NABIL in 2006/07 to 60.47% of NBL in 2002/03. The mean non-performing loan to total loan ratio of NBL, NABIL& SCBNL are 28.05%, 2.50% and 2.87% respectively. This ratio is significantly high of NBL in comparison to other two banks and portrays the critical condition of the banks; NBL has NPL very much higher than the acceptable standard of 10%. The average percentage of NPL to total loan of NABIL and SCBNL is below the prescribed standard.

The SD of NBL, NABIL and SCBNL are 16.95, 1.71&0.88 and CVs are 60.43%, 68.35% & 30.73% respectively. Thus it signifies that SCBNL has the least deviation and also lower degree of variation in this ratio. Among the three banks, NABIL is moderate in terms of deviation but has higher degree of variability and NBL has the highest deviation but the moderate variability of ratio during the study period. Since NPL is one of the causes of banking crisis, NBL and even other two banks should give serious attention to this matter.

Figure No. 3
Non-Performing Loans to Total Loans & Advances Ratio(%)
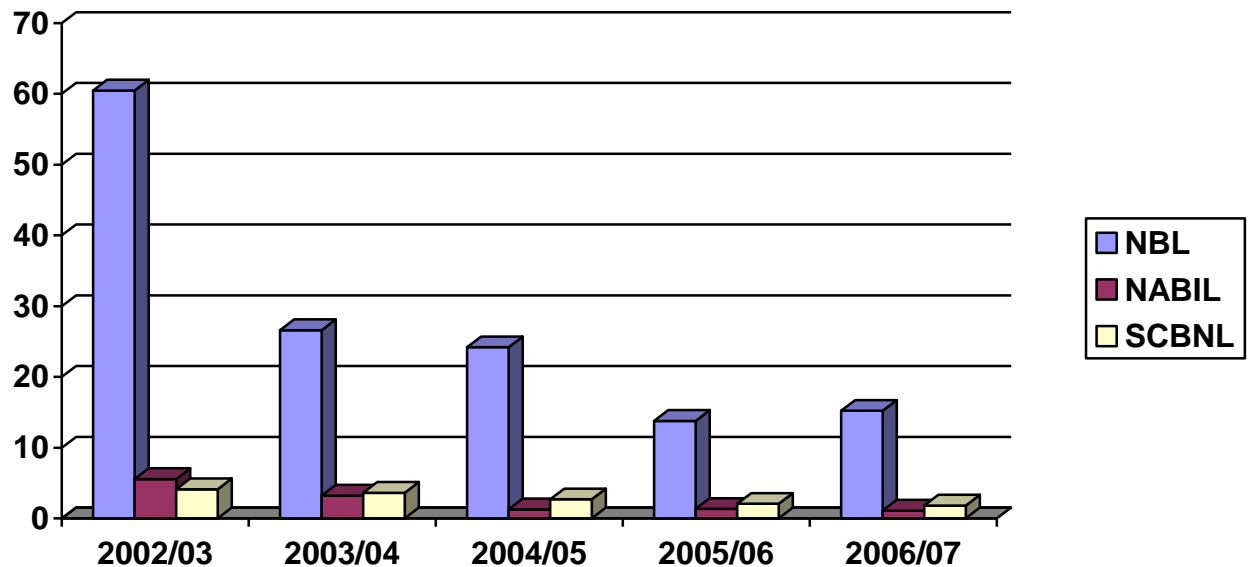
4.1.1.4 Loan Loss Provision to Total Loans and Advances Ratio

This ratio analyze the quality of assets in the form of loans and advances that a bank is holding. Since there is risk inherent in loans and advances, NRB has directed commercial banks to classify its loans into different categories and accordingly to make provision for probable loss. Loan loss provision signifies the cushion against future contingency created by the default of the borrower in payment of loans and ensure the continued solvency of the banks. Since high provision has to be made for non-performing loan, higher provision for loan loss reflects increasing non-performing loan in volume of total loans and advances. The low ratio signifies the good quality of assets in the volume of loans and advances. It indicates how efficiently it manages loan and advances and makes efforts to cope with probable loan loss. Higher ratio implies, higher portion of NPL in the total loan portfolio.

Table No. 7
Loan Loss Provision to Loans and Advances Ratio(%)

Fiscal Year	NBL	NABIL	SCBNL
2002/03	56.04	4.41	5.07
2003/04	50.48	4.20	4.24
2004/05	51.27	3.29	3.30
2005/06	30.86	2.66	2.93
2006/07	17.33	2.20	2.67
Mean	41.20	3.35	3.64
S.D.	14.73	0.71	0.72
C.V.	35.75	29.85	19.85

The above table shows that the ratio of loan loss provision to loans and advances of NBL, NABIL and SCBNL for five fiscal years. The above table shows that NBL has the highest ratio through out the study period. NABIL shows the least ratio during the study period and SCBNL is moderate in loan loss provision ratio. The overall ratio has been ranged from 2.20% of NABIL in 2006/07 to 56.04% of NBL in 2002/03. The mean loan loss ratio of NBL, NABIL & SCBNL are 41.20%, 3.35% and 3.64% respectively. This ratio of NBL is significantly high in comparison to other two banks. Higher LPP is indicative of poor performance of the economy. Hence the greater ratio of NBL suggest that there is high proportion of NPL in the total loans and advances and decreasing trend of loan loss provision ratio of

NABIL and SCBNL explains that both the banks have been successful to reduce its non-performing loan resulting to decreasing LLP.

The SD of NBL , NABIL and SCBNL are 14.73, 0.71 & 0.72 and CVs are 35.75%, 29.85% & 19.85% respectively. Thus it signifies that NBL has higher deviation with higher degree of variation in this ratio. Among the three banks, NABIL is moderate in terms of variability and SCBNL has the least variability of ratio during the study period.

Figure No.4
Loan Loss Provision to Loans and Advances Ratio(%)
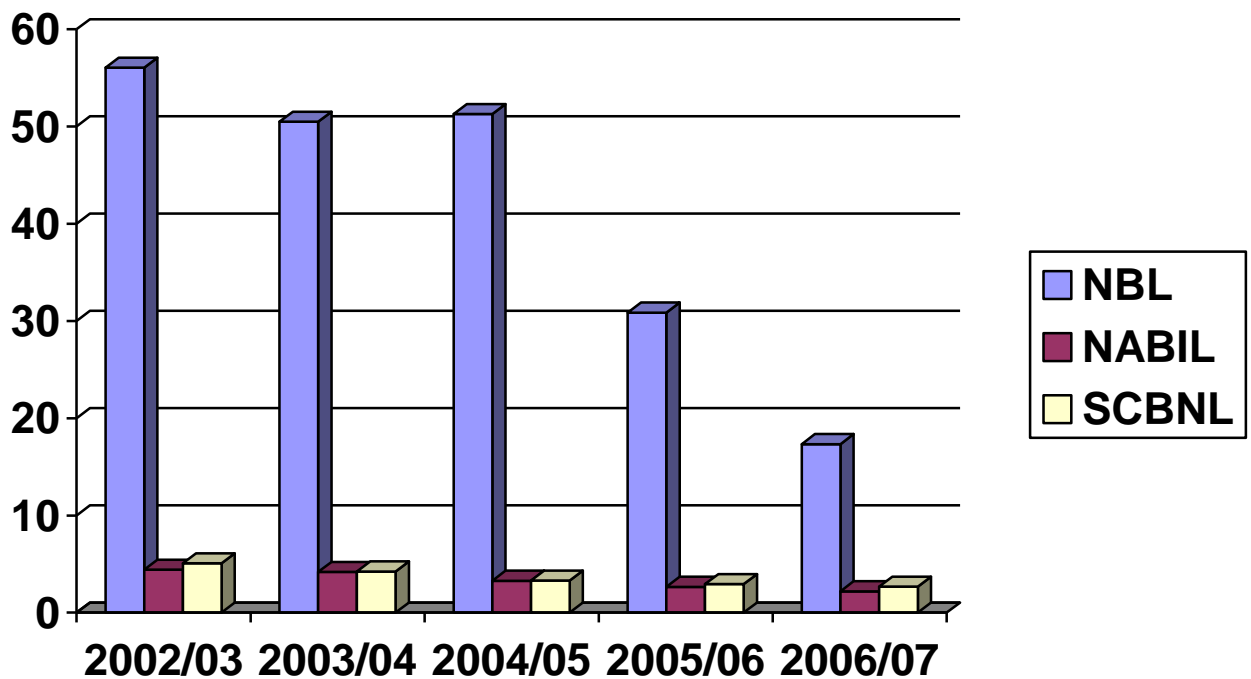
4.1.1.5 Provision Held to Non-Performing Loan Ratio

Provision held to non-performing loan ratio determines the proportion of provision held to non-performing loan of the bank. This ratio measures up to what extent of risk inherent in NPL is covered by the total loan loss provision . Higher ratio signifies that the banks are safeguard against future contingencies that may create due to non-performing loan or in other words banks have cushion of provision to cope the problem that may be cause due to NPL. Hence higher the ratio better is the financial position of the bank.

Table No. 8
Provision Held to Non-Performing Loan Ratio(%)

Fiscal Year	NBL	NABIL	SCBNL
2002/03	92.67	79.56	122.58
2003/04	189.73	130.73	117.36
2004/05	211.96	258.04	122.58
2005/06	224.06	197.95	141.87
2006/07	114.02	199.80	145.93
Mean	166.49	173.21	130.06
S.D.	53.15	61.79	11.53
C.V.	31.92	35.67	8.86

The above table shows the ratio of provision held to non-performing loan of NBL, NABIL and SCBNL for five fiscal years. The overall ratio has been ranged from 79.56% of NABIL in 2002/03 to 258.04% of NABIL in 2004/05. The mean ratio of NBL, NABIL & SCBNL are 166.49%, 173.21% and 130.06% respectively. This ratio of NABIL is significantly high in comparison to other two banks and portrays that the bank has adequate provision against non-performing loan but this ratio of SCBNL is comparatively lower.

The SD of NBL, NABIL and SCBNL are 53.15, 61.79 & 11.53 and CVs are 36.92%, 35.67% & 8.86% respectively. Thus it signifies that SCBNL has lowest deviation along with the least degree of variation in this ratio. Among the three banks, NBL is moderate in terms of both deviation and variability and NABIL has the highest deviation and highest variability of ratio during the study period.

Figure No. 5
Provision Held to Non-Performing Loan Ratio(%)
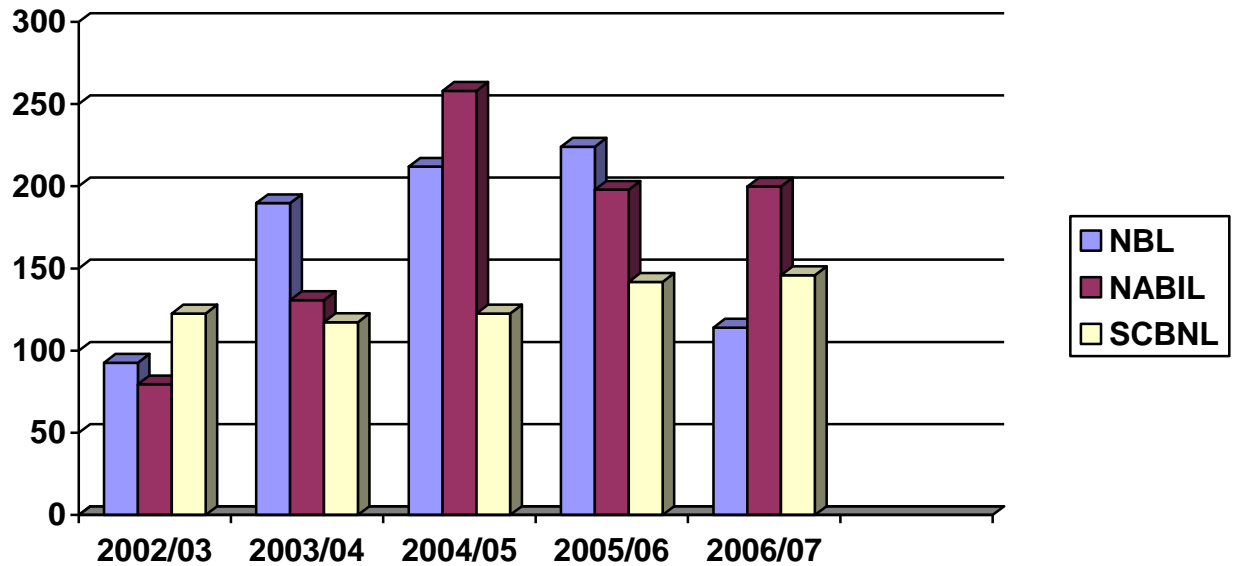
4.1.1.6 Return on Loans and Advances Ratio

This ratio indicates how efficiently the bank employed its resources in the form of loans and advances. This ratio is calculated by dividing net profit of the bank by total loans and advances. Net profit refers to that profit which is obtained after all types of deduction like employee bonus, tax, provision etc. Hence this ratio measures bank's profitability with respect to loans and advances. Higher the ratio better is the performance of the bank.

Table No. 9
Return on Loans and Advances Ratio(%)

Fiscal Year	NBL	NABIL	SCBNL
2002/03	(1.39)	5.13	8.45
2003/04	(6.73)	5.33	8.02
2004/05	10.26	4.75	6.37
2005/06	9.37	4.78	7.16
2006/07	3.04	4.31	6.41
Mean	2.91	4.86	7.28
S.D.	6.44	0.35	0.84
C.V.	221.30	7.22	11.54

The above table shows the ratio of return on loans and advances of NBL, NABIL and SCBNL for five fiscal years. The figure represented in the above table shows that SCBNL has the highest ratio through out the study period except in year 2004/05 and 2005/06. NABIL is moderate in this ratio and shows decreasing trend. NBL is in loss in first two years but after that it is in profit during the study period. The overall ratio has been ranged from (6.73)% of NBL in 2003/04 to 10.26% of NBL in 2004/05. The mean ratio of NBL, NABIL & SCBNL is 2.91% , 4.86% and 7.28% respectively. Since SCBNL's net profit is the highest among all the three banks, this ratio is also the highest.

The SD of NBL, NABIL and SCBNL are 6.44, 0.35 & 0.84 andCVs are 221.30%, 7.22% & 11.54% respectively. Thus it signifies that NABIL has the least deviation with moderate degree of variation in this ratio. Among the three banks, SCBNL is moderate in terms of deviation and least in variability. NBL has the highest deviation with the highest variability of ratio during the study period. Thus it can be concluded that even though NBL has the highest exposure on loans and advances , the bank has failed to earn return on loans and advances.

