

# CHAPTER I

## INTRODUCTION

### 1.1 Background of the Study

Financial system is generally considered as the most important institutional and functional vehicle for the economic transformation of a country. A sound, healthy, efficient and secured financial system helps accelerate the dynamics of an economy and thus plays a significant role as a growth facilitator. As such, banking sector is considered as the most important player of the financial system and is generally reckoned as a hub and barometer of the financial system. Financial institutions are the backbone of the economic development of any country. National development of any country depends upon the economic development of that country and economic development is supported by financial infrastructure of that country. The Nepalese financial sector is composed of banking sector and non-banking sector. Banking sector comprises of Nepal Rastra Bank and Commercial Banks. The non-banking sector includes development banks, micro-credit development banks, finance companies, co-operative financial institutions, non-government organizations (NGOs) performing limited banking activities. Other financial institutions comprise of insurance companies, employee's provident fund, citizen investment trust, postal saving offices and Nepal Stock Exchange. A small financial institution is a vital contributor to the financial health of the national economy. The financial institutions are often fragile and susceptible to failure because of poor management, particularly financial management. Commercial banks hold a dominant position on financial system of Nepalese economy. Banks constitute an important segment of financial infrastructure 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 is an establishment which makes to individuals such advance of money as may be required safety made and to which individuals entrust money when not required for use." (Khadka & Singh, 2004/5, P 4). "A bank is defined as a 'financial departmental store' which renders a host of financial services besides taking deposits and giving loans." (Dahal & Dahal, 2002, P 7)

Banking industry plays an important role in the development of an economy by providing short-term and long-term funds needed to finance investment expenditure and facilitating accumulation of real wealth. A developed banking industry provides a link between saving and investment and offers greater opportunities for individuals and society to increase wealth and raise the standard of living. A well developed banking industry signifies a developed financial system of a nation. Evidence shows that countries with developed and efficient banking industry also have higher standard of living. Bank pools the fund scattered in the economy and mobilizes 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, disbursing loan and rendering various types of financial services. It is the intermediary between the deficit and surplus of the financial resources. "Banking when properly organized, adds 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." (Radhaswami & Vasudevan, 1991, p 29)

It cannot be denied that the issue of development rests upon the mobilization of resources and banks deals in the process of channelizing 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 and 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 depositors. An average bank generates 60-70% 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 portfolio. 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.

Amongst 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 the shareholders. The risk involved is so high that it can bring bank to a verge of bankruptcy. The bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society they are serving. If a bank behaves irresponsibly, the cost born by the economy is enormous. "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 the governmental and non-governmental banking and financial institution."(Pandit, 2002, P.31).

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 banking system. All the banks have to abide by the rules and regulation issued by the central bank. Of the many directives, there are more than ten directives relating to the banking prudential regulation/norms to be followed by the banks.

### **1.1.1 Brief History of Evolution of Banking**

The evolution of banking industry had started a long time back, during ancient times. There was reference to the activities of moneychangers in temple of Jerusalem in the New Testament. In ancient Greece, the famous temples of Delphi and Olympia served as the great depositories for peoples' surplus funds and these were the centers of money laundering transactions. However as a public enterprise, banking made its first beginning around the middle of the 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. Subsequently Bank of Amsterdam set up in 1609, which was very popular then. The bank of Venice and the Bank of Geneva continued to operate until the end of eighteen century. With 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.

However, the development of banking in Nepal is relatively recent. Like other countries, landlords, moneylenders, merchant, goldsmith etc are the ancient bankers of Nepal. Though establishment of banking industry was very recent, some crude banking operations were in practice even in the ancient times. In the Nepalese Chronicle, it was recorded that the new era known as Nepal Sambat was introduced by Shankhadhar, a Sudra merchant of Kantipur in 880 A.D. after having paid all the outstanding debts in the country. This shows the basis of money lending practice in Ancient Nepal. The establishment of "Tejarath Adda" during the year 1877 A.D. was the first step in institutional development of banking sector in Nepal. Tejarath Adda did not collect deposit from public but granted loans to public against the collateral of bullions. Consequently the major parts of the country remain untouched from this limited banking activity. The development of trade with India and other countries increase the necessity of the institutional banker, which can act more widely to enhance the trade and commerce and to touch the remote non-banking sector in the economy. Reviewing this situation, the "Udyog Parishad" was constituted in 1936 A.D. One year after its formation, it formulated the "Company Act" and "Nepal Bank Act" in 1937 A.D.

Modern banking practices emerged with the establishment of Nepal Bank Limited 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 set up on 2013.01.14 as a central bank under Nepal Rastra Bank Act 2012 B.S. Similarly

on 2022.10.10 Rastriya Banijya Bank was established as a fully government owned commercial bank. With the emergence of RBB, banking service spread to both the urban and rural areas but customers failed to have taste of quality/competitive service because of excessive political and bureaucratic interference. For industrial development, Industrial Development Centre was set up in 2013 B.S which was converted to Nepal Industrial Development Corporation (NIDC) in 2016 B.S. Similarly Agricultural Development Bank (ADB) was established in 2024.10.07 with an objective to promote agricultural products so that agricultural productivity could be enhanced through introduction of modern agricultural techniques.

Despite all these efforts of the government, financial sector was slow. In the context of banking development, the 1980s saw a major structural change in financial sector policies, regulations and institutional developments. Government emphasized the role of the private sector for the investment in the financial sector. With the adoption of the financial sector liberalization by the government in 80's opened the door for foreign Banks to open Joint venture Banks in Nepal. As a result, various banking and non-banking financial institutions have come into existence. Nabil Bank Limited, the first foreign joint venture bank of Nepal, started operations in July 1984. With the opening of Nabil Bank Limited (erstwhile Nepal Arab Bank Limited) in 2041.03.29, the door of opening commercial banks was opened to the private sector. NABIL emerged as the first joint venture bank when the banking sector was 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. Having observed the success on NABIL based on marketing concept and also because of liberal economic policy adopted by the successive governments, many commercial banks have been established till date. During two decades, Nepal witnessed

tremendous increment in number of financial institutions. Nepalese banking system has now a wide geographic reach and institutional diversification. Consequently, by the end of mid – July 2011, altogether 272 banks and non- bank financial institutions licensed by NRB are in operation. Out of them, 31 are “A” class commercial banks, 87 “B” class development banks, 79 “C” class finance companies, 21 “D” class micro-credit development banks, 16 saving and credit co-operatives and 38 NGOs. In mid- July 2011, the commercial banks branches reached to 1245 with the population of twenty one thousand per branch. The table no.1 shows the list of licensed commercial banks as on Mid July 2011.