Figure No. 6
Return on Loans and Advances Ratio(%)
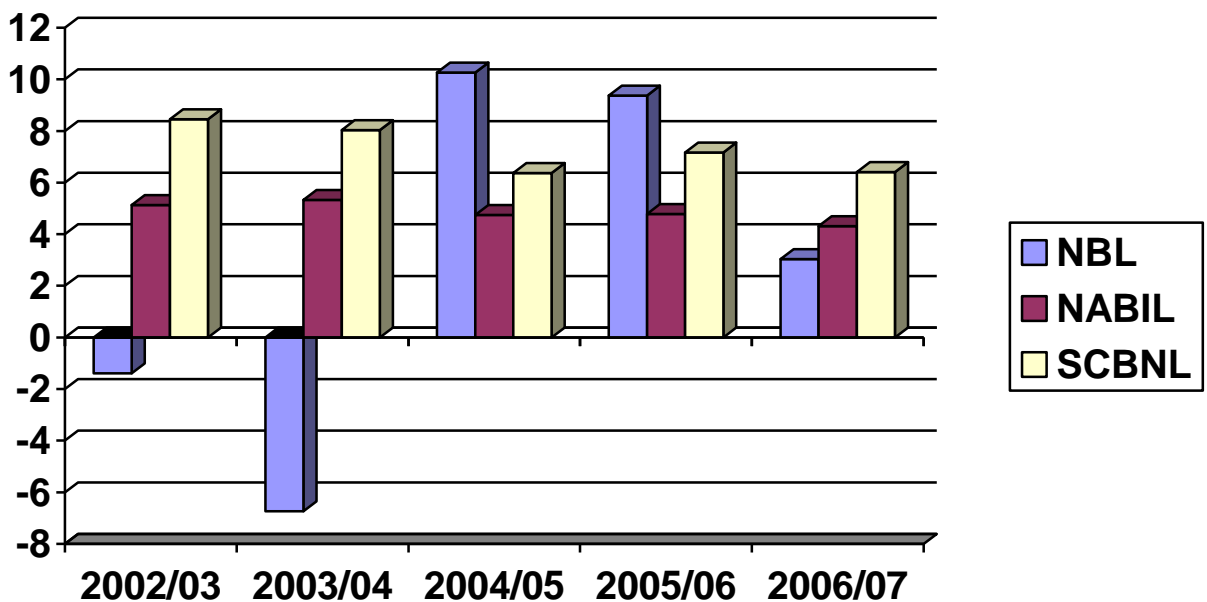
4.1.1.7 The Status of Performing, Non-Performing Loan and Loan Loss Provision of Concerned Commercial Banks:

I. Nepal Bank Limited:-

<div align="center">

Table No. 10

Performing, Non-Performing Loan and Loan Loss Provision(in million)

</div>

Status	2002/03	2003/04	2004/05	2005/06	2006/07
Performing Loan	7,167	13165	12787	11105	11661
Nonperforming Loan	10965	4773	4080	1774	2090
Loan Loss Provision	10161	9056	8648	3974	2383

<div align="center">

Figure No. 7

Performing, Non-Performing Loan and Loan Loss Provision(in million)

</div>
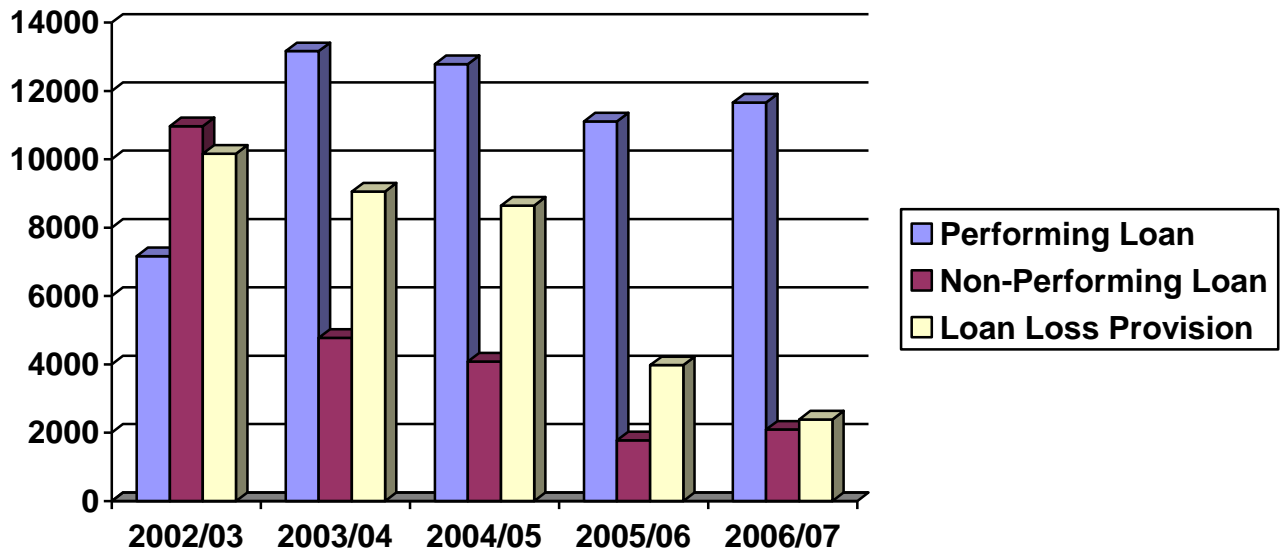
II. Nabil Bank Limited:-

Table No. 11
Performing, Non-Performing Loan and Loan Loss Provision(in million)

Status	2002/03	2003/04	2004/05	2005/06	2006/07
Performing Loan	7664	8275	10804	13100	15728
Nonperforming Loan	450	274	140	178	175
Loan Loss Provision	358	359	361	353	350

Figure No. 8
Performing, Non-Performing Loan and Loan Loss Provision(in million)
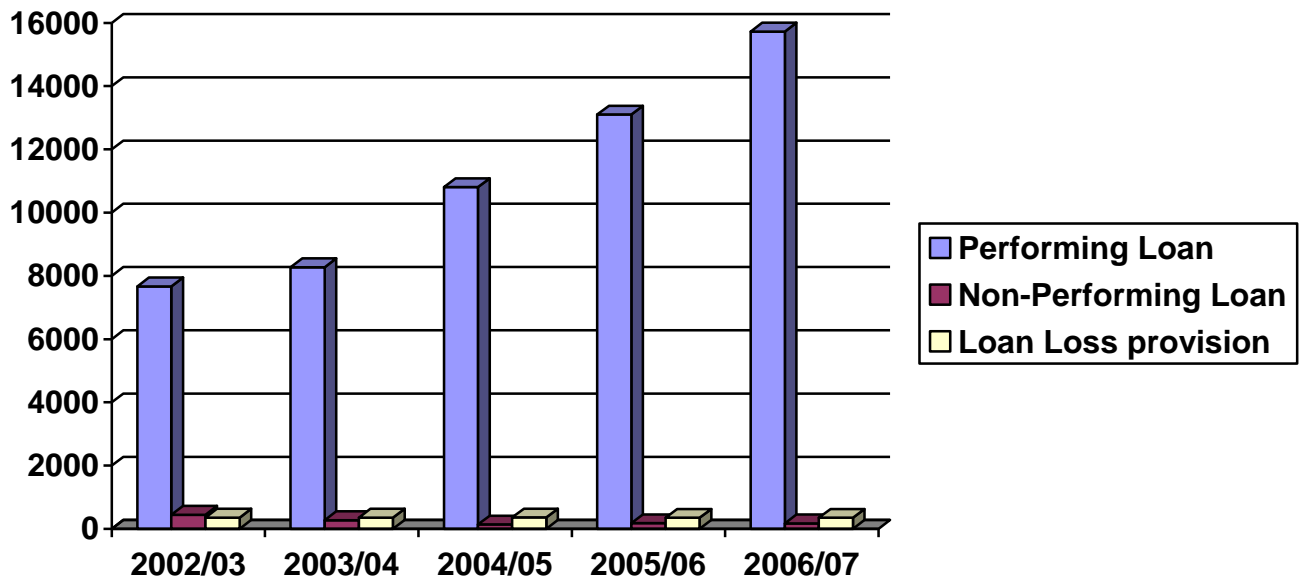
III. Standard Chartered Bank Nepal Limited:-

Table No. 12
Performing, Non-Performing Loan and Loan Loss Provision(in million)

Status	2002/03	2003/04	2004/05	2005/06	2006/07
Performing Loan	5752	6452	8194	9016	10593
Nonperforming Loan	248	242	227	190	197
Loan Loss Provision	304	284	278	270	288

Figure No. 9
Performing, Non-Performing Loan and Loan Loss Provision(in million)
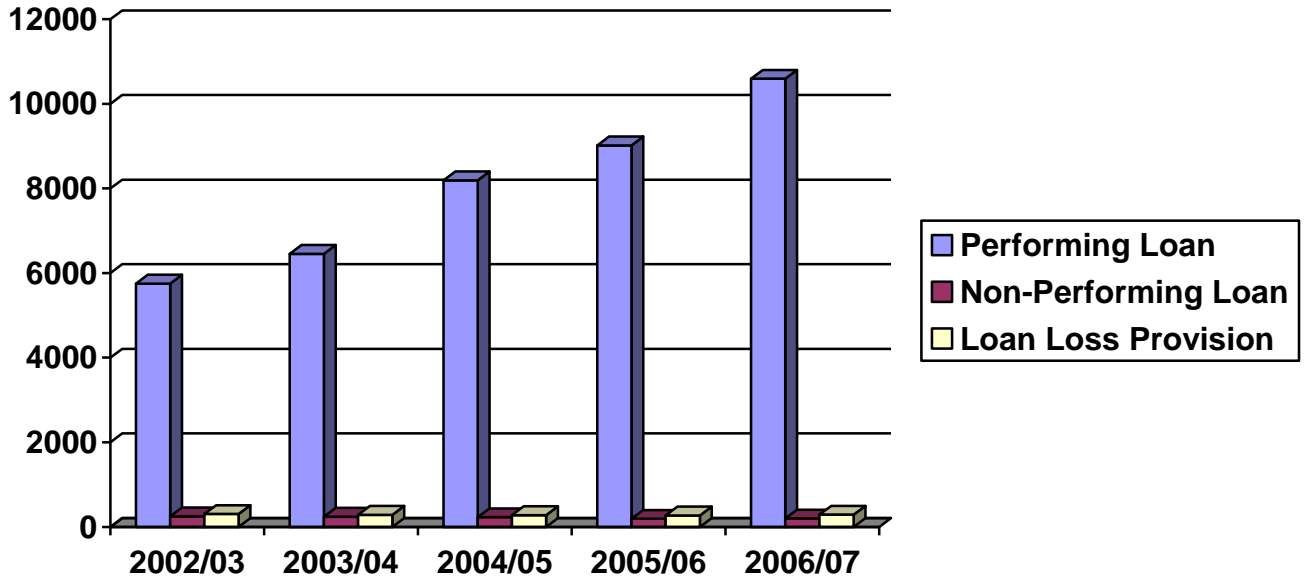
The above graphic and diagrammatic analysis shows the status of Performing Loan, Non-Performing Loan and Loan Loss Provision of three commercial banks. It refers that the NPL and LLP of Nepal Bank Limited are higher than NEBIL and SCBNL. But Performing Loan of NEBIL and SCBNL is higher than Nepal Bank Limited and they in increasing trend. So we can say that the financial position of NBIL and SCBNL is better than NBL.

4.2 Correlation Analysis

4.2.1 Correlation between Loan Loss Provision and Loans Advances

The correlation between loan loss provision and loans and advances shows the degree of relationship between these two items. How a unit increment in loans and advances affect the loan loss provision is measured by this correlation. Here loans and advances is independent variable and loan loss provision is dependent variable.

Table No. 13
Correlation Between Loan Loss Provision and Loans & Advances

Banks	Correlation Coefficient(r)	Probable Error(P.E.)	6.P.E.
NBL	0.9510	0.0288	0.1728
NABIL	(0.8498)	0.0836	0.5016
SCBNL	(0.5016)	0.2253	1.3521

The above table explains the relationship between loans and advances and loan loss provision. The correlation coefficient of NBL is 0.9510 and it is more than 6P.E. and even more than P.E., the correlation coefficient is significant. In other words, the total loan loss provision of NBL is correlated with the loans and advances during the study period. The correlation coefficient is positive as the loans and advances are decreasing and also loan loss provision is decreasing due to decrease in non-performing loan of NBL. The correlation coefficient of NABIL is -0.8498 and its P.E. is 0.0836 and 6P.E. is 0.5016. Since r is less than P.E. and also less than 6P.E., there is negative correlation between loan loss provision and loans and advances of NABIL. So, correlation coefficient is said to be insignificant. It is due to increasing trend in loan and advances and decreasing trend in loan loss provision because of decrease in non-performing loan. The correlation coefficient of SCBNL is -0.5016 and it is less than P.E. and also less than 6P.E. Hence there is negative correlation between loan loss provision and loan and advances of SCBNL and its correlation coefficient is significant. This is due to increasing trend in loan and advances and decreasing trend in loan loss provision due to decrease in non-performing loan.

4.2.2 Correlation between loan loss Provision and Non-Performing Loan

The correlation between loan loss provision and non-performing loan shows the relationship between these two items. How a unit increases in non-performing loan effect the loan loss provision is showed by this correlation. Here non-performing loan is independent variable and loan loss provision is dependent variable. As earlier mentioned non-performing loan are the loan falling on the category of Substandard, Doubtful and Loss loan and the respective provisioning requirement is 25%, 50% and 100%. Higher the NPL higher will be the provisioning amount.

Table No. 14
Correlation Between Loan Loss Provision and Non-Performing Loan

Banks	Correlation Coefficient(r)	Probable Error(P.E.)	6.P.E.
NBL	0.7816	0.1172	0.7032
NABIL	0.2616	0.2805	1.683
SCBNL	0.6329	0.1805	1.083

Above table no.14 describes the relationship between Loan Loss Provision and Non performing Loan. In the above table all the three banks have positive correlation between LLP and NPL. That means increment in NPL leads to increment in LLP. The correlation coefficient of NBL is 0.7816 and its P.E. and 6P.E. are 0.1172 and 0.7032. Since correlation coefficient(r) is greater than 6 times the value of P.E., the correlation coefficient is significant and reliable. In other words, the total LLP of NBL is highly correlated with the non performing loan during the study period and the increases in LLP of NBL is due to increase in NPL for the bank. The correlation coefficient of NABIL is 0.2616 and its P.E. and 6P.E. are 0.2805 and 1.683. In case of NABIL r is less than 6 times the value of P.E. but greater than the P.E. Hence its correlation coefficient is said to be insignificant and there is high degree of positive correlation between LLP and NPL on NABIL. The correlation coefficient of SCBNL is 0.6329. It is less than 6 times the value of P.E. but higher than the value of P.E. Hence there is positive correlation between NPL and LLP of SCBNL but the correlation coefficient is not significant. From this also we can understand that NBL has high degree of NPL in comparison to SCBNL and NABIL.

4.2.3 Correlation Between Loans and advances and Deposit.

Deposit is the very important items of liability side and loans and advances is the major items of asset side of balance sheet of any commercial bank. Banks disburse loans and advances through the funds received from the depositors. The correlation coefficient between loans and advances and deposit describes the degree of relationship between these two variables. Here deposit is independent variable and loan and advances is dependent variable. Hence how a unit increase in deposit impact in the volume of loans and advances is exhibited by this correlation coefficient.

Table No. 15
Correlation Between Loans and advances and Deposit

Banks	Correlation Coefficient(r)	Probable Error(P.E.)	6.P.E.
NBL	-0.5790	0.2002	1.2012
NABIL	0.9672	0.0195	0.1168
SCBNL	0.8257	0.0960	0.5760

The above table no.15 describes the correlation coefficient, probable error and 6 times the value of probable error of three banks. It shows there is positive correlation between loans and advances and deposit in NABIL and SCBNL but negative correlation in NBL. The respective values of correlation coefficient of NABIL and SCBNL are 0.9672 and 0.8257, which are greater than 6 times the value of their respective probable error. Hence it can be interpreted that the correlation between these two variables in NABIL and SCBNL is certain and significant. That means increase in volume of deposit leads to increment in loans and advances of NABIL and SCBNL. However the deposit and loans and advances in SCBNL has lesser degree of relationship in comparison to NABIL. The correlation coefficient of NBL is -0.5790 with P.E.0.2002 and 6 times the value of P.E. 1.2012. Since correlation coefficient of NBL is less than 6 times the value of P.E. and even less than the value of P.E., there is no evidence of correlation and the correlation coefficient is insignificant. The main reason behind this is, NBL's deposit is increasing but its loans and advances are decreasing, as NBL has no further investment in the form of loans and advances.

4.3 Trend Analysis

Trend analysis is a statistical tool, which helps to forecast the future value of different variables on the basis of past tendencies of variable. Trend analysis informs about the expected future values of various variables. Amongst the various methods to determine trend the least squares method is widely used in practices. Hence in this study also least square method has been adopted to measure the trend behaviors of these selected banks. However, trend analysis is based on the assumption that past tendencies continues in the future. Under this heading the effort has been made to calculate trend values of following variables from 2002/03 to 2006/07 and forecast is done for next five years from 2007/08 to 2011/12.

4.3.1 Analysis of Trend Value of Loans and Advances

Under this topic, the trend value of loans and advances of NBL, NABIL and SCBNL has been calculated for five years from F/Y 2002/03 to 2006/07 and the forecast for next five years from 2007/08 to 2011/12.

Table no. 16
Trend Values of Loans and Advances of NBL, NABIL and SCBNL

Rs. In Million

F/Y	NBL	NABIL	SCBNL
2002/03	18678	7296	5804
2003/04	17296	9327	7013
2004/05	15913	11358	8222
2005/06	14531	13388	9431
2006/07	13149	15419	10641
2007/08	11767	17450	11850
2008/09	10385	19480	13059
2009/10	9003	21511	14268
2010/11	7621	23542	15477
2011/12	6239	25573	16687

The above table no. 16 shows that NBL has decreasing trend but NABIL and SCBNL have increasing trend of loans and advances. The average loans and advances of NBL is Rs. 15,913.40, which is decreasing at the rate of Rs. 1,382.10 million every year. Loans and advances are expected to decrease from Rs.13,149 in 2006/07 to Rs. 6,239 million in 2011/12. NABIL's

average loans and advances is Rs.11,357.60 and are increasing every year at the rate of Rs. 2,030.70 million and that of SCBNL at the rate of Rs. 1,209.20 million each year. Hence the expected loans and advances of NABIL are supposed to increase from Rs. 15,419 in 2006/07 to Rs.25,573 million in 2011/12. The average loans and advances of SCBNL is Rs. 8,222.20 million, which is increasing every year at the rate of Rs. 1,209.20 million. Accordingly loans and advances of SCBNL is expected to be increase from Rs. 10,641 million in 2006/07 to Rs. 16,687 million in 2011/12. As NBL is suffering from the problems of bad debts, they are concentrating more on revering bad debts than the further investment in the form of loans and advances. Hence its loans and advances show decreasing trend. Even though NABIL and SCBNL shows increasing trend, rate of increment of NABIL is higher than that of SCBNL. From this it can be interpreted that SCBNL has policy of low investment in loans and advances. Following figure no.10 represents the trend line of loans and advances of three banks for ten fiscal years.

Figure No. 10
Trend line of loan and advances of NBL,NABIL&SCBNL(Inmillion)
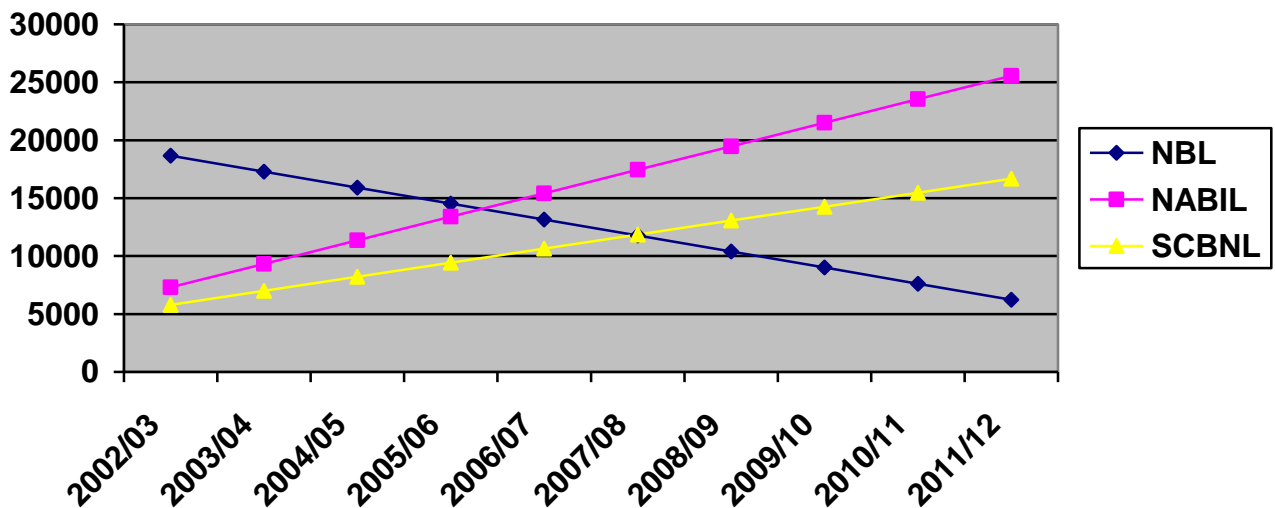
4.3.2 Analysis of Trend value of Non-Performing Loan

Here , the trend values of Non-performing loan of concerned banks have calculated for five years and an attempt has been made to forecast the projections for next five years from 2007/08 to 2011/12. The following table shows the trend value of Non-performing loan from 2002/03 to 2011/12.

Table No.17
Trend Values of Non-Performing loan of NBL,NABIL&SCBNL
(In million)

F/Y	NBL	NABIL	SCBNL
2002/03	8886	373	252
2003/04	6811	308	236
2004/05	4736	243	221
2005/06	2662	179	205
2006/07	587	114	190
2007/08	0	50	175
2008/09	0	0	159
2009/10	0	0	144
2010/11	0	0	128
2011/12	0	0	113

The above table describes that all the three banks have decreasing trend of NPL. The average NPL of NBL is Rs. 4,736.40, which is decreasing at the rate of Rs. 2,074.90 million every year. NPL is expected to decrease from Rs.587 million in 2006/07 to Rs. 0 million in 2011/12. Nepal Bank Limited is concentrating more on recovering bad debts than the further investment in the forms of loans and advances, so its rate of decreasing of NPL may not be zero. NABIL's average NPL is Rs. 243.40, which is decreasing every year at the rate of Rs. 64.60 million. Hence the expected NPL of NBIL is supposed to decrease from Rs. 114 million in 2006/07 to Rs 0 million in 2011/12. The average NPL of SCBNL is Rs. 220.80 million, which is decreasing every year at the rate of Rs. 15.40 million. Similarly NPL of SCBNL is expected to decrease from Rs. 175 million in 2006/07 to Rs. 113 million in 2011/12.

From the above analysis we can say that NBL has significantly high NPL in the total volume of loans and advances but its rate of decrease is also very high. If this trend continues, it would able to decrease its NPL dramatically. Due to NABIL's recovery efforts through establishment of Recovery Cell, its NPL has come down in recent years. Hence NABIL shows decreasing trend of NPL. Before few years NPL of SCBNL was relatively lower than that of other two banks, but in the recent years NABIL has the lower NPL.

The following figure represents the trend line of NPL of three banks for ten fiscal years.

Figure No. 11
Trend line of Non-performing loan of NBL,NABIL&SCBNL

(In million)
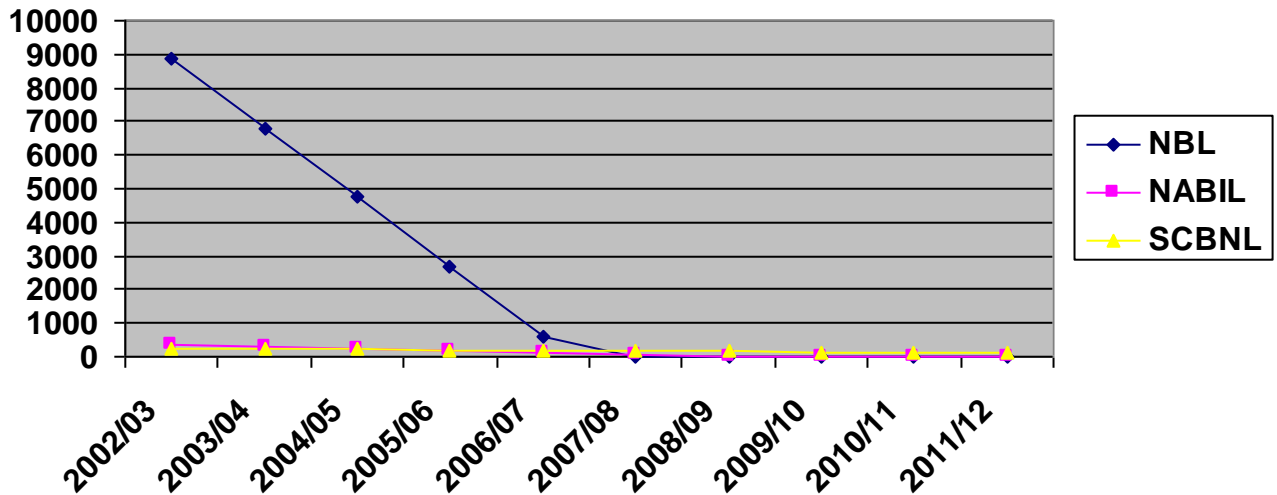
4.3.3 Analysis of Trend Value of Loan Loss Provision

Here , the trend values of Loan Loss Provision of concerned banks have calculated for five years and an attempt has been made to forecast the projections for next five years from 2007/08 to 2011/12. The following table shows the trend value of Loan Loss Provision from 2002/03 to 2011/12.

Table No.18
Trend Values of Loan Loss Provision of NBL,NABIL&SCBNL

(In million)

F/Y	NBL	NABIL	SCBNL
2002/03	10972	361	294
2003/04	8907	358	289
2004/05	6844	356	285
2005/06	4781	354	280
2006/07	2717	352	276
2007/08	653	350	271
2008/09	0	347	266
2009/10	0	345	262
2010/11	0	343	257
2011/12	0	341	253

The table no.18 describes that all the concerned banks has decreasing trend of loan loss provision. The NBL has average LLP of Rs. 6844.40, which is decreasing at the rate of Rs.2063.80 million every year. Loan Loss Provision of NBL is expected to decrease from Rs.2717 in2006/07 to Rs.0 million in 2011/12. The average LLP of NABIL is Rs.356.20, which is decreasing every year at the rate of Rs. 2.20 million. Hence the expected LLP of NABIL is supposed to decrease from Rs.352 million in 2006/07 to Rs. 341 million in 2011/12. The average LLP of SCBNL is Rs. 284.80 million, which is decreasing every year at the rate of Rs. 4.60 million. Similarly, LLP of SCBNL is expected to decrease from Rs. 276million in 2006/07 to Rs. 253 million in 2011/12.

From the above analysis we can say that as NBL is concentrating to recover the bad debt and also able to decrease the amount of NPL its decreasing rate of LLP is very high. As described on the above table the LLP amount of NBL is expected to be zero after 2008/09. But it is not possible because according to the rule of Nepal Rastra Bank the provision should be done in every loan either they are good or bad. The decreasing trend of LLP of NABIL and SCBNL shows that they are successful in reducing the NPL of the bank. The following figure shows the trend line of Loan Loss Provision of concerned commercial banks for ten fiscal year

Figure No. 12
Trend line of Loan Loss Provision of NBL,NABIL&SCBNL

(In million)
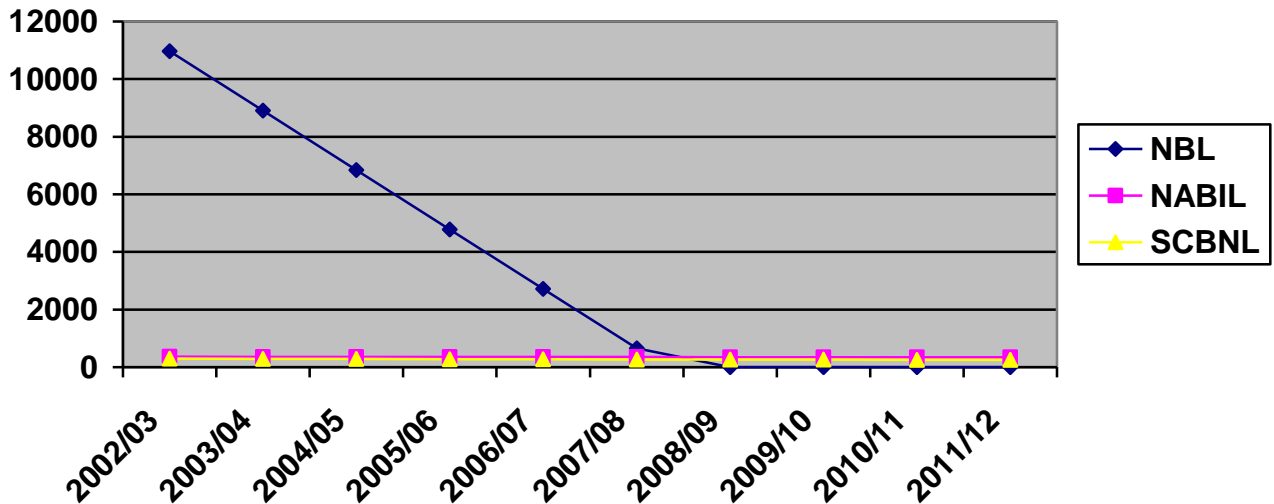
4.3.4 Analysis of Trend Value of Net Profit

Here , the trend values of Net Profit of concerned banks have calculated for five years and an attempt has been made to forecast the projections for next five years from 2007/08 to 2011/12. The following table shows the trend value of Net Profit from 2002/03 to 2011/12.

Table No.19
Trend Values of Net Profit of NBL,NABIL&SCBNL

(In million)

F/Y	NBL	NABIL	SCBNL
2002/03	-372	398	488
2003/04	4	470	537
2004/05	379	542	586
2005/06	755	614	636
2006/07	1130	686	685
2007/08	1505	758	734
2008/09	1881	830	783
2009/10	2256	902	832
2010/11	2632	974	881
2011/12	3007	1046	930

The above table describe that all the concerned banks have increasing trend of Net profit. The average net profit of NBL is Rs. 379.20, which is increasing every year at the rate of Rs. 375.40. Hence the expected net profit of NBL is supposed to increase from Rs. 1130 million in 2006/07 to Rs. 3007 million in 2011/12. The average net profit of NABIL is Rs. 542.40 million, which is increasing every year at the rate of Rs.72.00 million. The expected net profit of NABIL is supposed to increase from Rs. 686 million in 2006/07 to Rs.1046 million in 2011/12. The average net profit of SCBNL is Rs. 586.40 million, which is increasing every year at the rate of Rs. 49.10 million. Similarly the net profit of SCBNL is expected to increase from 685 million in 2006/07 to Rs. 930 million in 2011/12.

From the analysis of above table we can say that the NABIL is ahead in generating net profit and its rate of increment of net profit is higher than that of SCBNL. But in the actual SCBNL is generating more profit than the NABIL. It is due to huge fluctuation in the profit of NABIL. Among the three banks, NBL has the highest growth rate and it seems to be abnormal, it due to write back of loan loss provision. The following figure shows the trend line of net profit of three concerned banks for ten fiscal years.

Figure No. 13
Trend line of Net Profit of NBL,NABIL&SCBNL

(In million)
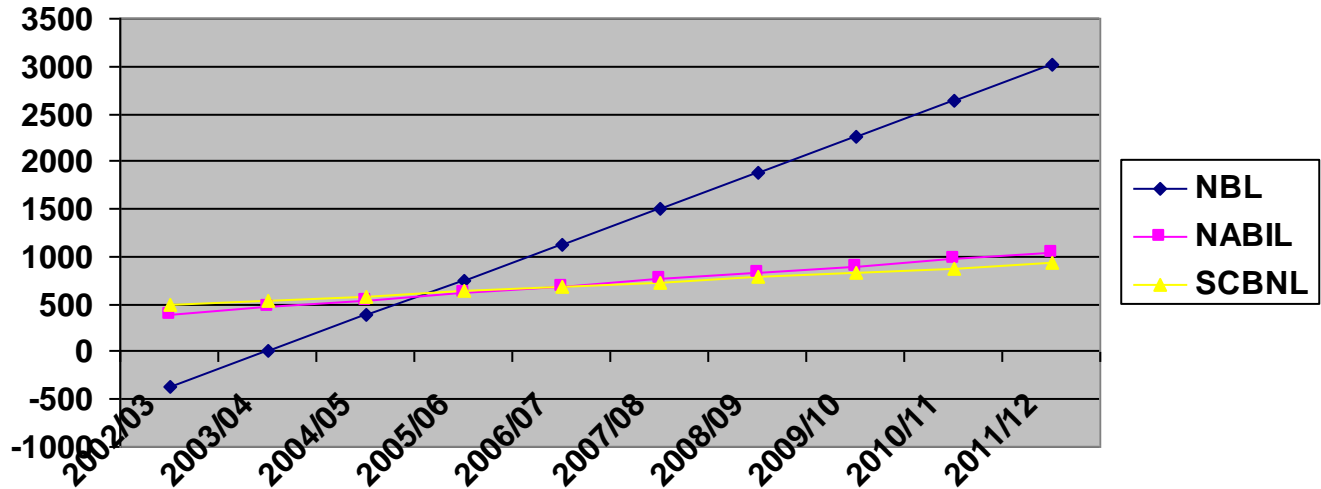
4.4 Analysis of Loan Classification and Loan Loss Provisioning Directives:-

As a central bank of Nepal Nepal Rastra Bank issued and amend various directives regarding banking regulation from time to time in order to streamline the financial activities and rescue the banks from financial crisis. Nepal Rastra Bank amended several old directives and issued many new circulars regarding banking regulation and operation . In this course the directive regarding loan classification and provisioning was also changed. As per old provision, which remained in force for about ten years, the loans were to be categorized into two groups. They are large loans and small loans. All the loans below Rs.100000 were regarded as small loans and more than Rs. 100000 were known as large loans. The large loans were classified into six categories on the basis of some clearly defined and some not so clearly defined parameters but small loans were categorized on the basis of period of past due. The directive was not clear where the borrower had wide fluctuation with respect to some financial indicators. In such case the borrower would qualify for different ratings under each indicator. Due to these difficulties the new loan classification and provisioning rule came in effect from July 16, 2001. The major changes brought by the new directives issued in 2001.