**Table No. 1****List of Class A Licensed Financial Institutions (Commercial Banks) Mid - July, 2011**

S.N.	Names	Operation Date (A.D.)	Head Office	Telephone No.
1	Nepal Bank Limited	15-Nov-1937	Kathmandu	01-4247999
2	Rastriya Banijya Bank	23-Jan-1966	Kathmandu	01-4246022
3	Nabil Bank Limited	16-Jul-1984	Kathmandu	01-4429546
4	Nepal Investment Bank Limited	27-Feb-1986	Kathmandu	01-4228229
5	Standard Chartered Bank Nepal Limited.	30-Jan-1987	Kathmandu	01-4781469
6	Himalayan Bank Limited	18-Jan-1993	Kathmandu	01-4227749
7	Nepal SBI Bank Limited	7-Jul-1993	Kathmandu	01-4435516
8	Nepal Bangladesh Bank Limited	5-Jun-1993	Kathmandu	01-4783975
9	Everest Bank Limited	18-Oct-1994	Kathmandu	01-4443377
10	Bank of Kathmandu Limited	12-Mar-1995	Kathmandu	01-4414541
11	Nepal Credit and Commerce Bank Limited	14-Oct-1996	Siddharthanagar, Rupandehi	071-521921
12	Nepal Industrial & Commercial Bank Limited	21-Jul-1998	Biaratnagar, Morang	021-521921
13	Lumbini Bank Limited	17-Jul-1998	Narayangadh, Chitawan	056-524150
14	Machhapuchchhre Bank Ltd.	3-Oct-2000	Pokhara	061-530900
15	Kumari Bank Limited	3-Apr-2001	Kathmandu	01-4232112
16	Laxmi Bank Limited	3-Apr-2002	Adarshanagar, Birgunj	01-4444684
17	Siddhartha Bank Limited	24-Dec-2002	Kathmandu	01-4442919
18	Agriculture Development Bank Ltd.	16-Mar-2006	Kathmandu	01-4252358
19	Global Bank Ltd.	2-Jan-2007	Birgunj, Parsa	01-4231198
20	Citizens Bank International Ltd.	21-Jun-2007	Kathmandu	01-4262699
21	Prime Commercial Bank Ltd.	24-Sep-2007	Kathmandu	01-4233388
22	Bank of Asia Nepal Ltd.	12-Oct-2007	Kathmandu	01-4263212
23	Sunrise Bank Ltd.	12-Oct-2007	Kathmandu	01-4420612
24	Development Credit Bank Ltd.	25-May-2008	Kathmandu	01-4231120
25	NMB Bank Ltd.	5-Jun-2008	Kathmandu	01-4246160
26	Kist Bank Ltd.	7-May-2009	Kathmandu	01-4232500
27	Janata Bank Nepal Ltd.	5-Apr-2010	Kathmandu	01-4786100
28	Mega Bank Nepal Ltd.	23-Jul-2010	Kathmandu	01-4257711
29	Commerz & Trust Bank Nepal Ltd.	20-Sep-2010	Kathmandu	01-4446150
30	Civil Bank Ltd.	26-Nov-2010	Kathmandu	01-4255551
31	Century Commercial Bank Ltd.	10-Mar-2011	Kathmandu	01-4445062

(Source: Nepal Rastra Bank, Banking and Financial Statistics, Mid-July 2011, No.57,p.54)



## **1.2 Focus of the Study**

Bank disburses loans and advances for certain predetermined fixed periods or every loans and advances has its maturity period or expiry date and the borrowers must repay the loan 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. Banks in Nepal are in poor health. Increasing non-performing assets (NPA) is one of the severe problems of the Nepalese banks. The total NPA of Nepalese commercial banking sector is estimated to be about 3.2% of the total loan in Mid - July 2011 from 2.39% in the Mid – July 2010. The total amount of NPA in Mid – July 2011 reached to Rs. 16,872 million from Rs. 11,223 million in the Mid – July 2010. As per the annual report 2010 (2066/67) of Credit Information Bureau (CIB), altogether 3,647 individuals/firms/company etc were blacklisted and 1,495 were de-listed from blacklist. The total amount to be recovered from blacklisted was Rs.3,62 Million and Rs.63.9 Million was recovered from them. (Source: CIB Annual Report 2066/067,p.22)

Banks investment in the form of loans and advances are not giving desired return. Banks are facing problems in recovering the granted loans that has turned to NPA. Now days, 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 also facing the problem of increasing NPAs. This problem may lead to bankruptcy of bank and failure of banking system adversely affecting the depositors and other parties of the society.

In order to rescue banks from financial distress, to safeguard depositor's interest and to ensure stability in the economy, NRB issues directives from time to time related to various aspects of the banks. NRB Directive No. 2 (2068) is related to loan classification and provisioning of Commercial Banks. As per this directive 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 possible 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 5 years but with the new directive, that period has also been reduced. This means that 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 shareholder. However adequate loan loss provision strengthens the financial health of the banks by controlling credit risk and safeguards the depositor's money leading to overall economic development of the country.

### 1.3 Statement of the Problem

After the liberalization started in 1980's 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/ financial institutions in Nepal have been facing several problem 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 provisions. As earlier mentioned, the provision amount is taken out by deducting from the profit of the bank.

The NRB statistics shows the NPL to total gross loan of the 6.08% in 2008, 3.53% in 2009, 2.39% in 2010 and 3.20% in 2011 of all the private commercial banks. The NPL to total gross loan of the selected banks for study are as follows.

SN	Banks	Mid-July 2008 (%)	Mid-July 2009(%)	Mid-July 2010(%)	Mid-July 2011(%)
1.	NBL	8.95	5.91	2.28	5.28
2.	MBL	1.04	2.75	1.78	4.48
3.	NCCBL	16.36	2.74	2.71	3.94

(source: Nepal Rastra Bank, Banking and Financial Statistics, Mid-July 2011, No.57,p.16)

As per the international standard only 5% NPL is allowed. In context of Nepal 5% NPL to total gross loan is acceptable. The statistics presents the current position of the commercial banks in Nepal. The old and experienced banks (Nepal Bank Limited, Rastriya Banijya Bank Limited, & Agricultural Development Bank Limited) were facing the high level of NPL (2003-2007) which they have been able to put within the range of bench mark in the year of studies. Where as, some new established banks have managed to put the NPL below the standard point. Some private commercial

Banks namely Himalayan Bank Limited, Nepal Bangladesh Bank Limited, Nepal Credit and Commerce Bank Limited, Lumbini Bank Limited were also facing high level of NPL in 2003-2007. Further, Himalayan Bank Limited has managed to reduce the NPA level below benchmark in the period of study.

Investment of most of the commercial bank has been found to have lower productivity due to the lack of supervision regarding whether there is proper utilization of their investment or not. Lack of farsightedness in policy formulation and absence of strong commitment towards its proper implementation has caused many problems to commercial banks. The guidelines in themselves are not important unless properly implemented. The rules and regulations are only the tools of NRB to supervise and monitor the financial institution. NRB need to monitor the concerned authorities in order to ensure that they are being followed. Among the various problems, the banking sector being victim of the huge NPL is the major one. Due to the instable political conditions, insecurity and other many factors industries of Nepal are closing their operation. Lending carries credit risk, which arises from the failure of borrower to fulfill its contractual obligation during the course of transaction. It is well known fact that the bank and financial institution in Nepal face the problem of swelling NPL and issue is becoming more and more unmanageable. The main focus of the statement of problem is the matter related to the NPL and the factors leading to accumulation of NPL of commercial banks.

## **1.4 Objectives of the Study**

The following are the specific objectives of the Study:

- ) To examine the proportion of non-performing loan in the selected commercial banks.
- ) To evaluate the factors leading to accumulation of non-performing loan in commercial banks.
- ) To analyze the relationship between loan and loan loss provision in the selected commercial bank.
- ) To analyze the impact of loan loss provision on the profitability of the commercial banks.

## **1.5 Limitation of the Study**

The main limitation of this study is that, the study is mainly based on secondary data, interviews, published books, unpublished reports, public documents, articles of different writers, annual reports and websites of selected banks and so on. The research has the following limitations:

) Only Nepalese commercial banks will be considered for the study and three banks will be selected for the study. The selected banks are:

1. Nepal Bank Limited.
2. Machhapuchchhre Bank Limited.
3. Nepal Credit & Commercial Bank Limited.

) The period of the study will be limited from Mid July 2006 to 2011.

) The study will be mainly based on secondary data. The data published in annual reports of the respective banks, NRB Statistics, articles, publication, journals etc will be taken into consideration. Any misrepresentation, mistakes, omission etc may affect the outcome to the study. Thus, the reality of study will depend on secondary sources of data.