4.4.1 Comparison of Loan Classification and Provisioning:

The following analysis represents the comparison between old directive effective from March 22, 1991 to July 15,2001 and new directive effective from July 16, 2001 to onwards.

A) On the basis of classification:-

In old directive, classification to be made on the basis of ageing of past dues for small loans and on the basis of certain financial ratios for large loans. But in new directive classification to be made on the basis of ageing of past dues for all loans.

B) On the basis of loan categorization and provisioning:-

In old directive, loans are to be classified into six categories. They are Good, Acceptable, Evidence of Substandard, Substandard, Doubtful and Bad. The provisioning requirement 1%, 1%, 5%, 25%, 50%, 100% for Good, Acceptable, Evidence of Substandard, Substandard, Doubtful and Bad respectively. But in new directive, loans are classified into four categories. They are Pass, Substandard, Doubtful and Loss. The provisioning requirement 1%, 25%, 50% and 100% for Pass, Substandard, Doubtful and Loss respectively.

C) On the basis of overdue period:-

In old directive, the period of overdue of each category of loan is longer. They are not overdue, up to one month, one to six months, six months to one year, one year to five years and more than five years for Good, Acceptable, Evidence of Substandard, Substandard, Doubtful and Bad respectively. But in new directive, the period of overdue of each category of loan is shorter. They are not overdue & due up to three months for Pass, three to six months for Substandard, six months to one year for Doubtful and more than one year for Loss.

The above analysis exhibits that the present directives of loan classification and provisioning is tighter than the previous one. Hence this leads to increment in loan loss provision requirement. However in the present context where Nepalese banking sector is severely affected by increasing non-performing loan, tightening loan loss provisioning requirements on loans and advances is essential to safeguards the banks from banking crisis and to ensure that the banks remain liquid even during economic downturns.

4.4.2 Analysis of classification of Loans and Provisioning as per New Directive:

According to new directive, loans and advances are to be classified into four categories. They are Pass, Substandard, Doubtful and Loss with respective provisioning 1%, 25%, 50% and 100% on the basis of ageing of

past dues. Besides this in case of insured priority and deprived sector loan, the provisioning requirement is one-fourth of that of normal loan loss provisioning requirement. Hence the respective provisioning requirement for Pass, Substandard, Doubtful and Loss loan are 0.25%, 6.25%, 12.5% and 25% of the outstanding loan. In case of rescheduled or restructured or swapped loan, if such loans fall under Pass category, the minimum provisioning requirement is 12.5% and if this is the case of priority sector loan, 3.125% provisioning should be provided for probable loss. Further if the loan is granted only against personal guarantee, where the loan falls under the category of Pass, Substandard and Doubtful, in addition to the normal Loan Loss Provision applicable for the category, an additional 20% must be provided. Hence in this case the provisioning required for Pass, Substandard and Doubtful is 21%, 45% and 70% respectively. The following table shows the Loan Loss Provision required for different category of loan ranges.

Table no. 20

Loan Category	Loan Loss Provision(Range from)
Pass	0.25% to 21.00%
Substandard	6.25% to 25.00%
Doubtful	12.50% to 50.00%
Loss	25.00% to 100.00%

In addition to overdue basis, loans and advances have to be classified as Loss on the basis of other factors like CIB blacklisting, collateral value, misuse of fund, bankruptcy of the borrower etc. The loan falling under Pass category is termed as performing loan and the loan falling under remaining three categories is termed as Non-performing loan. The LLP set aside for Performing Loan in defined as General Loan Loss Provision and LLP set aside for Non-performing loan is defined as Specific Loan Loss Provision. Besides this, if a bank provides any provision in excess of the proportion as required under the directives of Nepal Rastra Bank, the whole amount of such additional provision may be included in General Loan Loss Provision.

The new directive issued in 2001, regarding loan classification and provisioning was effective from fiscal year2001/02. The data regarding loan classification and provisioning of three banks as per new directive, for 2002/03 to 2006/07 has been analyzed as follows.

4.4.2.1 Loan classification and provisioning of Nepal Bank Limited:

The analysis of loan classification and provisioning of Nepal Bank Limited from 2002/03 to 2006/07 is given below in the table no.21.

Table no. 21
Loan Classification and Provisioning of NBL

Particulars	As on mid July 2002/03				As on mid July 2006/07			
	Loan o/s	% of total loan	LLP	% of total LLP	Loan o/s	% of total loan	LLP	% of total LLP
Performing loan	7167	39.53	84	0.83	11661	84.80	319	13.39
Pass	7167	39.53	84	0.83	11661	84.80	319	13.39
Non performing loan	10965	60.47	7852	77.27	2090	12.50	2064	86.61
Substandard	1291	7.12	298	2.93	17	0.12	5	0.21
Doubtful	2644	14.58	760	7.48	29	0.21	15	0.63
Loss	7030	38.77	6794	66.86	2044	14.86	2044	85.77
Additional Provision			2225	21.90				
Total	18132	100	10161	100	13751	100	2383	100

The above table no.21 shows different categories of loans and advances and the provision privided to each category of loans of NBL for the fiscal year 2002/03 and 2006/07. In 2002/03, the total loan outstanding of NBL was Rs.18132 million out of which non performing loan was Rs. 10965. Out of total loan Pass, Substandard, Doubtful and Loss loan comprises 39.53%, 7.12%, 14.58% and 38.77% respectively. Hence it is clear that 39.53% of total loan is performing and remaining 60.47% is Non performing. Besides this in 2002/03, NBL has the highest degree of Loss loan followed by Doubtful loan and substandard loan in total NPL. Similarly out of total provision provided of Rs.10161 million, out of which, Pass, Substandard, Doubtful and Loss loan comprises 0.83%, 2.93%, 7.48% and 66.86% respectively. Besides this regular provision, additional of Rs.2225 comprises 21.90% was also provisioned by the bank. Hence out of total LLP, GLLP

comprises 22.73% and SLLP comprises remaining. In 2006/07, the total loan outstanding of NBL has decreased to Rs. 13751 million and its non performing loan has decreased to Rs.2383. Out of total loan Pass, SS, DF and Loss loan comprises 13.39% , 0.21% ,0.63% and 85.77% respectively. In 2006/07, Pass loan have increased but DF, SS and Loss loan has decreased. It signifies increasing asset quality of the bank but also it is higher than the standard. The higher proportion of Loss account in the total asset quality of the bank is also an indicative of the very critical condition of the bank. Similarly the total LLP of the bank has decreased to Rs.2383 million, out of which, Pass, SS, DF and Loss loan comprises 13.39%, 0.21%, 0.63% and 85.77% respectively. Hence out of total LLP, GLLP comprises 13.39% and SLLP comprises remaining 86.61%. Following figures represents the loan categorization of NBL for two fiscal years.

Figure No.14
Loan Categorization of NBL
As on 2002/03

Figure No. 15
Loan Categorization of NBL
As on 2006/07

- Pass
- Substandard
- Doubtful
- Loss
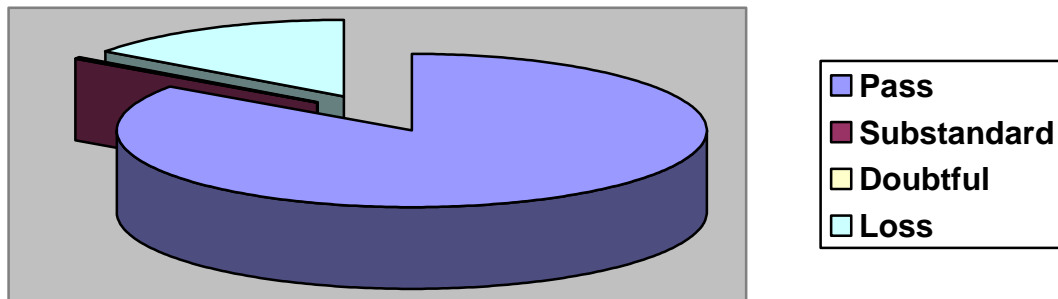
4.4.2.2   Loan classification and provisioning of NABIL:

The analysis of loan classification and provisioning of Nepal Bank Limited from 2002/03 to 2006/07 is given below in the table no.22.

Table No. 22
Loan classification and Provisioning of NABIL

Particulars	As on 2002/03				As on 2006/07			
	Loan O/S	% of total loan	LLP	% of total LLP	Loan O/S	% of total loan	LLP	% of total LLP
Performing loan	7664	95.45	123	34.36	15725	98.88	249	71.14
Pass	7664	94.45	123	34.36	15725	98.88	249	71.14
Non performing loan	450	5.55	235	65.65	178	1.12	101	28.86
Substandard	77	0.95	18	5.03	120	0.75	56	16
Doubtful	279	3.44	137	38.27	14	0.09	7	2.00

Loss	94	1.16	80	22.34	44	0.28	38	10.86
Total	8114	100	358	100	15903	100	350	100

(Source: Annual Report)

The above table no.22 shows different categories of loans and advances and the provision provided to each category of loans of NABIL for the fiscal year 2002/03 and 2006/07. In 2002/03, the total loan outstanding of NABIL was Rs. 8114 million. Out of the total loan, Pass, Substandard, Doubtful and Loss loan comprises 94.45% , 0.95% , 3.44% and 1.16% respectively. Hence it is clear that 94.45% of total loan is performing and remaining 5.55% is non-performing. Besides this in 2002/03, NABIL has the highest degree of Doubtful loans followed by Loss loan and substandard loan in total NPL. Similarly out of total provision provided of Rs. 358 million, 34.36% comprises for Pass loan and the provision provided for Substandard, Doubtful, and Loss loan comprises 5.03%, 38.27% and 22.34% respectively making provision for non-performing loan 65.65% of total LLP. Hence it can be understood that the General LLP comprises 34.6% and Specific LLP comprises 65.65% of total LLP.

In 2006/07, the total outstanding of NABIL has increased to Rs.15903 million. Out of total loan Pass, SS, DF and Loss loan comprises 98.88%, 0.758%, 0.09% and 0.28% respectively. In 2006/07, SS loan has increased but Pass, SS and Loss loan have decreased. Similarly out of total LLP of Rs. 350 million, the respectively % of Pass, SS, DF and Loss loan is 71.14%, 16.00%, 2.00% and 10.86%. Hence out of total LLP, GLLP comprises proportion of all the SLLP comprises remaining 28.86%. The two years data shows that the proportion of all the categories of loans except Pass and SS loan has decreased. Accordingly provision amount has also increased in Pass and SS loan. In 2002/03, NABIL has the highest percent of DF loan to total NPL but in 2006/07, it is SS loan. In 2002/03, NABIL has Rs. 450 million but in 2006/07, it is Rs. 101 million which indicates the increasing asset quality of the bank. Following figures represents the loan categorization of NABIL for two fiscal years.

Figure No.16
Loan Categorization of NABIL
As on 2002/03
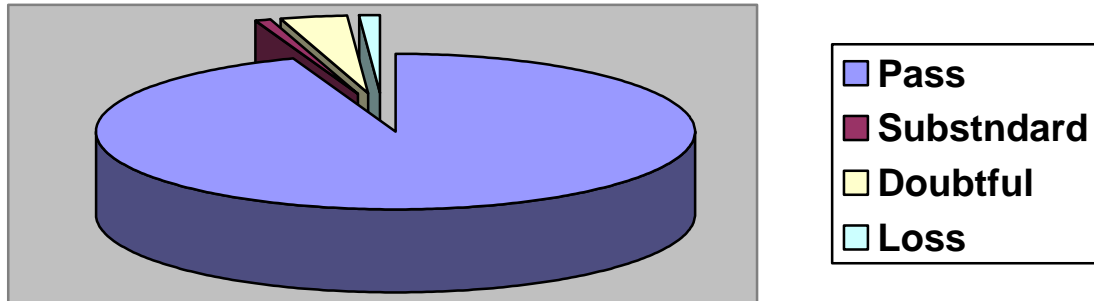
Figure No. 17
Loan Categorization of NABIL
As on 2006/07

4.4.2.3 Loan classification and provisioning of SCBNL:

The analysis of loan classification and provisioning of Nepal Bank Limited from 2002/03 to 2006/07 is given below in the table no.223.

Table No. 23
Loan Classification and Provisioning of SCBNL

Particulars	As on 2002/03				As on 2006/07			
	Loan O/S	% of total loan	LLP	% of total LLP	Loan O/S	% of total loan	LLP	% of total LLP
Performing loan	5752	95.87	94	30.82	10593	98.17	106	36.81
Pass	5752	95.87	94	30.82	10593	98.17	106	36.81
Non-performing loan	248	4.13	211	69.18	197	1.83	182	63.19
Substandard	7	0.12	2	0.66	16	0.15	4	1.39
Doubtful	130	2.16	98	32.13	66	0.61	63	21.88
Loss	111	1.85	111	36.39	115	1.07	115	39.93
Total	6000	100	305	100	10790	100	288	100

(Source: Annual Report)

The above table no.23 shows categories of loans and advances and the provision provided to each category of loans of SCBNL for the fiscal year 2002/03 and 2006/07. In 2002/03, the total outstanding of SCBNL was Rs. 6000 million. Out of the total loan Pass, Substandard, Doubtful and Loss loan comprises 95.87%, 0.12%, 2.16% and 1.85% respectively. Hence it is clear that 95.87% of total loan is performing and remaining 4.13% is non-performing. Besides this in 2002/03, SCBNL has the highest degree of DF loans followed by Loss loan and then SS loan in the total NPL. Similarly out of total provision provided of Rs. 305 million, 30.82% comprises for Pass loan and the provision provided for SS, DF and Loss loan comprises 0.66%, 32.13% and 36.39% respectively making provision for non-performing loan 69.18% of total LLP. Hence it can be understood that the General LLP comprises 30.82% and Specific LLP comprises 69.18% of total LLP.

In 2006/07, the total loan outstanding of SCBNL has increased to Rs. 10790 million. Out of total loan Pass, SS, DF and Loss loan

comprises 98.17%, 0.15%, 0.61% and 1.07% respectively. In 2007, the entire loan has increased except DF loan. Similarly out of total LLP of Rs. 288 million, the respectively percent of Pass, SS, DF and Loss loan is 36.81%, 1.39%, 21.88% and 39.93%. Hence out of total LLP, GLLP comprises 36.81% and SLLP comprises remaining 63.19%. As non-performing loan has decreased accordingly provision amount has also decreased. Following figures represents the loan categorization of SCBNL for two fiscal years.

Figure No. 18
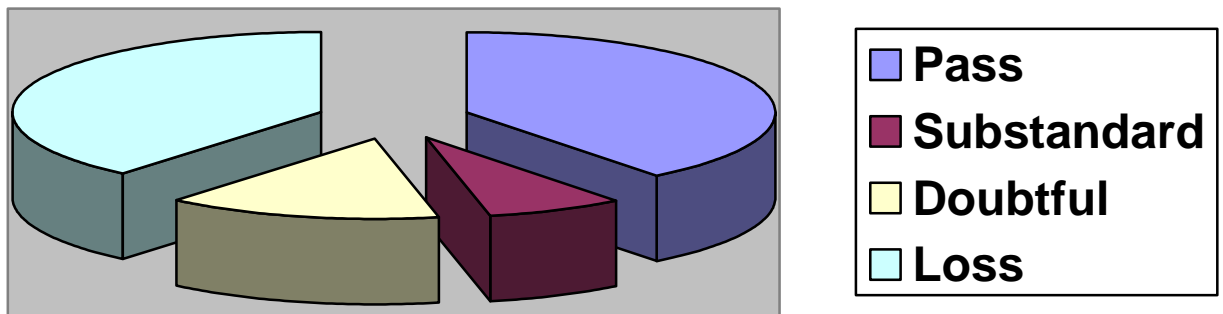**Loan Categorization of SCBNL**
As on 2002/03

- Pass
- Substandard
- Doubtful
- Loss
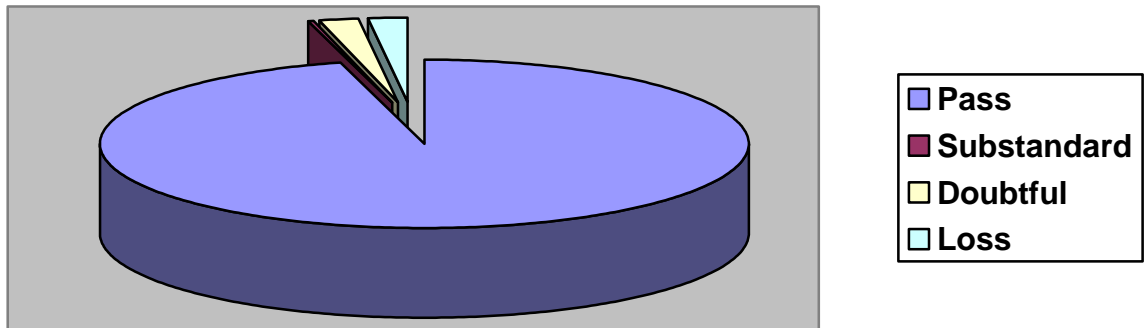
Figure No.19
Loan Categorization of SCNL
As on 2006/07

Legend: Pass, Substandard, Doubtful, Loss
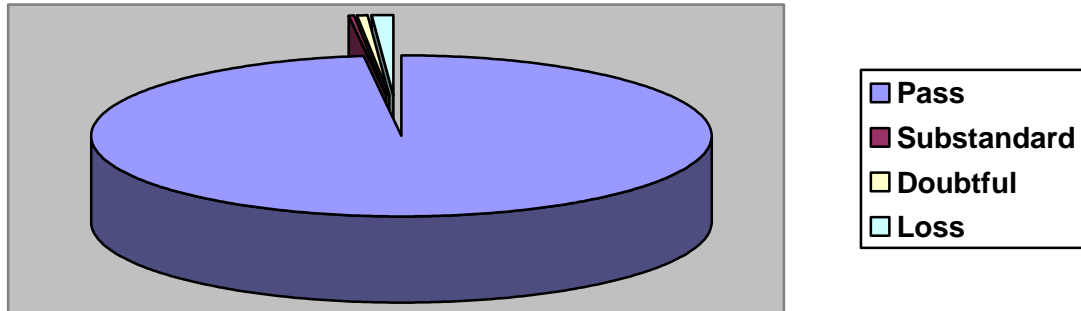
Effect on Profitability:-

Latest Loan Loss Provision norm have a great impact on profitability of the banks. As earlier mentioned, Loan Loss Provision is deducted from the profit of the bank. Therefore the net profit of the bank will come down by the amount of provision. Hence increase in LLP means lesser net profit resulting to less Earning per Share (EPS), less Dividend per Share (DPS) or no dividend at all and finally lower Market Value per Share (MVPS). If any banks make profit less than the amount of provision to be made, it may have to show losses in the balance sheet. For instance the LLP of NBL, NABIL and SCBNL as on 2006/07 is Rs. 2383 million, Rs. 350 million and Rs. 288 million respectively . Hence the net profit of NABIL and SCBNL is reduced by the respective provisioned amount.

However, the impact of Loan Loss Provision on Profitability of banks is of short term. After two years, when banks have enough provision for loss loans and have sound credit management, the profitability will again pick up. Hence in long term basis banks will enjoy greater cushion against loan disbursed and improve their financial strength leading to increased profitability.

4.5 Major Findings of the Study:-
From the presentation and analysis of above data, following major findings have been obtained.

The average loans and advances to total asset ratio of NBL, NABIL and SCBNL during the study period is found to be 38.03%, 56.17% and 33.54% respectively. The relatively low ratio of SCBNL is the indication of risk adverse attitude of the management or they have the policy of investing low in the risky assets i.e. loans and advances. They have higher proportion of their investment in risk free or nominally risky asset like treasury bills, National Saving Bonds etc. Here this ratio is the highest of NABIL. NABIL shows the highest degree of deviation while SCBNL has the highest degree of variation through out the study. NBL is moderate in terms of the ratio, its deviation and variability.

The core banking function is to mobilize the funds obtained from the depositors and how successfully this function have been discharged by the banks is measured by the ratio of loans and advances to total deposit ratio or simply CD ratio. The average CD ratio of NBL, NABIL and SCBNL during the study period is found to be 44.02%, 66.53% and 38.18% respectively. The average ratio of NABIL is highest followed by NBL and then SCBNL. NABIL has the most consistent and least deviated ratio during the study period where as NBL has higher deviation and variability in this ratio. SCBNL is moderate among the three banks in terms of deviation and variability of ratio.

The analysis of non-performing loan to total loans revealed that average NPL of NBL, NABIL and SCBNL is 28.05%, 2.50% and 2.87% of total loan respectively. That means 71.95%, 97.50% and 97.13% of total loan of NBL, NABIL and SCBNL is performing loan. Hence NBL has significantly higher proportion of non-performing loan in the total loans portfolio but this ratio shows decreasing trend, due to hiring the new management team and giving priority to recovery. NABIL, in recent years has shown significant decrement in NPL, which is the result of banks effective credit management and its efforts of recovering bad debt through establishment of Recovery Cell. During the study period this ratio is the least in NABIL. SCBNL is moderate in terms of CD ratio and it is in dreasing trend . SCBNL has the least deviation and NABIL has highest variation whereas NBL has highest deviation and is moderate in variation through out the study period.

Loan Loss Provision ratio of NBL is found to be significantly higher which is around 41.20% in average followed by SCBNL of 3.64% and NABIL of 3.359%. Since higher ratio is an indication of higher non-performing loan in total loans and advances NBL's relatively higher ratio is the result of higher proportion of NPL in the total loan. SCBNL's and NABIL's average ratio is

around similar in this ratio which means both of the bank's asset quality is improving. NBL has the highest deviation and variation of the ratio.

The average ratio of provision held to non-performing loan of NBL, NABIL and SCBNL was found to be 166.49%, 173.21% and 13.06% respectively. Hence NABIL has significantly higher ratio in comparison to other two banks, which portrays that the bank has adequate provision against non-performing loan but this ratio of SCBNL is comparatively lower. NABIL shows the highest deviation and variability in this followed by NBL and then SCBNL.

The main objective of commercial banks is to earn profit through mobilization of fund. The ratio of returns on loans and advances ratio revealed that NBL seems to be failure to earn return on loans and advanaces.Even though NBL has higher investment in the most income-generating asset i.e. loans and advances, it was in loss since last many years. The average return on loans and advances is 3.91%. SCBNL with an average of 7.28% return on loans and advances has the highest ratio as it is ahead in generating net profit. NABIL is moderate with an average of 4.86% return on loans and advances. NBL has the highest variability followed by SCBNL and then NABIL.

The correlation coefficient between LLP and loans and advances of NBL, NABIL and SCBNL is 0.9510, -0.8498 and -0.5016. Since higher provision has to be provided for non-performing loan, the positive correlation of NBL is the result of high non-performing loans in the total loan portfolio. But it is in decreasing trend due to the effect of giving priority to recover the bad loans. NABIL and SCBNL have negative correlation between LLP and loans and advances but it is more than the 6 times P.E. This is due to low proportion of NPL in the total loan portfolio and its decreasing trend.

The correlation between LLP and NPL reveals that there is positive correlation between LLP and NPL in all the three banks. As earlier mentioned higher provision needs to be provided for NPL, higher the NPL higher would be the LLP. The correlation coefficient between these two variables in NBL, NABIL and SCBNL is 0.7816, 0.2616 and 0.6329. The correlation coefficient of NBL is significant but that of NABIL and SCBNL is insignificant. The reason behind this is relatively lower proportion of NPL in the total loan portfolio of NABIL and SCBNL

While analyzing correlation between loans and advances and deposit, it has been found that NABIL and SCBNL have of positive correlation between two variables but NBL has negative correlation coefficient. The respective correlation coefficient of NABIL and SCBNL is 0.9672 and 0.8257, which is significant and reliable. In recent years, NBL is concentrating on loan

recovery and there was no further investment of the bank in the form of loans and advances but deposits are increasing.

Trend analysis was done based on the data of past five years and forecast was made for next five years. The trend of loans and advances showed decreasing trend in NBL and increasing trend in regards to NABIL and SCBNL but rate of increment of NABIL is higher than that of SCBNL. The loans and advances of NBL is decreasing at the rate of Rs. 1382.10 million every year and that of NABIL and SCBNL is increasing at the rate of Rs. 2030.70 million and Rs. 1209.20 million every year respectively.

From the trend analysis of NPL, it is found that NPL is decreasing in case of all the three banks. The NPL of NBL is decreasing at the rate of Rs.2074.90 million every year and that of NABIL and SCBNL is decreasing at the rate of Rs.64.60 million and Rs.15.40 million every year respectively. The decreasing trend of NPL in NABIL and SCBNL is due to its efforts towards recovering bad debts. But in case of NBL is due to its effort towards recovering bad debts and there was no further investment of the bank in the form of loans and advances.

From the trend analysis of LLP, it is found that LLP is expected to increase in coming years in case of all the three banks. The LLP of NBL, NABIL and SCBNL is decreasing at the rate of Rs.2063.80, Rs.2.20 and Rs . 4.60 million Every year respectively. The decreasing trend of LLP in all the three banks is due to their recovery efforts towards reducing NPL.

From the trend analysis of Net Profit, it is found that NP is expected to increase in coming years in all the three banks. NBL shows increment of net profit at the rate of Rs. 375.40 million each year. Similarly Net Profit of NABIL and SCBNL is increasing every year by Rs.72.00 million and Rs. 49.10 million respectively. As NBL has high rate of increment, if this trend is to continue, NBL would soon surpass NABIL and SCBNL in providing net profit.

As per the latest directive, loans and advances are to be classified into four categories, namely Pass, Substandard, Doubtful and Loss with respective provisioning 1%, 25%, 50% and 100% on the basis of ageing of past dues. Besides this in case of insured priority and deprived sector loan, the provisioning requirement is one-fourth of that of normal loan loss provisioning requirement. Hence the respective provisioning requirement for Pass, Substandard, Doubtful and Loss loan are 0.25%, 6.25%, 12.5% and 25% of the outstanding loan. In case of rescheduled of restructured of swapped loan, if such loans falls under Pass category, the minimum provisioning requirement is 12.5% and if this is the case of priority sector loan, 3.125% provisioning should be provided for probable loss. Further if

the loan is granted only against personal guarantee, the provisioning required for Pass, Substandard and Doubtful is 21%, 45% and 70% respectively.

From the analysis of loan classification and provisioning of NBL it has been found that out of total loan Pass, Substandard, Doubtful and Loss loan comprises 39.53%, 7.12%, 14.58% and 38.77% respectively in 2002/03 and that of 2006/07 is 13.39%, 0.21%, 0.63% and 85.77%. NBL has the highest proportion of Loss loans followed by Doubtful and then substandard loan out of NPL which is an indication of bad quality of asset of NBL. It has also been found that in besides the regular provisioning requirement, NBL has also provided additional provision of Rs. 2225 million in 2002/03.

From the analysis of loan classification and provisioning of NABIL, it has been found that out of total loan Pass, Substandard, Doubtful and Loss loan comprises 94.45%, 0.95%, 3.44% and1.16% respectively in 2002/03 and that of 2006/07 is 98.88%, 0.75%, 0.09% and 0.28%. NABIL has the highest proportion of Doubtful loan followed by Loss and then Substandard loan out of total NPL in 2002/03 but in 2006/07 there is higher proportion of Substandard loan and but its Doubtful and Loss loan has decreased which is an indication of increasing good quality of asset of NABIL. And performing loan of NABIL has also increased.

From the analysis of loan classification and provisioning of SCBNL it has been found that out of total loan Pass, Substandard, Doubtful and Loss loan comprises 95.87%, 0.12%, 2.16% and 1.85% respectively in 2002/03 and that of 2006/07 is 98.17%, 0.15%, 0.61% and 1.07%. In the year 2002/03 SCBNL has the highest proportion of Doubtful loans followed by Loss and then substandard loan in total non-performing loan. But in the year 2006/07, all the loans SS, DF, Loss has decreased which is an indication of increasing good quality of asset of SCBNL.

Increasing non-performing loan is one of the burning problems of Nepalese Banking sector. Improper appraisal system, ineffective credit monitoring and supervision system economic slowdown, borrower's misconduct, political pressure to lend to uncreditworthy parties etc are the major factors leading to non-performing assets. Setting up recovery cell, hiring asset management Company etc are some to the measures to resolve the problem of NPL. Loan classification and loan loss provision also helps to confront the problems thus created due to non-performing loans. Since loan loss provision is deducted from the profit of the bank, increase in provision decrease the profit of the bank by the same amount but this type of negative effect is only for short period. Once the banks have adequate provision and sound credit management, the profitability will again gear up.

Chapter V
SUMMARY, CONCLUSION AND RECOMMENDATIONS

After completion of presentation and analysis of data, in this chapter includes the summery, conclusion and recommendation based of the result of the analysis of the data.

5.1 Summary

Banks plays vital role in the economic development of the country as the issue of development always rests upon the mobilization of resources. Banks deals in the process of canalizing the available resources to the needy sector causing overall economic development. The main objective of this research is studying the non-performing loan and loan loss provision of commercial banks. For this purpose, descriptive cum analytical research design was adopted. Out of the total population of twenty three commercial banks, 3 banks were taken as sample using Judgmental Sampling Method. Nepal Bank Limited was selected from public sector bank where as two major joint venture banks; NABIL Bank Limited and Standard Chartered Bank Nepal Limited were selected from private sector banks. In this study, secondary data have been used. The secondary data has been collected through annual report and other publications. The data collected from various sources are recorded systematically and presented in appropriate forms of tables, charts and appropriate mathematical, statistical, financial, graphical tools have been applied to analyze the data. The data of five fiscal years of the three selected banks have been analyzed to meet the objective of the research.

Nepal Bank Limited and NABIL Bank Limited have the highest proportion of the loans and advances in the total asset structure but Standard Chartered Bank Nepal Limited has relatively lower loans and advances in the total asset structure. The credit deposit ratio also shows the same thing. It indicates the risk adverse attitude of the management of SCBNL. There is higher proportion of non-performing loan in the total loans and advances of NBL, which comes around 28.05% on average, which is very much higher than the acceptable standard of minimum 10%. Since higher provision has to be apportioned for NPL, its loan loss provision is also significantly higher than the other two banks. Regarding NPL of SCBNL is moderate among the

three but it has least LLP. NABIL has the least NPL but moderate in LLP. The ratio of provision held to NPL of NABIL is the highest followed by NBL and then SCBNL. Even though, NBL has the highest proportion of their investment in the most income generating asset, the bank is unsuccessful in generating returns. Most of the loans of NBL have become non-performing and hence it is not generating any income instead demanded high provision for probable loss. Even NABIL has higher proportion of investment in loans and advances in comparison to SCBNL, its return on loans and advances is comparatively lower. However the high return of SCBNL is not due to its proper lending function but due to low deposit cost, high fee based income, high foreign currency deposit, exchange earning etc.

There is negative correlation between LLP and Loan and advances in NABIL and SCBNL but these two variables shows positive correlation in case of NBL. The negative correlation in NABIL and SCBNL is due to decrease in non-performing loan in these two banks. The positive correlation in NBL is due to decrement of non-performing loan of NBL. Amount to be provisioned depends upon the non-performing loan and its quality. Higher provision has to be provided for NPL. Hence even though loans and advances do not increase, if in the same loan portfolio NPL increases, LLP will increase. This has also been shown by the positive correlation between LLP and NPL in all the three banks. NABIL and SCBNL have shown positive correlation between loans and advances and deposit but NBL shows negative correlation. NBL is concentrating on loan recovery and hence there was no further investment of deposit in the form of loans and advances but deposit is increasing which is the reason behind the negative correlation between these two variables.

The trend analysis of loans and advances shows increasing trend in case of NABIL and SCBNL but decreasing trend of NBL. This means NBL has no further investment in loans and advances in recent years instead they are concentrating more on recovering bad debts. The trend analysis of non-performing loan and loan loss provision shows decreasing trend in all three banks. In case of NBL decrease in NPL and LLP is due to concentrating more on recovering bad debts. And in NABIL and SCBNL this is due to recovery efforts towards reducing NPL through establishment of Recovery Cell. The past trend of net profit of all the three banks exhibit increasing trend in coming years. Since NBL is concentrating on recovering bad debts its increasing trend of net profit is very high and it continues for some years. After that its increasing trend of net profit will be normal.

As per the latest loan classification and provisioning directives loans and advances have to be categorized into four types namely Pass, Substandard,

Doubtful and Loss with respective provisioning of 1%, 25%, 50% and 100%. The loan falling under Pass category is regarded as performing loan and that which falls under remaining three categories is regarded as non-performing loan. NBL has the highest proportion of loss graded loan followed by Doubtful loan in the total NPL which in an indication of bad quality of asset of NBL in the form of loans and advances. NABIL has higher proportion of Substandard loan in the total non-performing loan followed by and then Doubtful loan. And SCBNL has higher proportion of Loss loans followed by Doubtful and then Substandard loans.