) All the analysis in this study will be based on the date as of end of fiscal year i.e. mid July of respective years. Any abnormality in this date may affect the conclusion of the study.

## 1.6 Organization of the Study

This research work will be divided into five chapters, namely:

- Chapter I: Introduction.
- Chapter II: Review of Literature
- Chapter III: Research Methodology
- Chapter IV: Data Presentation and Analysis
- Chapter V: Summary, Conclusion and Recommendation.

) The first chapter contains the introduction part and describes the major issues to be investigated along with general background, focus, objective, organization of study and its limitation.

) The second chapter includes conceptual and theoretical review of related literature regarding the subject matter. Related articles/journals and Thesis will also be reviewed.

) The third chapter deals with the research methodology, which consists of research design, sources of data, population and sample along with different statistical, mathematical and financial tools used in the study.

) The fourth chapter includes presentation and analysis of data using different statistical tools and major findings.

) The final chapter includes summary conclusion and recommendations regarding the subject matter.

# CHAPTER II

## REVIEW OF LITERATURE

Review of literature is a basic requirement for any research work. Review of literature means reviewing research studies or other related proposition in related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted. The main reason for the full review of research of the past is to know the outcomes of those investigations in areas where similar concepts and methodologies had been used successfully. In this process, efforts has been made to examine and review some of the related books, articles published in different economic journals, bulletins, dissertation papers, magazines, newspapers, and websites. This chapter includes the following topics:

- 2.1 Conceptual framework
- 2.2 Review of related studies-
  - ) Review of Articles/Journals
  - ) Review of thesis.
- 2.3 Research Gap

### **2.1 Conceptual Framework**

The concept and meaning of some of the terms used in the study will be cleared out under this heading.



### **2.1.1 Loans and Advances**

Commercial bank's main function is to create credit from its borrowed fund. The bank creates credit in the form of loan and advances. Loan and advances are the most profitable assets of the bank. While creating credit the bank turn its liability into the profit generating assets. Loans and advances dominate the assets side of balance sheet of any bank. Similarly, earning from such loans and advances occupy a major space in income statement of the bank. They are also the least liquid of the bank's entire assets. Loans and advances may take different forms and are allowed against various types of securities. Loans, overdrafts, discounting of bills of exchange etc are some of the forms of bank lending. Granting loans and advances always carries a certain degree of risk. Loans and advances are regarded as the risky assets of banks.

### **2.1.2 Non-Performing Assets/Loans (NPAs/NPL)**

Loans and advances which do not repay principle and interest on time to the banks are known as non-performing assets/loans (NPAs/NPL). One of the major problems of the commercial banks is the NPAs/NPL and their management. NPAs have different meaning that varies form country to country. In some countries, it means that the loan is impaired. In some countries, it means that the payment are due but there are significant different among countries how many days a payment should be in arrears before past due status is triggered (Shrestha, 2004:14). Nevertheless, a rather common feature of NPAs appears to be the payment if more than 90 days past due. In Nepal, if the loan is past due for over 3 months, it is non-performing loan. Hence the loans falling under substandard, doubtful and loss categories are regarded as Non-performing loans.

Causes of occurring NPAs/NPL:

There are various causes to increase the NPAs/NPL. It can increase due to:

- Lack of transparent and clear policy to mobilize the assets productivity.
- Lack of effective forecasting or deviation between expectation and actual outcomes of the business.
- Wrong choose of project and business to lend the fund.
- Lack of supervision, monitoring and control.
- Lack of information and communication between banks and customer.
- Lack of closed relationship between bankers and customer.
- Lack of proper information about the situation and transaction of the customer at the time of rendering loan.
- Wrong valuation of accepted collateral by the bank to the loan.
- Lack of step towards the decrease or sell the NPAs, which are not useful to the bank.
- Lack of training and seminars to build the smart human resources.
- Depression of the economy of the country due to the insecurity and instability of the business environment.
- Lack of proper policy and act to return the expired loan.

### **2.1.3 Loan Loss Provision**

The NPAs has negative impacts on the profitability of the banks. Non-performing assets are the idle assets of the banks, which do not generate any return for the banks.

Loan loss provision is the accumulated fund that is provided as a safeguard to cover possible losses upon classification of risk inherited by individual loans. There is a risk inherent in every loan. Hence provisioning is made as cushion against possible losses and to reflect the true picture of bank's asset. Hence there is practice of showing net loan (Total Loans – Loan Loss Provision) in financial statements. The amount

required for provisioning depends upon the level of NPAs and their quality. High amount of provision is an indication 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, 1%, 25%, 50%, &100% provisioning should be made for Pass, Substandard, Doubtful, and Loss loans respectively.

#### **2.1.4 Loan Classification**

Loan classification 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 as per the 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. In the context of Nepal, as per guidelines of NRB, loans are classified into four categories namely Pass, Substandard, Doubtful and Loss.

#### **2.1.5 Performing Loans**

Performing loans are those loans that repay principle and interest timely to the bank from the cash flow it generates. In the context of Nepal, the loans classified as 'Pass' category is termed as performing loan.

#### **2.1.6 Past Due/Overdue**

An amount due under any credit facility is treated as past due or overdue when it has not been paid on the due date fixed by the bank.

### **2.1.7 Principles of Lending Loan and Advances**

The precautions to be taken by a banker, and the principles to be taken care of, while granting advances. By way of introduction, an attempt is being made in the following paragraphs to discuss the general principle to be borne in mind by a banker while granting advances (Shekher and Shekher, 1999:551).

- **Liquidity**

The term 'liquidity' implies the ability to produce cash on demand. A bank mainly utilizes its deposits for the purpose of granting advances. These deposits are repayable on demand or on the expiry of a specified period. In either case, the banker must be ready to meet these liabilities whenever necessary. The advances granted by the banker must be as liquid as possible.

- **Profitability**

Banks are essentially commercial venture. It is true that excessive and unjustifiable profits can only be at the cost of the customer, in so far as higher lending rates push up production costs, and in the ultimate analysis, adversely affects society in general. At the same time, the facts remains that while strong operation profits allow for full prudential provisioning high net profits allow for allocation to capital and reserves, which is essential for any bank to maintain its competitive viability and expand its lending operations. Also, the shareholders of a bank are entitled to reasonable dividend. All this indicates that it is that their lending operations are sufficiently profitable.

- **Safety and Security**

The banker should ensure that the borrower has the ability and will repay the advances as per agreement. The banker should carefully consider the margin of safety. If it is as unsecured advance, its repayment depends on the creditworthiness of the

borrower, and that of guarantor. The banker should consider the Charter, Capacity, and Capital (popularly known as 3 Cs) or Reliability, Responsibility, and Resources (popularly known as 3 Rs) of the borrower and the guarantor.

- **Purposes**

The banker has to carefully examine the purpose for which the advance has been applied and the purpose for which the advance is actually utilized. There is always the possibility that the advance, once granted, may be diverted for purposes other than that indicated by the borrower at the time of application. Thus, there should be proper analysis of purpose.

- **Social Responsibility**

While admitting that bankers are essentially commercial ventures, a bank should not forget that fact that it is not enough that only people of means are given bank finance. The identification of priority sectors for the purpose of extending bank credit should be considered as a positive development in the banking system, aimed at effectively discharging its responsibility towards society. At the same time, this social responsibility should not deter the banks from paying adequate attention to the qualitative aspects of lending. Social responsibility is, no doubt, highly exacting.

### **2.1.8 Non-Performing Assets/Loans in Nepalese Banking Sector:**

The NRB report shows the NPL to total gross loan 6.08% in 2008, 3.53% in 2009 and 2.39% in 2010 and 3.20% in 2011. The following are the non-performing loan to total gross loan status of individual commercial banks:

Table No: 2

## The Non-Performing to Total Gross Loan Status of Individual Banks:

Non Performing Loan Status of Commercial Banks												(Rs. in million)
Banks	Mid July											
	2008			2009			2010			2011		
	Total		NPL	Total		NPL	Total		NPL	Total		NPL
	Gross		Total	Gross		Total	Gross		Total	Gross		Total
Loan		Gross	Loan		Gross	Loan		Gross	Loan		Gross	
	NPL	Loan	NPL	NPL	Loan	NPL	NPL	Loan	NPL	NPL	Loan	NPL
NBL	15,770.70	1,410.80	8.95	19,482.25	1,151.40	5.91	25,086.80	573.20	2.28	26,709.90	1,410.73	5.28
RBBL	27,494.60	5,951.80	21.65	31,606.96	4,955.97	15.68	35,692.51	4,085.02	11.45	36,866.10	4,024.64	10.92
NABIL	21,769.80	171.40	0.79	27,589.93	220.72	0.80	33,030.93	45.58	0.14	38,922.74	689.85	1.77
NIBL	27,529.30	309.40	1.12	36,827.16	301.98	0.82	40,948.44	189.82	0.46	41,887.69	245.63	0.59
SCBNL	13,964.40	128.70	0.92	13,679.76	90.29	0.66	16,176.65	87.17	0.54	18,662.48	115.80	0.62
HBL	20,233.90	475.80	2.35	25,519.14	551.21	2.16	29,123.76	920.29	3.16	32,968.27	1,293.38	3.92
NSBIBL	12,742.60	464.90	3.65	15,131.75	305.66	2.02	18,023.36	264.94	1.47	21,718.79	245.53	1.13
NBBL	9,469.60	2,945.30	31.10	7,025.65	1,355.95	19.30	9,119.03	161.50	1.77	10,237.46	1,963.56	19.18
EBL	18,836.40	121.00	0.64	24,469.56	117.45	0.48	28,156.40	43.71	0.16	31,661.84	108.40	0.34
BOK	12,747.80	223.80	1.76	14,945.72	189.81	1.27	17,113.33	202.08	1.18	17,956.95	326.33	1.82
NCCBL	5,281.00	864.00	16.36	7,183.68	196.83	2.74	8,387.77	227.72	2.71	9,229.80	363.40	3.94
NICBL	11,465.46	98.30	0.86	13,679.39	123.11	0.90	12,929.30	72.40	0.56	15,165.52	90.36	0.60
LBL	5,367.40	798.20	14.87	5,681.39	514.73	9.06	5,272.30	245.87	4.66	6,213.15	59.73	0.96
MBL	8,969.80	92.90	1.04	12,467.19	342.85	2.75	14,972.07	266.27	1.78	14,732.06	660.73	4.48
KBL	11,530.80	156.00	1.35	14,593.57	62.75	0.43	14,938.51	60.14	0.40	14,926.38	167.90	1.12
LBL	9,794.40	12.70	0.13	13,463.35	6.73	0.05	14,736.41	17.73	0.12	15,389.51	138.84	0.90
SBL	9,481.20	57.00	0.60	13,330.80	59.99	0.45	16,895.41	70.57	0.42	18,647.20	109.57	0.59
ADBL	36,585.40	4,256.20	11.63	32,566.53	2,875.62	8.83	39,375.27	3,235.90	8.22	40,389.35	3,491.50	8.64
GBL	5,134.07	-	-	9,063.09	8.52	0.09	12,163.64	74.47	0.61	12,779.18	321.78	2.52
CBIL	4,798.30	-	-	8,128.11	-	-	10,924.88	4.37	0.04	12,514.23	146.18	1.17
PCBL	5,156.00	-	-	9,732.59	-	-	14,102.43	29.97	0.21	17,083.90	81.19	0.48
BOANL	2,755.30	-	-	7,635.76	0.76	0.01	11,229.90	11.56	0.10	11,873.20	76.62	0.65
SBL	4,057.69	-	-	8,963.62	13.89	0.15	12,235.68	163.60	1.34	12,434.38	427.64	3.44
DCBL	3,692.54	79.80	2.16	6,353.98	102.93	1.62	7,500.48	89.53	1.19	9,043.46	148.55	1.64
NMBBL	2,009.90	30.50	1.52	5,194.21	25.45	0.49	7,931.13	55.83	0.70	11,343.09	30.16	0.27
KBL				-			12,486.12	24.10	0.19	13,437.00	133.60	0.99
JBNL				-			608.33	-		3,584.31		-
MBNL										4,816.46		-
CTBNL										2,486.29		-
CBL										3,155.16		-
CCBL										1,187.30		-
Total	306,638.36	18,648.50	6.08	384,315.14	13,574.60	3.53	469,160.84	11,223.34	2.39	528,023.15	16,871.60	3.20

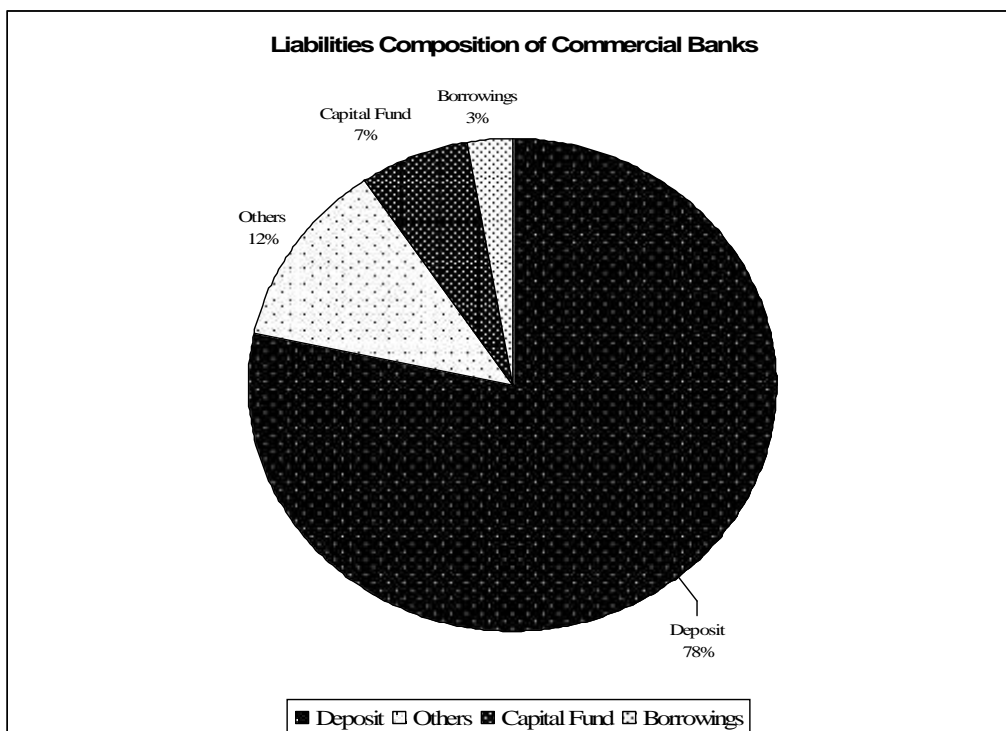
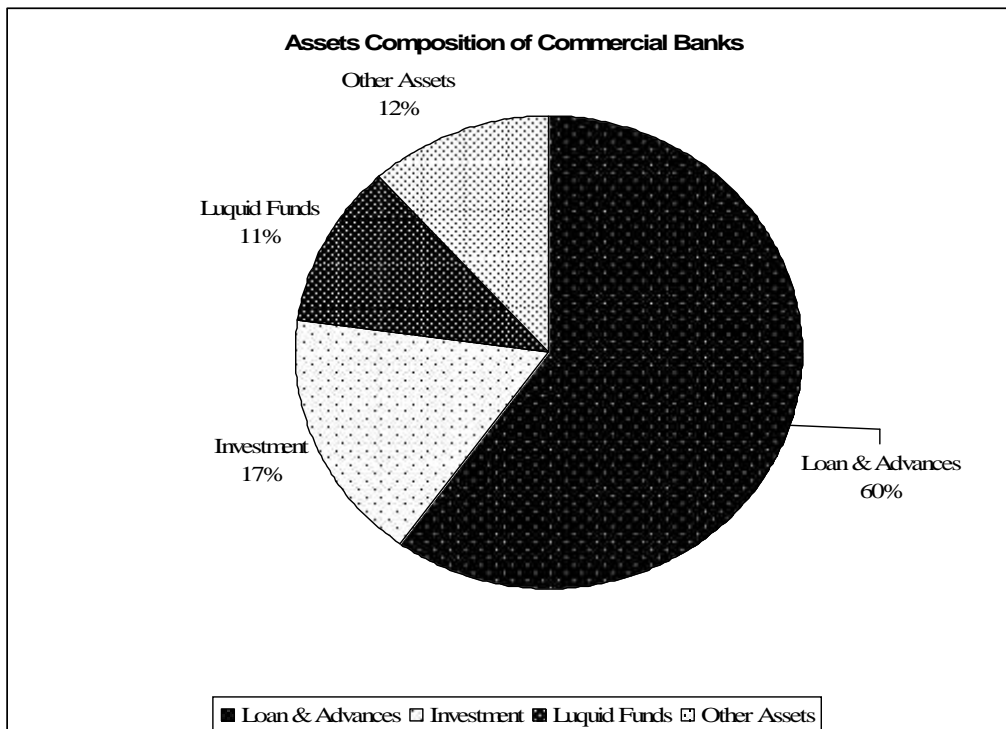
(source: Nepal Rastra Bank, Banking and Financial Statistics, Mid-July 2011, No.57,p1.6)