Today's banking industry is severely effected by the problem of NPA. Improper credit appraisal system, ineffective credit monitoring and supervision system, economic slow down, borrower's misconduct and over valuation of collateral, political pressures to lend to uncreditworthy parties etc. are the major factors leading to non-performing assets. Setting of Recovery Cell, hiring asset Management Company etc are some to the measures to resolve the problem of NPA. Loan classification and loan loss provision also helps to confront the problem thus created due to non-performing loans. The latest directive regarding loan classification and loan loss provisioning is very important for maintaining sound financial health of the banks. The new provisioning directives leads to increment in provision amount of the banks leading to decrement in profitability of the bank but this is only for a short run.

Conclusion:-

Liberalization of financial sector started in 1980 with the aim to streamline it. After that the financial sector widened with more banks and financial institutions. The total number stood at 208 in 2006/07. Regarding banking sector there are 23 commercial banks, 38 development banks and 74 finance companies. Even the financial sector developed rapidly in quantity, but it is far behind in term of quality. Banks came into existence mainly with the objectives of collecting idle funds, mobilizing them in to productive sector and causing an overall economic development.

The bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society they are serving. Lending is the major function of any commercial bank and it is the most income-generating asset of any commercial bank but there is risk inherent in bank's lending portfolio. In order to cover the risk inherent in the lending portfolio, banks have to make loan loss provision by categorizing the loans into different category as per the NRB directives. Increasing non-performing loan is the

serious problem of the banking sector in Nepal. Non-performing asset debar the income flow of the bank while claiming additional resources in the form of provisioning and hinder further gainful investments.

It has been found that NBL has very high portion of non-performing loan resulting to higher provision. Hence even the bank has the highest investment in the most income generating asset i.e. loans and advances, its return is very low. Even though in 2006/07 SCBNL has lower investment in forms of loans and advances than of NABIL, its NPL is higher than of NABIL. Among the three banks NABIL has the least non-performing loan but its LLP is more than that of SCBNL. From the above indicators it can be said that NABIL is best among the three banks in terms of NPL and LLP.

In the conclusion it can be said that ineffective credit policy, political pressure to lend to uncreditworthy borrowers, overvaluation of collateral are the major causes of mounting non-performing assets in government bank like NBL. Other factor leading to accumulation of NPAs are weak loan sanctioning process, ineffective credit monitoring and supervision system, economic slowdown, borrower's misconduct etc. Continual review and classification of loans enables banks to monitor quality of their loan portfolios and to take remedial action to counter deterioration in credit quality. In addition to this establishing recovery cell, hiring Asset Management Company are also measures to resolve the problem of NPL. The present loan classification and supervisoning directives seem more stringent than the previous one. As a result more provision has to be apportioned leading to lesser profitability but this kind of negative impact is only for short period. Adequate provisioning strengthens the financial health of the banks and makes them able to face any kind of future contingencies.

Recommendations:-

A. The high portion of non-performing loan accompanied by higher provision of NBL indicates that the bank's credit portfolio needs serious attention. Hence NBL is recommended to take immediate remedial actions for recovering bad debts. Hiring Asset Management Company (AMC) is recommended for NBL to resolve the problem of mounting non-performing loan.

B. SCBNL's contribution to loans and advances is relatively low. Entire economy is largely dependent upon the proper execution of lending function by commercial banks. Low level of lending means, low level of investment resulting to low level of productivity, which may ultimately affect negatively on the national economy. Loans and

advances on one hand is the highest income generating asset and on the other hand it also helps to upgrade the economic health of the country. Hence SCBNL is recommended to increase its investments in productive sector in the form of loans and advances.

C. It has been observed that the loans and advances of NBL are decreasing and less further investment of deposit in recent years. Hence it is recommended for NBL for exploring new areas of investment.

D. The main factors 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 to bad debts. Hence all the three banks are recommended to be more cautious and realistic while granting loans and advances. After advancing loans there should be regular supervision and follow up for proper utilization of loan.

E. It is recommended for the banks to initiate training and development programme for the employees to make them efficient and professional in credit appraisal, monitoring and proper risk management.

F. Following the directives of NRB and acting upon it also reduce many of the credit risk. Besides there are penalty implication on non-compliance of the directives. Hence all the three banks are recommended to adhere the directives and they are also suggested to come up with a stronger internal audit department to ensure that the directives are properly implemented.

G. 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 strengthen Credit Information Bureau (CIB) so that banks can get required credit information about the borrowers on time. This would help in reducing NPL.

H. It is often said that 'Prevention is better than cure'. Hence it is recommended for all the three banks to take preventive measures before the loan goes to default. All the banks are recommended to

have an information system to gather all the possible information and activities about its borrowers so that necessary precautions can be taken in time.

APPENDIX 1

Figures from Balance Sheet and Profit and Loss Account.

TOTAL ASSET   Rs. in million.

BANKS	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
NBL	37442	39393	39816	44162	47045	35919	42606
NABIL	18367	17629	16523	16745	17186	22330	27630
SCBNL	19703	18443	21000	23642	22171	25776	29078

TOTAL DEPOSIT   Rs. in million.

BANKS	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
NBL	35619	34265	35014	35735	35934	35830	39008
NABIL	15839	15506	13448	14119	14587	19347	23342
SCBNL	15430	15836	18756	21161	19335	23061	24640

NON-PERFORMING LOAN   Rs. in million.

BANKS	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
NBL	10373	10834	10965	4773	4080	1774	2090
NABIL	1348	557	450	274	140	178	175
SCBNL	297	276	248	242	227	190	197

PERFORMINF LOAN   Rs. in million.

BANKS	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
NBL	10046	8419	7167	13165	12787	11105	11661
NABIL	6976	7245	7664	8275	10804	13100	15728
SCBNL	5384	5420	5752	6452	8194	9016	10593

LOAN AND ADVANCES   Rs. in million.

BANKS	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
NBL	20419	19253	18132	17938	16867	12879	13751
NABIL	8324	7802	8114	8549	10944	13278	15903
SCBNL	5681	5696	6000	6694	8421	9206	10790

NET PROFIT   Rs. in million.

BANKS	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
NBL	(2178)	(3071)	(252)	(1207)	1730	1207	418
NABIL	291	272	416	455	520	635	686
SCBNL	431	479	507	538	536	659	692

LOAN LOSS PROVISION   Rs. in million.

BANKS	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
NBL	8500	10614	10161	9056	8648	3974	2383
NABIL	600	364	358	359	361	353	350
SCBNL	274	332	304	284	278	270	288

*The entire figures presented above are rounded off to the nearest million
   Rs.
* The data presented here in are pertained to mid July of each year.
* The data presented here in are based on the amount mentioned in the
   annual reports of respective years in case of NABIL and SCBNL. The
   data of NBL is based on data in website www.nepalstock com, www.nrb.
   org.np and the annual repot to shareholders of NBL published in Gorkha
   ptra.
* Loans and advances also include Bill Purchased and Discounted.

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APPENDIX 2

1. Calculation of Mean, S.D. and C.V. of Loans and Advances to Total Asset Ratio

NABIL Bank :-

(Rs. In million)

Years	Ratio (X)%	$(X - \bar{X})$	$(X - \bar{X})^2$
2002/03	49.11	-7.06	49.84
2003/04	51.05	-5.12	26.21
2004/05	63.68	7.50	56.28
2005/06	59.46	3.29	10.82
2006/07	57.56	1.38	1.92
N = 5	Σ X = 280.86		Σ(X-X)² =145.04

We have,

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{280.86}{5} = 56.17$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{145.04}{5}} = 5.39$$

$$\text{Coefficient of Variation(C.V.)} = \frac{\sigma}{X} \times 100 = \frac{6.02}{56.17} \times 100 = 9.6$$

NBL Bank :-

(Rs. In million)

Years	Ratio (X)%	$(X - \bar{X})$	$(X - \bar{X})^2$
2002/03	45.54	7.51	56.40
2003/04	40.62	2.59	6.71
2004/05	35.85	-2.23	4.97
2005/06	35.86	-2.17	4.71

2006/07	32.27	-5.76	33.177
N = 5	**Σ X = 190.14**		**Σ(X-X)² =105.97**

We have,

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{190.14}{5} = 38.03$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{105.97}{5}} = 4.60$$

$$\text{Coefficient of Variation(C.V.)} = \frac{\sigma}{\bar{X}} \times 100 = \frac{4.60}{38.03} \times 100 = 12.10$$

SCBNL Bank :-

(Rs. In million)

Years	**Ratio (X)%**	**(X – $\bar{X}$)**	**(X – $\bar{X}$)²**
2002/03	28.57	-4.97	24.7
2003/04	28.31	-5.23	27.35
2004/05	37.98	4.44	19.71
2005/06	35.71	2.17	4.71
2006/07	37.11	3.57	12.74
N = 5	**Σ X = 167.68**		**Σ(X-X)² =89.22**

We have,

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{167.68}{5} = 33.54$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-\overline{X})^2}{N}} = \sqrt{\frac{89.22}{5}} = 4.22$$

$$\text{Coefficient of Variation}(C.V.) = \frac{\sigma}{\overline{X}} \times 100 = \frac{4.22}{33.54} \times 100 = 12.59$$

2. Calculation of Mean, S.D. and C.V. of Loans and Advances to Total Deposit Ratio

2.1 NABIL Bank :-

(Rs. In million)

Years	Ratio (X)%	$(X - \overline{X})$	$(X - \overline{X})^2$
2002/03	60.34	-6.19	38.32
2003/04	60.55	-5.98	35.76
2004/05	75.03	8.5	72.25
2005/06	68.63	2.1	4.41
2006/07	68.13	1.6	2.56
N = 5	Σ X = 332.68		Σ(X-X)² =153.30

We have,

$$\text{Mean}(\overline{X}) = \frac{\Sigma X}{N} = \frac{332.68}{5} = 66.53$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-\overline{X})^2}{N}} = \sqrt{\frac{153.30}{5}} = 5.54$$

$$\text{Coefficient of Variation}(C.V.) = \frac{\sigma}{\overline{X}} \times 100 = \frac{5.54}{66.53} \times 100 = 8.32$$

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2.2 NBL Bank :-

(Rs. In million)

Years	Ratio (X)%	$(X - \bar{X})$	$(X - \bar{X})^2$
2002/03	51.79	7.77	60.37
2003/04	50.20	6.18	38.19
2004/05	46.94	2.92	8.53
2005/06	35.94	-8.08	65.29
2006/07	35.25	-8.77	76.91
N = 5	Σ X = 220.12		Σ(X-X)² =249.29

We have,

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{220.12}{5} = 44.02$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{249.29}{5}} = 7.06$$

$$\text{Coefficient of Variation(C.V.)} = \frac{\sigma}{X} \times 100 = \frac{7.06}{44.02} \times 100 = 16.04$$

2.3 SCBNL Bank :-

(Rs. In million)

Years	Ratio (X)%	$(X - \bar{X})$	$(X - \bar{X})^2$
2002/03	31.99	-6.186	38.27
2003/04	31.63	-6.546	42.85
2004/05	43.55	5.374	28.88
2005/06	39.92	1.74	3.04
2006/07	43.79	5.61	31.52
N = 5	Σ X = 190.88		Σ(X-X)² =144.56

We have,

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{190.88}{5} = 38.18$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{144.56}{5}} = 5.38$$

$$\text{Coefficient of Variation}(C.V.) = \frac{\sigma}{\overline{X}} \times 100 = \frac{5.38}{38.176} \times 100 = 14.08$$

3. Calculation of Mean, S.D. and C.V. of Non-performing loan to Loan and advances

3.1 NABIL Bank :-

(Rs. In million)

Years	Ratio (X)%	$(X - \overline{X})$	$(X - \overline{X})^2$
2002/03	5.55	3.05	9.30
2003/04	3.21	0.71	0.50
2004/05	1.28	-1.22	1.49
2005/06	1.34	-1.16	1.35
2006/07	1.10	-1.40	1.96
N = 5	**Σ X = 12.48**		**Σ(X-X)² =14.60**

We have,

$$\text{Mean}(\overline{X}) = \frac{\Sigma X}{N} = \frac{12.48}{5} = 2.50$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{14.60}{5}} = 1.71$$

$$\text{Coefficient of Variation}(C.V.) = \frac{\sigma}{\overline{X}} \times 100 = \frac{1.71}{2.50} \times 100 = 68.35$$

3.2 NBL Bank :-

<div align="right">(Rs. In million)</div>

Years	Ratio (X)%	$(X - \bar{X})$	$(X - \bar{X})^2$
2002/03	60.47	32.42	1051.06
2003/04	26.61	-1.44	2.07
2004/05	24.19	-3.86	14.90
2005/06	13.77	-14.28	203.92
2006/07	15.20	-12.85	165.12
N = 5	**Σ X = 140.24**		**Σ(X-X)² =1437.07**

We have,

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{140.24}{5} = 28.05$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{1437.07}{5}} = 16.95$$

$$\text{Coefficient of Variation(C.V.)} = \frac{\sigma}{\bar{X}} \times 100 = \frac{16.95}{28.05} \times 100 = 60.43$$

3.3 SCBNL Bank :-

<div align="right">(Rs. In million)</div>

Years	Ratio (X)%	$(X - \bar{X})$	$(X - \bar{X})^2$
2002/03	4.13	1.26	1.59
2003/04	3.61	0.74	0.55
2004/05	2.69	-0.18	0.03
2005/06	2.07	-0.80	0.64
2006/07	1.83	-1.04	1.08
N = 5	**Σ X = 14.33**		**Σ(X-X)² =3.89**

We have,

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{14.33}{5} = 2.87$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{3.89}{5}} = 0.88$$

$$\text{Coefficient of Variation}(C.V.) = \frac{\sigma}{\bar{X}} \times 100 = \frac{0.88}{2.87} \times 100 = 30.73$$

4. Calculation of Mean, S.D. and C.V. of Loan Loss Provision to Loan and advances

4.1 NABIL Bank :-

(Rs. In million)

Years	Ratio (X)%	$(X - \bar{X})$	$(X - \bar{X})^2$
2002/03	4.41	1.06	1.12
2003/04	4.20	0.85	0.72
2004/05	3.29	-0.06	0.0036
2005/06	2.66	-0.69	0.48
2006/07	2.20	-1.15	1.32
N = 5	**Σ X = 16.76**		**Σ(X-X)² =3.65**

We have,

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{16.76}{5} = 3.35$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{3.65}{5}} = 0.85$$

$$\text{Coefficient of Variation(C.V.)} = \frac{\sigma}{\overline{X}} \times 100 = \frac{0.85}{3.35} \times 100 = 29.85$$

4.2 NBL Bank :-

(Rs. In million)

Years	Ratio (X)%	$(X - \overline{X})$	$(X - \overline{X})^2$
2002/03	56.04	14.84	220.22
2003/04	50.48	9.28	86.12
2004/05	51.27	10.07	101.40
2005/06	30.86	-10.34	106.92
2006/07	17.33	-23.87	569.78
N = 5	**Σ X = 205.98**		**Σ(X-X)² =1084.44**

We have,

$$\text{Mean}(\overline{X}) = \frac{\Sigma X}{N} = \frac{205.98}{5} = 41.20$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{1084.44}{5}} = 14.73$$

$$\text{Coefficient of Variation(C.V.)} = \frac{\sigma}{\overline{X}} \times 100 = \frac{14.73}{41.20} \times 100 = 35.75$$

4.3 SCBNL Bank :-

(Rs. In million)

Years	Ratio (X)%	$(X - \overline{X})$	$(X - \overline{X})^2$
2002/03	5.07	0.83	0.69
2003/04	4.24	0.60	0.36
2004/05	3.30	-0.34	0.12
2005/06	2.93	-0.71	0.50
2006/07	2.67	-0.97	0.94
N = 5	**Σ X = 18.21**		**Σ(X-X)² =2.61**

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We have,

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{18.21}{5} = 3.64$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{2.61}{5}} = 0.72$$

$$\text{Coefficient of Variation(C.V.)} = \frac{\sigma}{\bar{X}} \times 100 = \frac{0.72}{3.6.4} \times 100 = 19.85$$

5. Calculation of Mean, S.D. and C.V. of Provision Held to Non-Performing Loan

5.1 NABIL Bank :-

(Rs. In million)

Years	Ratio (X)%	(X – $\bar{X}$)	(X – $\bar{X}$)²
2002/03	79.56	-93.66	8771.45
2003/04	130.73	-42.49	1805.07
2004/05	258.04	84.82	7195.11
2005/06	197.95	24.73	611.77
2006/07	199.80	26.58	706.71
N = 5	Σ X = 866.08		Σ(X-X)² =19090.10