### **2.1.9 Highlight on Performance of Nepalese Commercial Bank**

➤ The number of commercial bank branches operating in the country reached to 1245 in Mid-July 2011. Among the total bank branches, 50.5 percent bank branches are concentrated in the central region followed by Western 18.0 percent, Eastern 17.3 Mid Western 8.0 percent and Far Western 6.0 percent respectively. Entry of new banks in financial system along with increased in the business, the total assets i.e. sources of fund of commercial banks increased by 11.6 percent compared to decrement by 3.0 percent in the previous year. By the end of this fiscal year, the total assets of commercial banking sector reached to Rs.878,364 million from Rs 787,301 million in the last period.

➤ The share of loans and advances to total assets remained 60.1 percent in Mid - July 2011. Similarly, share of investment and liquid funds to total assets registered 17.0 percent and 11.2 percent respectively. The composition of liabilities of commercial banks shows that, the deposit has occupied the dominant share of 78.3 percent followed by others 12.2 percent capital fund 6.7 percent and Borrowings 2.8 percent in the Mid - July 2011.

**Figure No.1**



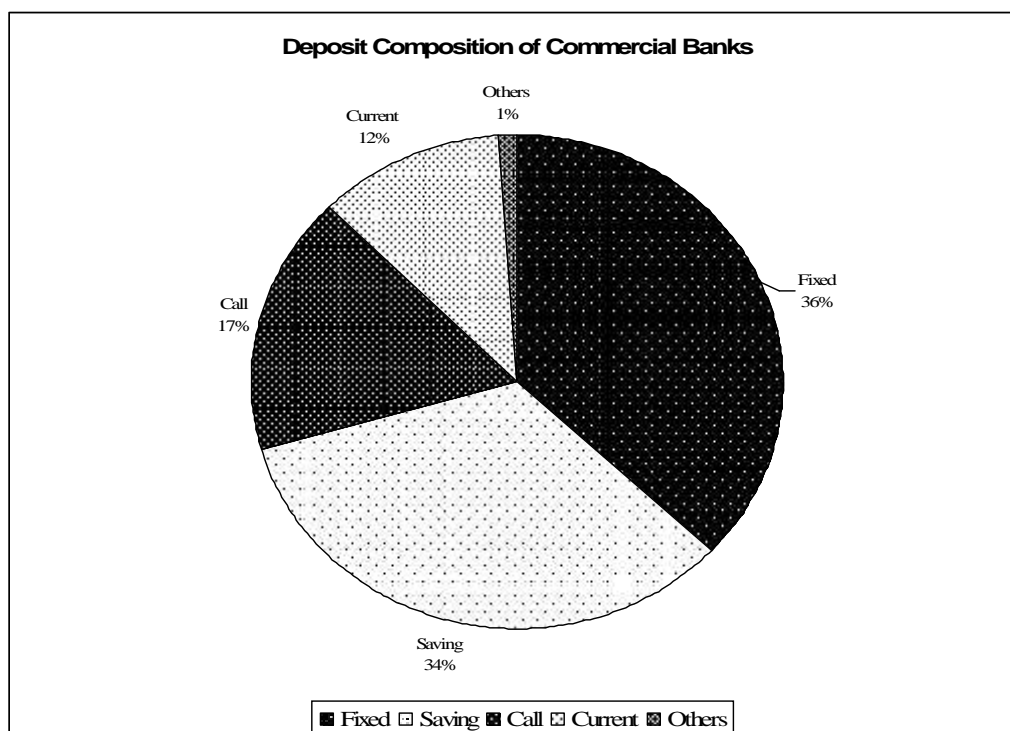
➤ By the end of Mid - July 2011, the total outstanding amount of loans and advances including Bills Purchase and Loan against Collected Bills of commercial banks reached to Rs. 528,023 million. It was Rs. 469,378 million in Mid - July 2010.



The total investment including share & other investment of commercial banks in Mid - July 2011 increased by 11.6 percent and remained to Rs. 149,557 million from Rs. 134,041 million in Mid – July 2010. Similarly liquid fund decreased by 4.6 percent and amounted to Rs. 98,072 million in Mid – July.

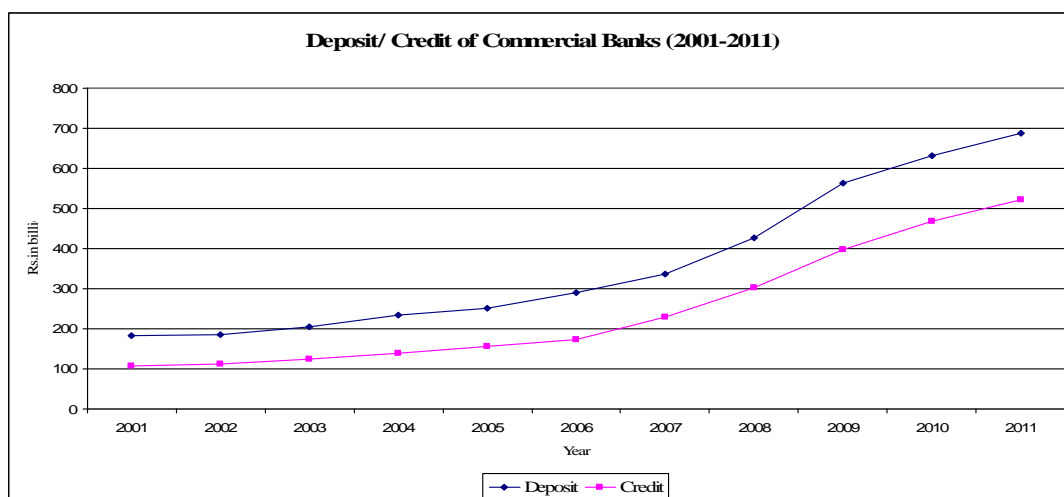
➤ In the Mid - July 2011, total deposit of commercial bank increased by 9.0 percent compare to 11.9 percent growth in the Mid - July 2010. As of Mid - July 2011, it reached to Rs. 687,588 million from Rs 630,881 million in the Mid - July 2010. Among the component of deposit, current deposit decreased by 2.0 percent compared to 12.5 percent increment in last year. Similarly, saving deposit decreased by 2.8 percent and fixed deposit increased by 26.8 percent .The fixed deposit comprises the major share in total deposit followed by saving deposit, call deposit and current deposit. As of Mid - July 2011, the proportion of fixed, saving, and call & current deposits are 36.9 percent, 33.6 percent, 17.0 and 11.5 percent respectively.

**Figure No. 2**



➤ In the Mid - July 2011, the borrowing increased by 25.6 percent compared to 8.0 percent in the previous year. By the end of Mid – July 2011, it reached to Rs. 24,853 million from Rs. 19,784 million in the Mid -July 2010. Capital fund of commercial banks increased by 45.0 percent compared to previous year and reached to Rs. 59,064 million in Mid - July 2011. It was Rs. 40,720 million in Mid - July 2010. Out of the Rs. 528,023 million outstanding sector wise credits in Mid - July 2011, the largest proportion of the loans and advances is occupied by manufacturing sector. The share of this sector is 21.7 percent followed by wholesale & retailers 20.8 percent, other sector 12.7 percent, finance, insurance & real estate by 11.3 percent and construction 9.8 percent. Similarly, transportation, communication & public services comprise 4.7 percent, consumable loan by 6.2 percent, other service industries by 4.3 percent and agriculture by 2.4 percent in the same period. The outstanding of deprived sector credit of commercial banks in the Mid - July 2011 reached to Rs. 19,387 million. The ratio of deprived sector credit to total outstanding of product wise loans and advances stood at 3.67 percent in the current period. Last year it was 3.56 percent. In Mid - July 2011, the credit to deposit ratio of the commercial banks reached to 76.8 percent compared to 74.0 percent in Mid - July 2010.

**Figure No.3**



- The non-performing loan of commercial banks increased to 3.2 percent in Mid – July 2011 from 2.39 percent in the Mid - July 2010. The total amount of NPA in Mid –July 2011reached to Rs. 16,872 million from Rs. 11,223 million in the Mid - July 2010.
  
- Due to improvement, the aggregate capital funds to total risk weighted assets ratio of the banking system have been positive after 2007. Some improvement in capital funds of two big banks namely RBB and NBL converted the total capital base of the banking system to be positive. Although the aggregate capital funds and capital funds to total risk weighted assets ratio is positive the capital fund and capital fund to total risk weighted assets ratio of RBB and NBL is still negative. The capital adequacy ratio stood at 377.06 percent in mid-July 2010 and 464.49 percent in mid-July 2011 in aggregate.

**Table No: 3**

**Soundless Indicators of Commercial Banking System:**

Indicators	Mid-July				
	2007	2008	2009	2010	2011
Profitability (Rs. In Million)	8,797.9	11,911.7	4,337.1	15,363	15,598.5
NPL as percentage of Total Loan	10.56	6.08	3.53	2.39	3.2
<b>Total Capital Fund as Percentage of RWA</b>	(1.71)	235	241.74	377.06	464.49

- With improvement, the level of non-performing loans and advances is below the benchmark (5%) in Mid-July 2011. The aggregate nonperforming loan, which was Rs. 24215.85 in mid-July 2007, reached to 11223.34 in mid-July 2010 and Rs. 16871.58 in mid-July 2011. The aggregate non-performing loan as percent of total loan was 10.56 percent in mid-July 2007 and decreased to 2.39 in mid-July 2010 and

increased to 3.20 in mid- July 2011. (Source: Nepal Rastra Bank, *Banking and Financial Statistics, Mid-July 2006, No.57*)

"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 donot have proper system in place for management of market risks. The people 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. It would be prudent to advise NRB to strictly implement its recently introduced directive so that other banks avert the fate of NBL, RBB, & NIDC."( Dahal & Dahal, 2002, p. 21)

"In Nepal, the success of financial reforms so far indicates that the regulation system is still weak, and that further prudential rules and an effective regulatory framework are needed. In that regard, the introduction of CAMEL could be a major positive approach, especially in view of the effectiveness of CAMEL in Malaysia. The central bank employs the CAMEL framework to evaluate the overall financial and general condition of a banking institution. CAMEL is the acronym for "capital adequacy, assets quality, management quality, earnings performance, liquidity position. On the question of approach to supervision, the central bank employs off-site surveillance and on-site examinations." (*Banking and insurance services liberalization and development in Bangladesh, Nepal and Malaysia: A comparative analysis by Dilli Raj Khanal*)

The acronym “CAMEL” refers to the five components of a bank’s condition that are assessed: Capital adequacy, Assets Quality, Management, Earnings, and liquidity. These aspects reflect the variation in bank assets risk and leverage, because they capture the market, credit operational, and liquidity risk faced by banks. CAMEL system are used for all sized of banking institutions.

### **CAMEL Ratios** (Srivinas, 1997)

#### **Capital Adequacy Ratios**

) *Dependency Ratio:* Donations and grants/Total performing assets Shows dependency of institution on outside funding for operations.

) *Capital to Assets Ratio:* Capital/Total performing assets Shows overall capital sufficiency

#### **Assets Quality**

) *Debt to Assets Ratio:* Total liabilities/Total performing assets Indicates provisioning requirements on loan portfolio for current period.

) *Loan Loss Provision Ratio:* Loan Loss provision/average performing assets Indicates provisioning requirements on loan portfolio for current period.

) *Portfolio in Arrears:* Balance of loans in arrears/ value of loans outstanding Measures amount of default in portfolio.

) *Loan Loss Ratio:* Amount written off/Average loans outstanding Indicates extent of un-collectible loans over the last period. Any loan more than one year past due is considered un-collectible.

) *Reserve Ratio:* Loan loss reserve/Value of loans outstanding administrative expenses + provisions. Indicates adequacy of reserves in relation to portfolio.

#### **Management**

) *Number of Active Borrowers per Credit Officer:* % of active borrowers/ % of loans officers Indicates performance of loan officer and efficiency of methodology.

) *Number of Active Borrowers per Management Staff:* % of active borrowers/% of management personnel (excluding loan officers) Indicates performance of manager and efficiency of methodology.

) *Portfolio per Credit Officer:* Indicates potential financial productivity of loan officer. Value of loans outstanding/ % of loan officers.

) *Cost per unit of Money Lent:* Operating costs/total amount disbursed Indicates efficiency in distributing loans(in monetary terms)

) *Cost per Loan Made:* Operating costs/% of loans made. Indicates efficiency in disbursing loans.

#### **Earnings**

) *Return on Performing Assets:* Financial income/average performing assets Indicates financial productivity of credit services and investments activities.

) *Return on Average total assets:* Financial income/ average total assets Parallels the Return on Performing Assets, yet includes non performing assets.