We have,

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{866.08}{5} = 173.216$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{19090.10}{5}} = 61.79$$

$$\text{Coefficient of Variation(C.V.)} = \frac{\sigma}{\bar{X}} \times 100 = \frac{61.79}{173.216} \times 100 = 35.67$$

5.2 NBL Bank :-

(Rs. In million)

Years	Ratio (X)%	$(X - \bar{X})$	$(X - \bar{X})^2$
2002/03	92.67	-73.82	5449.39
2003/04	189.73	23.24	540.10
2004/05	211.96	45.47	2067.52
2005/06	224.06	57.57	3314.30
2006/07	114.02	-52.47	2753.10
N = 5	**Σ X = 832.44**		**Σ(X-X)² =14124.42**

We have,

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{832.44}{5} = 173.216$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{14124.42}{5}} = 53.15$$

$$\text{Coefficient of Variation(C.V.)} = \frac{\sigma}{\bar{X}} \times 100 = \frac{53.15}{166.49} \times 100 = 31.92$$

5.3 SCBNL Bank :-

(Rs. In million)

Years	Ratio (X)%	$(X - \bar{X})$	$(X - \bar{X})^2$
2002/03	122.58	-7.48	55.95
2003/04	117.36	-12.7	161.29
2004/05	122.58	-7.48	55.95
2005/06	141.87	11.81	139.48

2006/07	145.93	15.87	251.86
N = 5	**Σ X = 650.32**		**Σ(X-X)² =664.52**

We have,

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{650.32}{5} = 130.06$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{664.52}{5}} = 11.53$$

$$\text{Coefficient of Variation(C.V.)} = \frac{\sigma}{\bar{X}} \times 100 = \frac{11.53}{130.06} \times 100 = 8.86$$

6. Calculation of Mean, S.D. and C.V. of Return on Loan and Advances

6.1 NABIL Bank :-

(Rs. In million)

Years	Ratio (X)%	(X – $\bar{X}$)	(X – $\bar{X}$)²
2002/03	5.13	0.27	0.07
2003/04	5.33	0.47	0.22
2004/05	4.75	-0.11	0.01
2005/06	4.78	-0.08	0.006
2006/07	4.31	-0.55	0.30
N = 5	**Σ X = 24.3**		**Σ(X-X)² =0.6148**

We have,

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{24.3}{5} = 4.86$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{0.6148}{5}} = 0.35$$

$$\text{Coefficient of Variation(C.V.)} = \frac{\sigma}{\overline{X}} \times 100 = \frac{0.35}{4.86} \times 100 = 7.22$$

6.2 NBL Bank :-

<div align="right">(Rs. In million)</div>

Years	Ratio (X)%	$(X - \overline{X})$	$(X - \overline{X})^2$
2002/03	-1.39	-4.30	18.49
2003/04	-6.73	-9.64	92.93
2004/05	10.26	7.35	54.02
2005/06	9.37	6.46	41.72
2006/07	3.04	0.13	0.017
N = 5	Σ X = 14.55		Σ(X-X)² =207.18

We have,

$$\text{Mean}(\overline{X}) = \frac{\Sigma X}{N} = \frac{14.55}{5} = 2.91$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-X)^2}{N}} = \sqrt{\frac{207.18}{5}} = 6.44$$

$$\text{Coefficient of Variation(C.V.)} = \frac{\sigma}{\overline{X}} \times 100 = \frac{6.44}{2.91} \times 100 = 221.30$$

6.3 SCBNL Bank :-

<div align="right">(Rs. In million)</div>

Years	Ratio (X)%	$(X - \overline{X})$	$(X - \overline{X})^2$
2002/03	8.45	1.17	1.37
2003/04	8.03	0.75	0.56
2004/05	6.37	-0.91	0.83
2005/06	7.16	-0.12	0.014
2006/07	6.41	-0.87	0.76
N = 5	Σ X = 36.42		Σ(X-X)² =3.53

We have,

$$\text{Mean}(\overline{X}) = \frac{\Sigma X}{N} = \frac{36.42}{5} = 7.28$$

$$\text{Standard Deviation}(\sigma) = \sqrt{\frac{\Sigma(X-\overline{X})^2}{N}} = \sqrt{\frac{3.53}{5}} = 0.84$$

$$\text{Coefficient of Variation}(\text{C.V.}) = \frac{\sigma}{\overline{X}} \times 100 = \frac{0.84}{7.28} \times 100 = 11.54$$

APENDIX 3

1. Calculation of Correlation Coefficient, P.E. & 6P.E. between Loan Loss Provision and Loans and Advances.

1.1 NABIL BANK :-

Years	Loans& Advances(X)	LLP (Y)	X= (X-X̄)	Y= (Y-Ȳ)	X²	Y²	XY
2002/03	8114	358	-3244	2	10523536	4	-6488
2003/04	8549	359	-2809	3	7890481	9	-8427
2004/05	10944	361	-414	5	171396	25	-2070
2005/06	13278	353	1921	-3	3686400	9	-5763
2006/07	15903	350	4545	-7	20657025	36	-31815
N = 5	**ΣX= 56788**	**ΣY= 1781**	**ΣX= 0**	**ΣY=0**	**ΣX²= 42932679**	**ΣY²= 83**	**ΣXY= -54560**

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{56788}{5} = 11357.60$$

$$\text{Mean}(\bar{Y}) = \frac{\Sigma Y}{N} = \frac{1781}{5} = 356.20$$

We have Karl Pearson Correlation Coefficient,

$$\text{Correlation (r)} = \frac{\Sigma XY}{\sqrt{\Sigma X^2 . \Sigma Y^2}} = \frac{-54560}{\sqrt{42932679 \times 96}}$$

$$= \frac{-54560}{6552 \times 9.8} = \frac{-54560}{64200} = -0.8498$$

$$\text{Probable Error(P.E.)} = \frac{0.6745\ (1-r^2)}{\sqrt{N}} = \frac{0.6745[1-(-0.8498)^2]}{\sqrt{5}} = 0.0836$$

$$6\text{P.E.} = 6 \times 0.0836 = 0.5016$$

1.2 NBL BANK :-

Years	Loans& Advances(X)	LLP (Y)	X= _ (X-X̄)	Y= _ (Y-Ȳ)	X²	Y²	XY
2002/03	18132	10161	2218.6	3316.6	4222186	10999836	7358209
2003/04	17938	9056	2024.6	2211.6	4099005	4891175	4477605
2004/05	16867	8648	953.6	1803.6	909353	3552973	1719913
2005/06	12879	3974	-3034.4	-2870.4	9207583	8239196	8709942
2006/07	13751	2383	-2162.4	-4461.4	4675974	19904090	9647331
N = 5	**ΣX= 79567**	**ΣY= 34222**	**ΣX= 0**	**ΣY=0**	**ΣX²= 23814101**	**ΣY²= 47287269**	**ΣXY= 31913000**

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{79567}{5} = 15913.4$$

$$\text{Mean}(\bar{Y}) = \frac{\Sigma Y}{N} = \frac{34222}{5} = 6844.4$$

We have Karl Pearson Correlation Coefficient,

$$\text{Correlation (r)} = \frac{\Sigma XY}{\sqrt{\Sigma X^2 . \Sigma Y^2}} = \frac{31913000}{\sqrt{23814101 \times 47287269}} = 0.9510$$

$$\text{Probable Error(P.E.)} = \frac{0.6745\ (1-r^2)}{\sqrt{N}} = \frac{0.6745[1-(0.9510)^2]}{\sqrt{5}} = 0.0288$$

$$6\text{P.E.} = 6 \times 0.0288 = 0.1728$$

1.3 SCBNL BANK :-

Years	Loans& Advances(X)	LLP (Y)	X= _ (X-X̄)	Y= _ (Y-Ȳ)	X²	Y²	XY
2002/03	6000	304	-2222.2	19.2	4938173	369	-42666
2003/04	6694	284	-1528.2	-0.8	2335395	0.64	1223
2004/05	8421	278	198.8	-6.8	39521	46	-1352
2005/06	9206	270	983.8	-14.8	967862	219	-14560
2006/07	10790	288	2567.8	3.2	6593597	10	8217
N = 5	**ΣX= 41111**	**ΣY= 1424**	**ΣX= 0**	**ΣY=0**	**ΣX²= 14874549**	**ΣY²= 645**	**ΣXY= -49138**

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{41111}{5} = 8222.2$$

$$\text{Mean}(\bar{Y}) = \frac{\Sigma Y}{N} = \frac{1424}{5} = 284.8$$

We have Karl Pearson Correlation Coefficient,

$$\text{Correlation (r)} = \frac{\Sigma XY}{\sqrt{\Sigma X^2 . \Sigma Y^2}} = \frac{-49138}{\sqrt{14874549 \times 645}} = -0.5016$$

$$\text{Probable Error(P.E.)} = \frac{0.6745 (1-r^2)}{\sqrt{N}} = \frac{0.6745[1-(-0.5016)^2]}{\sqrt{5}} = 0.2254$$

$$6\text{P.E.} = 6 \times 0.2254 = 1.3521$$

2. Calculation of Correlation Coefficient, P.E. & 6P.E. between Loan Loss Provision ans Non-Performing Loan.

2.1 NABIL BANK :-

Years	NPL (X)	LLP (Y)	X= _ (X-X̄)	Y= _ (Y-Ȳ)	X²	Y²	XY
2002/03	450	358	206.6	1.8	42684	3	372
2003/04	274	359	30.6	2.8	936	8	86
2004/05	140	361	-103.4	4.8	10692	23	-496
2005/06	178	353	-65.4	-3.2	4277	10	209
2006/07	175	350	-68.4	-6.2	4679	38	424
N = 5	ΣX= 1217	ΣY= 1781	ΣX= 0	ΣY=0	ΣX²= 63268	ΣY²= 82	ΣXY= 596

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{1217}{5} = 243.4$$

$$\text{Mean}(\bar{Y}) = \frac{\Sigma Y}{N} = \frac{1781}{5} = 356.2$$

We have Karl Pearson Correlation Coefficient,

$$\text{Correlation (r)} = \frac{\Sigma XY}{\sqrt{\Sigma X^2 . \Sigma Y^2}} = \frac{596}{\sqrt{63268 \times 82}} = 0.2616$$

$$\text{Probable Error(P.E.)} = \frac{0.6745 (1-r^2)}{\sqrt{N}} = \frac{0.6745[1-(0.2616)^2]}{\sqrt{5}} = 0.2805$$

$$6\text{P.E.} = 6 \times 0.2805 = 1.683$$

2.2 NBL BANK :-

Years	NPL (X)	LLP (Y)	X= $(X-\bar{X})$	Y= $(Y-\bar{Y})$	X²	Y²	XY
2002/03	10965	10161	6229	3317	38800441	11002489	20661593
2003/04	4773	9056	37	2212	1369	4892944	81844
2004/05	4080	8648	-657	1804	431649	3254416	-1185228
2005/06	1774	3974	-2962	-2871	8773444	8242641	8503902
2006/07	2090	2383	-2647	-4462	7006609	19909444	11810914
N = 5	ΣX= 23682	ΣY= 34222	ΣX=0	ΣY=0	ΣX²= 55013512	ΣY²= 47301934	ΣXY= 39873025

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{23682}{5} = 4736.4$$

$$\text{Mean}(\bar{Y}) = \frac{\Sigma Y}{N} = \frac{34222}{5} = 6844.4$$

We have Karl Pearson Correlation Coefficient,

$$\text{Correlation (r)} = \frac{\Sigma XY}{\sqrt{\Sigma X^2 . \Sigma Y^2}} = \frac{39873025}{\sqrt{55013512 \times 47301934}} = 0.7816$$

$$\text{Probable Error(P.E.)} = \frac{0.6745 \,(1-r^2)}{\sqrt{N}} = \frac{0.6745[1-(0.7816)^2]}{\sqrt{5}} = 0.1172$$

$$6\text{P.E.} = 6 \times 0.1172 = 0.7032$$

2.3 SCBNL BANK :-

Years	NPL (X)	LLP (Y)	X= _ (X-X̄)	Y= _ (Y-Ȳ)	X²	Y²	XY
2002/03	248	304	27	19	729	361	513
2003/04	242	284	21	-1	441	1	-21
2004/05	227	278	6	-7	36	49	-42
2005/06	190	270	-31	-14	961	196	434
2006/07	197	288	-23	3	529	9	-69
N = 5	**ΣX= 1104**	**ΣY= 1424**	**ΣX= 0**	**ΣY=0**	**ΣX²= 2696**	**ΣY²= 616**	**ΣXY= 815**

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{1104}{5} = 220.8$$

$$\text{Mean}(\bar{Y}) = \frac{\Sigma Y}{N} = \frac{1424}{5} = 284.8$$

We have Karl Pearson Correlation Coefficient,

$$\text{Correlation (r)} = \frac{\Sigma XY}{\sqrt{\Sigma X^2 . \Sigma Y^2}} = \frac{815}{\sqrt{2696 \times 615}} = 0.6329$$

$$\text{Probable Error(P.E.)} = \frac{0.6745\,(1-r^2)}{\sqrt{N}} = \frac{0.6745[1-(0.6329)^2]}{\sqrt{5}} = 0.1805$$

$$6\text{P.E.} = 6 \times 0.1805 = 1.08$$

3. Calculation of Correlation Coefficient, P.E. & 6P.E. between Loan and Advances and Deposit.

3.1 NABIL BANK :-

Years	Deposit (X)	Loans& Advances (Y)	X= $(X-\bar{X})$	Y= $(Y-\bar{Y})$	X²	Y²	XY
2002/03	13448	8114	-3521	-3244	12397441	10523536	11422124
2003/04	14119	8549	-2850	-2809	8122500	7890481	8005650
2004/05	14587	10944	-2381	-413	5669161	170569	983353
2005/06	19347	13278	2378	1920	5654884	3686400	4565760
2006/07	23342	15903	6374	4546	40627876	20666116	28976204
N = 5	ΣX= 84843	ΣY= 56788	ΣX= 0	ΣY=0	ΣX²= 72471862	ΣY²= 42937102	ΣXY= 53953091

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{84843}{5} = 16968.6$$

$$\text{Mean}(\bar{Y}) = \frac{\Sigma Y}{N} = \frac{56788}{5} = 11357.6$$

We have Karl Pearson Correlation Coefficient,

$$\text{Correlation (r)} = \frac{\Sigma XY}{\sqrt{\Sigma X^2 . \Sigma Y^2}} = \frac{53953091}{\sqrt{72471862 \times 42937102}} = 0.9672$$

$$\text{Probable Error(P.E.)} = \frac{0.6745\,(1-r^2)}{\sqrt{N}} = \frac{0.6745[1-(0.9672)^2]}{\sqrt{5}} = 0.0195$$

$$6P.E. = 6 \times 0.0195 = 0.1168$$

3.2 NBL BANK :-

Years	Deposit (X)	Loans& Advances(Y)	X= (X-X̄)	Y= (Y-Ȳ)	X²	Y²	XY
2002/03	35014	18132	-1290	2219	1664100	4923961	-2862510
2003/04	35735	17938	-569	2025	323761	4100625	-1152225
2004/05	35934	16867	-370	953	136900	908209	-352610
2005/06	35830	12879	-474	-3034	224676	9205156	1438116
2006/07	39008	13751	2703	-2163	7306209	4678569	-5846589
N = 5	**ΣX= 181521**	**ΣY= 79567**	**ΣX= 0**	**ΣY=0**	**ΣX²= 9655646**	**ΣY²= 23816520**	**ΣXY= -8775818**