) <i>Financial Cost Ratio:</i> Financial cost/average performing assets	Shows cost of funds. Affected by mix of net worth, soft loans and hard loans.
) <i>Administrative Cost Ratio:</i> Administrative expenses/Average performing Assets	Key indicator of efficiency of lending operations
) <i>Operating Self-Sufficiency Ratio:</i> Financial Income/Financial and administrative expenses + Provisions	Shows ability of institutions to cover costs of operations (financial and non-financial expenses) with internally generated income.
) <i>Financial Self-Sufficiency Ratio:</i> Financial income/ financial and administrative expenses + provisions + (Imputed cost of capital including grants and donations)	Shows ability of institution to be fully sustainable in the long-run by covering all operating costs and manufacturing value of capital.

**Liquidity**

) *Current Ratio:* For a six month period - Shows ability of institutions to meet projected cash inflow/ projected cash outflow projected near term obligations.  
[http://www.arts.uwaterloo.ca/~vecon/download/fallavier/mfi\\_vnm.pdf](http://www.arts.uwaterloo.ca/~vecon/download/fallavier/mfi_vnm.pdf)

"CAMELS stand for capital adequacy, assets quality, management, earnings, liquidity, sensitivity to market risk and was developed by us regulators. Variants of this framework are extensively used by banking supervisors in a number of countries to assess the health of individual banks." (<http://www.bankofengland.co.uk/publications/fsr/2000/fsr09art3.pdf>)

They stated that loans and advances dominate the assets side of the balance sheet of any bank and earnings from such loans and advances occupy a major source 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 benefits to 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 loses its scarce capital if loan is given to project which is not viable.

As per their view, there is risk inherent in every loan and efforts should be made to have proper control in every step of loan management. They further suggested that 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 the 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. Hence there is practice of showing net loan (Total Loan – Loan Loss Provision) in financial statements. The banks should comply with the statutory regulation relating to loan classification and provisioning."(Ibid, p.115)

Mr. Shakespeare Vaidya in his book "Project Failures and Sickness in Nepal, Challenges to Investors for Investment Risk Management" has discussed about the early warning system for investment risk management. In his book, the author has also envisaged number of examples about crisis created by the banks in the world. As per his view, banking sector cannot ignore any sector of the economy on the basis of its good and bad and there is vital role of financial institution in regards to bad accounts.

"Nepalese financial institution has 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 cannot be or have not been recovered. The management owned banks suffer acutely from this, as they have to lend to various priority sectors, at the whims of their political masters and then forget everything about the money forever." (Vaidya, 1998, p. 20-21)

With the growing number of financial institutions, market economy, economic liberalization etc industrial sickness in Nepal has a phenomenal proportion 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 bank's 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 cannot 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.

"Banks and financial institutions 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 institutions 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 has 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 and detail before go out of hand."(Ibid, p.29)

Finally he concludes "In order to safeguard the banks form the financial crisis likely to be arise from the project failure and sick units, that is, non-performing loans, the government needs to do a number of things and fast. It must bring a broad rule for the poor financial institutions, transferring bad loans to bridge bank or loan recovery agencies, 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 loan, and recapitalize the banking system."(Ibid, p.54)

NRB issues various directives relating banking regulations and prudential norms. Among various directives issued in 2001 directive no.2 is relating to loan classification and provisioning. With reference to the previous directives and to have more effective control mechanism for overall financial sector, NRB has issued consolidated new directive for all financial institution on July 2011.

## **"Directives Relating to Loan Classification and Provisioning (Directive No.2)"**

Effective FY 2067/68, banks shall classify outstanding loan and advances on the basis of aging of principal amount into the following 4 categories.

### **1. Classification of loans and advances**

#### **a) Pass**

Loans and advances whose principal amount are not past due and past due for a period up to 3 months shall be included in this category. These are classified and defined as **Performing Loans**.

#### **b) Substandard**

All loans and advances that are past due for a period of 3 months to 6 months shall be included in this category.

#### **c) Doubtful**

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

#### **d) Loss**

All loans and advances which are past due for a period of more that 1 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 falling in the category of Pass Loan are **Performing Loans** & Loans and Advances falling in the category of Sub-standard, Doubtful, Loss and Re-structuring/ Re-scheduling are classified and defined as **Non-Performing Loan**.

**Note:**

- a. If it is appropriate in the views of the bank management, there is not restriction in classifying the loan and advances from low risk category to high risk category. For instance, loans falling under substandard may be classified into doubtful or loss and loans falling under doubtful may be classified into loss category.
- b. The 'term' loan and advances also includes Bill purchased and Discounted.

**2. Additional arrangement in respect of pass loan**

Following Loans and advances can be categorized as “**Pass**”:

- ) Loan and advances fully secured by gold, silver,
- ) Loan and advances fully secured by fixed deposit receipts
- ) Loan and advances fully secured by Nepal Government Securities and NRB Bonds.
  - o However, where collateral of fixed deposit receipt or Nepal Government securities or NRB Bonds is placed as security against loans for other purposes, such loan has to be classified on the basis of ageing.
  - o Upon renewal of Loan and advances disbursed under Overdraft category with validity period only up to one year should be categorized as **Pass**. If interest of Overdraft Loan and advances is overdue and irregular such loan should be categorized according to interest overdue period.

### **3. Additional arrangement in respect of 'Loss' Loan**

Even if the loan is past due or not past due, loans having any or all of the following discrepancies shall be classified as 'Loss'

- a) Insufficient security/collateral.
- b) The borrower has been declared bankrupt.
- c) The borrower is absconding or cannot be found.
- d) Purchased or Discounted Bills and Letter of Credit, Guarantee and Other Liabilities converted to Force Loan are not realized within 90 days from the due date.
- e) Misuse of loan, i.e. credit not been 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.
- h) If project/ business are in non-operative condition or closed.
- i) Credit card loan not write off within 90 days from its expiry date.
- j) If Trust Receipt Loan has crossed expiry date.

### **4. Additional arrangement in respect of Term Loan**

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

## **5. Additional arrangements in respect of Loan against security of Gold/Silver**

The Licensed A, B & C classed Banks and Financial Institutions have to fulfill below mentioned terms & conditions before disbursement of Loans and Advances against security of Gold/Silver.

- ) Arrangements to provide Loans and Advances against security of Gold/Silver should be mentioned in Credit Policy.
- ) Arrangements of Security, valuation of security, vault insurance and other should be done before doing transaction of Gold/Silver Loan.
- ) Financial Institutions must conduct yearly analysis/study of Gold/Silver Loan and its profitability and such study should be annually inspected by the BOD.

## **6. Principle and interest should not be recovered by overdrawing in excess of the Overdraft Limit.**

## **7. Arrangement for Grace Period**

## **8. Rescheduling and Restructuring of Loan**

- a) In respect of loans and advances falling under the category of substandard, doubtful or loss, banks may reschedule or restructure such loans only upon receipt of a written plan of action from the borrower citing the following reason:
  - i. Evidence for adequate collateral and documentation regarding loans.
  - ii. Financial institutions have confidence that loans can be recovered after restructuring and rescheduling.
  - iii. Minimum of 25% of overdue interest must be recovered before the date of restructuring and rescheduling of loan.

*Note:* Rescheduling means to extend the duration of loan payment period. Restructuring means to change the loan type and terms and condition including change in loan payment period

## **8. Loan Loss Provisioning**

- a. 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:

<b>Classification of Loan</b>	<b>Loan Loss Provision</b>
Pass	1 Percent
Substandard	25 Percent
Doubtful	50 Percent
Loss/ Loan disbursed to Blacklisted person/firm/company/organization	100 Percent

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 of NRB, the whole amount of such additional provisioning may be included in General Loan Loss Provision under the supplementary capital.

- b. Loan loss provisioning to rescheduled or restructured loans should be as follows:
  - i. For rescheduled/ restructured loan, loan loss provision should be at least 12.5 percent.