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{181521}{5} = 36304.2$$

$$\text{Mean}(\bar{Y}) = \frac{\Sigma Y}{N} = \frac{79567}{5} = 15913.4$$

We have Karl Pearson Correlation Coefficient,

$$\text{Correlation }(r) = \frac{\Sigma XY}{\sqrt{\Sigma X^2 . \Sigma Y^2}} = \frac{-8775818}{\sqrt{9655646 \times 231816520}} = -0.5790$$

$$\text{Probable Error(P.E.)} = \frac{0.6745\ (1-r^2)}{\sqrt{N}} = \frac{0.6745[1-(-0.5790)^2]}{\sqrt{5}} = 0.2002$$

$$6\text{P.E.} = 6 \times 0.2002 = 1.2012$$

3.3 SCBNL BANK :-

Years	Deposit (X)	Loans& Advances(Y)	X= _ (X-X)	Y= _ (Y-Y)	X²	Y²	XY
2002/03	18756	6000	-2635	-2222	6943225	4937284	5854970
2003/04	21161	6694	-229	-1528	52441	2334784	349912
2004/05	19335	8421	-2055	199	4223025	39601	-408945
2005/06	23061	9206	1670	983	2788900	966289	1641610
2006/07	24640	10790	3249	2568	10556001	6594624	8343432
N = 5	**ΣX= 106953**	**ΣY= 41111**	**ΣX=0**	**ΣY=0**	**ΣX²= 24563592**	**ΣY²= 14872582**	**ΣXY= 15780979**

$$\text{Mean}(\bar{X}) = \frac{\Sigma X}{N} = \frac{106953}{5} = 21390.60$$

$$\text{Mean}(\bar{Y}) = \frac{\Sigma Y}{N} = \frac{41111}{5} = 8222.20$$

We have Karl Pearson Correlation Coefficient,

$$\text{Correlation (r)} = \frac{\Sigma XY}{\sqrt{\Sigma X^2 . \Sigma Y^2}} = \frac{16598869}{\sqrt{24563592 \times 14872582}} = 0.8257$$

$$\text{Probable Error(P.E.)} = \frac{0.6745\,(1-r^2)}{\sqrt{N}} = \frac{0.6745[1-(0.8257)^2]}{\sqrt{5}} = 0.0960$$

$$6\text{P.E.} = 6 \times 0.0960 = 0.5760$$

APENDIX 4

1. Calculation of Trend Value of Loans and Advances.

NBL BANK:-

Rs. In million

Years	Loans& Advances (Y)	Deviation from 2002/03(X)	X²	XY	Yc=a+bx Yc=15913.40+ (-1382.10)×x
2002/03	18132	-2	4	-36264	18678
2003/04	17938	-1	1	-17938	17296
2004/05	16867	0	0	0	15913
2005/06	12879	1	1	12879	14531
2006/07	13751	2	4	27502	13149
N = 5	ΣY= 79567	ΣX= 0	ΣX²= 10	ΣXY= -13821	

Here,
When, $\Sigma X= 0$, from the two normal equations,

$$a = \frac{\Sigma Y}{N} = \frac{79567}{5} = 15913.40$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{-13821}{10} = -1382.10$$

Thus,

Average Loans and Advances (a) = Rs. 15913.40
Rate of change of Loans and Advnaces (b) = Rs. -1382.10

Hence, the equation of straight line trend is

$$Yc = a + bx$$

$$Yc = 15913.40 + (-1382.10) \times x$$

Expected Value of Loans and Advances (2007/08 to 2011/12)

Years	Deviation from 2002/03 (X)	Yc=a+bx ,Yc=15913.40+(-1382.10)×x
2007/08	3	11767
2008/09	4	10385
2009/10	5	9003
2010/11	6	7621
2011/12	7	6239

NABIL BANK:-

Rs. In million

Years	Loans& Advances (Y)	Deviation from 2002/03(X)	X²	XY	Yc=a+bx Yc=11357.60+ (2030.70)×x
2002/03	8114	-2	4	-16228	7296
2003/04	8549	-1	1	-8549	9327
2004/05	10944	0	0	0	11358
2005/06	13278	1	1	13278	13388
2006/07	15903	2	4	31806	15419
N = 5	ΣY= 56788	ΣX= 0	ΣX²= 10	ΣXY= 20307	

Here,

When, $\Sigma X = 0$**,** from the two normal equations,

$$a = \frac{\Sigma Y}{N} = \frac{56788}{5} = 11357.60$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{20307}{10} = 2030.70$$

Thus,

Average Loans and Advances (a) = Rs. 11357.60

Rate of change of Loans and Advnaces (b) = Rs.2030.70

Hence, the equation of straight line trend is

Yc = a + bx

Yc = 11357.60 + 2030.70 × x

Expected Value of Loans and Advances (2007/08 to 2011/12)

Years	Deviation from 2002/03 (X)	Yc=a+bx ,Yc=11357.60+(2030.70)×x
2007/08	3	17450
2008/09	4	19480
2009/10	5	21511
2010/11	6	23542
2011/12	7	25573

SCBNL BANK:-

Rs. In million

Years	Loans& Advances (Y)	Deviation from 2002/03(X)	X²	XY	Yc=a+bx Yc=8222.20+ 1209.20×x
2002/03	6000	-2	4	-1200	5804
2003/04	6694	-1	1	-6694	7013
2004/05	8421	0	0	0	8222
2005/06	9206	1	1	9206	9431
2006/07	10790	2	4	21580	10641
N = 5	**ΣY= 41111**	**ΣX= 0**	**ΣX²= 10**	**ΣXY= 12092**	

Here,
 When, ΣX= 0**,** from the two normal equations,

$$a = \frac{\Sigma Y}{N} = \frac{41111}{5} = 8222.20$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{12092}{10} = 1209.20$$

Thus,

Average Loans and Advances (a) = Rs. 8222.20
Rate of change of Loans and Advnaces (b) = Rs.1209.20

Hence, the equation of straight line trend is

$$Yc = a + bx$$

$$Yc = 8222.20 + 1209.20 \times x$$

Expected Value of Loans and Advances (2007/08 to 2011/12)

Years	Deviation from 2002/03 (X)	Yc=a+bx ,Yc=8222.20+1209.20×x
2007/08	3	11850
2008/09	4	13059
2009/10	5	14268
2010/11	6	15477
2011/12	7	16687

2. <u>Calculation of Trend Value of Non-Performing Loan.</u>

NBL BANK:-

Rs. In million

Years	Non-Performing loan (Y)	Deviation from 2002/03(X)	X²	XY	Yc=a+bx Yc=4736.40+ (-2074.90)×x
2002/03	10965	-2	4	-21930	8886
2003/04	4773	-1	1	-4773	6811
2004/05	4080	0	0	0	4736
2005/06	1774	1	1	1774	2662
2006/07	2090	2	4	4180	587
N = 5	**ΣY= 23682**	**ΣX= 0**	**ΣX²= 10**	**ΣXY= -20749**	

Here,
When, ΣX= 0**,** from the two normal equations,

$$a = \frac{\Sigma Y}{N} = \frac{23682}{5} = 4736.40$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{-20749}{10} = -2074.90$$

Thus,

Average Non-Performing Loans (a) = Rs. 4736.40
Rate of change of Non-Performing Loans (b) = Rs.-2074.90

Hence, the equation of straight line trend is

Yc = a + bx

Yc = 4736.40 + (-2047.90) × x

Expected Value of Non-Performing Loans (2007/08 to 2011/12)

Years	Deviation from 2002/03 (X)	Yc=a+bx ,Yc=4736.40+(-2047.90)×x
2007/08	3	0
2008/09	4	0
2009/10	5	0
2010/11	6	0
2011/12	7	0

NABIL BANK:-

Rs. In million

Years	Non-Performing Loans (Y)	Deviation from 2002/03(X)	X²	XY	Yc=a+bx Yc=243.40+ (-64.60)×x
2002/03	450	-2	4	-900	373
2003/04	274	-1	1	-274	308
2004/05	140	0	0	0	243
2005/06	178	1	1	178	179
2006/07	175	2	4	350	114
N = 5	ΣY= 1217	ΣX= 0	ΣX²= 10	ΣXY= -646	

Here,
When, ΣX= 0, from the two normal equations,

$$a = \frac{\Sigma Y}{N} = \frac{1217}{5} = 243.40$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{-646}{10} = -64.60$$

Thus,

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Average Non-Performing Loans (a) = Rs. 243.40
Rate of change of Non-Performing Loans (b) = Rs.-64.60

Hence, the equation of straight line trend is

Yc = a + bx

Yc = 243.40 + (-64.60)× x

Expected Value of Non-Performing Loans (2007/08 to 2011/12)

Years	Deviation from 2002/03 (X)	Yc=a+bx ,Yc=243.40+(-64.60)×x
2007/08	3	50
2008/09	4	0
2009/10	5	0
2010/11	6	0
2011/12	7	0

2.3 SCBNL BANK:-

Rs. In million

Years	Non-Performing Loans (Y)	Deviation from 2002/03(X)	X²	XY	Yc=a+bx Yc=220.80+ (-15.40)×x
2002/03	248	-2	4	-496	252
2003/04	242	-1	1	-242	236
2004/05	227	0	0	0	221
2005/06	190	1	1	190	205
2006/07	197	2	4	394	190
N = 5	ΣY= 1104	ΣX= 0	ΣX²= 10	ΣXY= -154	

Here,

When, $\Sigma X = 0$, from the two normal equations,

$$a = \frac{\Sigma Y}{N} = \frac{1104}{5} = 220.80$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{-154}{10} = -15.40$$

Thus,

Average Non-Performing Loans (a) = Rs. 220.80
Rate of change of Non-performing Loans (b) = Rs.-15.40

Hence, the equation of straight line trend is

$$Yc = a + bx$$

$$Yc = 220.80 + (-15.40) \times x$$

Expected Value of Non-Performing Loans (2007/08 to 2011/12)

Years	Deviation from 2002/03 (X)	Yc=a+bx ,Yc=220.80+(-15.40)×x
2007/08	3	175
2008/09	4	159
2009/10	5	144
2010/11	6	128
2011/12	7	113

3. <u>Calculation of Trend Value of Loan Loss Provision.</u>

NBL BANK:-

Rs. In million

Years	Loan Loss Provision. (Y)	Deviation from 2002/03(X)	X²	XY	Yc=a+bx Yc=6844.4+ (2063.80)×x
2002/03	10161	-2	4	-20322	10972
2003/04	9056	-1	1	-9056	8908
2004/05	8648	0	0	0	6844
2005/06	3974	1	1	3974	4781
2006/07	2383	2	4	4766	2717
N = 5	**ΣY= 34222**	**ΣX= 0**	**ΣX²= 10**	**ΣXY= -20638**	

Here,
When, ΣX= 0**,** from the two normal equations,

$$a = \frac{\Sigma Y}{N} = \frac{34222}{5} = 6844.40$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{-20638}{10} = -2063.80$$

Thus,

Average Loan Loss Provision (a) = Rs.6844.40
Rate of change of Loan Loss Provision (b) = Rs.-2063.80

Hence, the equation of straight line trend is

$Yc = a + bx$

$Yc = 6844.40 + (-2063.80) \times x$

Expected Value of Loan Loss Provision (2007/08 to 2011/12)

Years	Deviation from 2002/03 (X)	Yc=a+bx ,Yc=6844.40+(-2063.80)×x
2007/08	3	653
2008/09	4	0
2009/10	5	0
2010/11	6	0
2011/12	7	0

NABIL BANK:-

Rs. In million

Years	Loan Loss Provision. (Y)	Deviation from 2002/03(X)	X²	XY	Yc=a+bx Yc=365.20+ (-2.50)×x
2002/03	358	-2	4	-716	361
2003/04	359	-1	1	-359	358
2004/05	361	0	0	0	356
2005/06	353	1	1	353	354
2006/07	350	2	4	700	352
N = 5	ΣY= 1781	ΣX= 0	ΣX²= 10	ΣXY=-25	

Here,
When, $\Sigma X = 0$, from the two normal equations,

$$a = \frac{\Sigma Y}{N} = \frac{1781}{5} = 356.20$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{-25}{10} = -2.50$$

Thus,

 Average Loan Loss Provision (a) = Rs. 356.20
Rate of change of Loan Loss Provision (b) = Rs.-2.50

Hence, the equation of straight line trend is

Yc = a + bx

Yc = 356.20 + (-2.50) × x

Expected Value of Loan Loss Provision (2007/08 to 2011/12)

Years	Deviation from 2002/03 (X)	Yc=a+bx ,Yc=356.20+(-2.50)×x
2007/08	3	350
2008/09	4	347
2009/10	5	345
2010/11	6	343
2011/12	7	241

SCBNL BANK:-

Rs. In million

Years	Loan Loss Provision. (Y)	Deviation from 2002/03(X)	X²	XY	Yc=a+bx Yc=284.80+ (-4.60)×x
2002/03	304	-2	4	-608	294
2003/04	284	-1	1	-284	289
2004/05	278	0	0	0	285
2005/06	270	1	1	270	280
2006/07	288	2	4	576	276
N = 5	ΣY=1424	ΣX= 0	ΣX²= 10	ΣXY=-46	

Here,

When, $\Sigma X = 0$, from the two normal equations,

$$a = \frac{\Sigma Y}{N} = \frac{1424}{5} = 284.80$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{-46}{10} = -4.60$$

Thus,

Average Loan Loss Provision (a) = Rs.284.80
Rate of change of Loan Loss Provision (b) = Rs.-4.60

Hence, the equation of straight line trend is

$$Y_c = a + bx$$

$$Y_c = 284.80 + (-4.60) \times x$$

Expected Value of Loan Loss Provision (2007/08 to 2011/12)

Years	Deviation from 2002/03 (X)	Yc=a+bx ,Yc=284.80+(-4.60)×x
2007/08	3	271
2008/09	4	266
2009/10	5	262
2010/11	6	257
2011/12	7	253

4. Calculation of Trend Value of Net Profit.

4.1 NBL BANK:-

Rs. In million

Years	Net Profit (Y)	Deviation from 2002/03(X)	X²	XY	Yc=a+bx Yc=379.20+ 375.40×x
2002/03	-252	-2	4	504	-372
2003/04	-1207	-1	1	1207	4
2004/05	1730	0	0	0	379
2005/06	1207	1	1	1207	755
2006/07	418	2	4	836	1130
N = 5	ΣY=1896	ΣX= 0	ΣX²= 10	ΣXY= 3754	

Here,

When, ΣX= 0, from the two normal equations,

$$a = \frac{\Sigma Y}{N} = \frac{1896}{5} = 379.20$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{3754}{10} = 375.40$$

Thus,

Average Net Profit (a) = Rs. 379.20
Rate of change of Net Profit (b) = Rs.375.40

Hence, the equation of straight line trend is

Yc = a + bx

Yc = 379.20 + 375.40× x

Expected Value of Net Profit (2007/08 to 2011/12)

Years	Deviation from 2002/03 (X)	Yc=a+bx ,Yc=379.20+375.40×x
2007/08	3	1505
2008/09	4	1881
2009/10	5	2256
2010/11	6	2632
2011/12	7	3007

4.2 NABIL BANK:-

Rs. In million

Years	Net Profit (Y)	Deviation from 2002/03(X)	X²	XY	Yc=a+bx Yc=542.40+ 72.00×x
2002/03	416	-2	4	-832	398
2003/04	455	-1	1	-455	470
2004/05	520	0	0	0	542
2005/06	635	1	1	635	614
2006/07	686	2	4	1372	686
N = 5	ΣY=2712	ΣX= 0	ΣX²= 10	ΣXY=720	

Here,

When, ΣX= 0**,** from the two normal equations,

$$a = \frac{\Sigma Y}{N} = \frac{2712}{5} = 542.40$$

$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{720}{10} = 72.00$$

Thus,

Average Net Profit (a) = Rs.542.40
Rate of change of Net Profit (b) = Rs.72.00

Hence, the equation of straight line trend is

Yc = a + bx

Yc = 542.40 + 72.00 × x

Expected Value of Net Profit (2007/08 to 2011/12)

Years	Deviation from 2002/03 (X)	Yc=a+bx ,Yc=542.40+72.00×x
2007/08	3	758
2008/09	4	830
2009/10	5	902
2010/11	6	974
2011/12	7	1046

4.3 SCBNL BANK:-

Rs. In million

Years	Net Profit (Y)	Deviation from 2002/03(X)	X²	XY	Yc=a+bx Yc=586.40+ 49.10×x
2002/03	507	-2	4	-1014	488
2003/04	538	-1	1	-538	537
2004/05	536	0	0	0	586
2005/06	659	1	1	659	636
2006/07	692	2	4	1384	685
N = 5	**ΣY=2935**	**ΣX= 0**	**ΣX²= 10**	**ΣXY=491**	

Here,
When, ΣX= 0, from the two normal equations,

$$a = \frac{\Sigma Y}{N} = \frac{2932}{5} = 586.40$$

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$$b = \frac{\Sigma XY}{\Sigma X^2} = \frac{491}{10} = 49.10$$

Thus,

 Average Net Profit (a) = Rs. 586.40
Rate of change of Net Profit (b) = Rs.49.10

Hence, the equation of straight line trend is

Yc = a + bx

Yc = 586.40 + 49.10 × x

Expected Value of Net Profit (2007/08 to 2011/12)

Years	Deviation from 2002/03 (X)	Yc=a+bx ,Yc=586.40+49.10×x
2007/08	3	734
2008/09	4	783
2009/10	5	832
2010/11	6	881
2011/12	7	930

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