- ii. If priority sector or deprived sector loan which is insured or guaranteed priority sector credit has been rescheduled or restructured, provision should be only 25 percent of above point (i) for such loans.(i.e. 25% of 12.50%)
  - iii. If interest and principle of rescheduled/restructured loans have been served regularly since last two years, such loans can be converted into 'pass' loan.
- c. Priority sector or deprived sector loans which are not insured should be provisioned as per clause no 'a'.
- d. 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 loan shall be classified as per above and where the loans fall under the category of pass, substandard and doubtful, in addition to the normal loan loss provision applicable for the category, an additional provision by 20 percentage 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%, 41%, and 70% for pass, substandard and doubtful category respectively.

**Table No: 4**  
**Timetable of Loan Classification**

<b>Classification</b>	<b>For F/Y 2058/59 2001/02</b>	<b>For F/Y 2059/60 2002/03</b>	<b>For F/Y2060/61 2003/04</b>	<b>For F/Y2067/68 2011/12</b>
<b>Pass</b>	Loans not past due and past due up to 3 months.	Loans not past due and past due up to 3 months.	Loans not past due and past due up to 3 months.	Loans not past due and past due up to 3 months.
<b>Sub-Standard</b>	Loans and advances past due for a	Loans and advances past due for a	Loans and advances past due for a period	Loans and advances past due for a period

	period of over 3 months to 1 year.	period of over 3 months to 1 year.	of over 3 months to 9 months.	of over 3 months to 6 months.
<b>Doubtful</b>	Loans and advances past due for a period of over 1 year to 3 year.	Loans and advances past due for a period of over 1 year to 3 year.	Loans and advances past due for a period of over 9 months to 2 years.	Loans and advances past due for a period of over 6 months to 1 year.
<b>Loss</b>	Loans and advances past due for a period of over 3 years.	Loans and advances past due for a period of over 3 years.	Loans and advances past due for a period of over 2 years.	Loans and advances past due for a period of over 1 year.

The respective overdue periods of Pass, Sub-standard and Doubtful loans shall be considered for higher classification from the next day of date of expiry of the overdue period provided for each class. (Source: *Unified Directives 2068, Directives No.2, 2068, p35-46*)



## **2.2 Review of Related Studies**

### **2.2.1 Review of Related Articles and Journals**

#### **"Non-Performing Assets Management"**

In the article by Yogendra Regmi, (2062,P.75) titled "Non-Performing Assets Management", the writer stated about the management of NPAs in the commercial banks. He writes, the NPAs include the non-performing loan, non-banking assets, remaining non-performing loan, suspended interest and unutilized assets. The increasing NPAs are the emerging problem in commercial banks, which is the main factor of failure of banks.

He said, NPAs caused by investment of assets in non-productive sectors, lack of future prediction, lack of proper supervision, monitor, control, lack of information and failure of recovery of loan and their interest on time. He also added the low quality of collateral of loans, failure of projects, and lack of appropriate rules and regulations to punish the bad loan takers.

He added that increasing NPAs directly affects to the banks, investors and human resources. Not only that but also it affects the customer, economy of country, and business activities. Increasing NPA has two types of impact on banks: internal impact and external impact. In internal, it affects directly on profitability and human resources and in external, it affects to customers, investors, management and country's economy.

He concludes that it is like a cancer of banks. Thus, it is necessary to control this cancer on time: otherwise it becomes a big issue for bankruptcy. NPAs have to be micro analyzed to protect the banks, investors, customers, human resources and country's economy. For that a clear 'Road Map' is required. To success the laws and policies, all the stakeholders should take responsibilities.

### **"Challenges of Banking Sector in Nepal"**

#### High Volume of Non Performing Loans (NPL)

One of the universally accepted indicators of the health of the banking sector of a country is the level of NPL. Given this fact, Nepalese banks seem to be in critical position due to having a higher level of NPL. Average NPL level of banking industry is 13.54 percent, which is couple of times over the internationally accepted level of 5 percent. Although NPL of the banking sector has been declining gradually, it still leaves a lot to be desired. High level of NPL is not a matter of concern only for the public sector banks i.e. Nepal Rastra Bank (NBL), Rastriya Banijya Bank Limited (RBB) and Agricultural Development Bank (ADB/N), it is equally alarming for some of the private sector banks e.g. Lumbini Bank, Nepal Bangladesh Bank, and Nepal Credit and Commerce Bank. Out of the 19 commercial banks, NPL of eight commercial banks is more than the international benchmark.

The quality of loan has a direct bearing on the bank's financial health. The banks are required to develop reserves and provision in accordance to the quality of loans. A rapidly deteriorating loan portfolio is a huge drain on the bank's profitability and subsequently on the capital adequacy. This has the potential to erode the bank's capital in no time. Thus, the quality of loan is arguably the key determinant of bank's

financial health. Among other factors, it was the quality of loan portfolio of two of the largest Nepalese banks which required the supervisory intervention.

Poor corporate governance and risk management practices are the key reasons for high level of NPL in our banking system. Other causes are economic slowdown, legal hurdles in recovery and poor quality of credit information. Management practices in many banks are still very weak, particularly in the areas of credit analysis, credit administration and risk management and internal control system.

Hence, the management of NPL is a great challenge for the Nepalese banking sector. It is high time that we start strengthening and reshaping the reform process. It is a must not only to capitalize on the achieved robustness of the banking industry, but also to integrate it with the global economy deep into the twenty first century.

Finally he concludes "banking sector in Nepal has expanded substantially in the last one and a half decade, following the financial liberalization policy. People now have several choices in pursuing their banking activities. This sector has gradually embraced modern technologies to deliver value added product and services to its clientele. However, the expansion and adoption of new technologies has brought new types of risk to the fore, the management of which is crucial for the bank and the banking industry in the long run.

Nepalese banking industry is faced with variety of serious challenges the prominent being the management of large volume of non performing loans and the development of corporate values and ethics among the stakeholders in the banking industry. There

is already a stiff competition between the market players and the possibility of entry of new players is going to further add to the pressure. So, in such a scenario, stakeholders including NRB, has to be vigilant that banks do not compromise on the prudent risk management practices in order to survive the competition, which might ultimately lead to the bank failure. At the same time, NRB has to keep tight vigil in the banking industry so as to be able to take corrective measures in creating and maintaining a stable and a sound banking industry." (Ravindra P Pandey, 2064, p.299-304)

### **"Competition in the Banking Industry in Nepal"**

Dr. Bijay KC in his article titled "Competition in the Banking Industry in Nepal" which was published in Arunodaya, Baishak 2064 stated that- Banking industry plays a dominant role in the financial system of the country. In July 2005 the total assets of the financial sector of the country was Rs. 474 billion and total assets of commercial banks accounted for about 87 percent of this. In the same way in July 2005 the shares of commercial banks were 89 percent of the total amount of deposit, 78 percent of the total credit, 90 percent of the total investment and 84 percent of the total liquid funds. Between 1998 and 2006 loans and advances in the banking industry increased at the rate of 12.62 percent per annum. In mid-July 2006, loans and advances in the banking industry way Rs. 173383 million. Out of the total loans and advances in mid-July 2006, lending to the private sector accounted for more than 95 percent. Interest accrued also increased from Rs. 10618.6 million to Rs. 36718 million between mid-July 1998 to mid-July 2006 growing, on an average, at the rate of 21.68% annually. He concludes that," as often cited one of the reasons for non-performing loans is also collusion between the borrower and staff of financial institutions in loan approval. It is very much necessary to improve the governance of financial institutions and make

the staff involved in such collusion liable for the loss. Improvements are necessary not only at the middle level but also at the top level because the problem of non-performing loan is acute due to large borrowers"(Dr. Bijay KC, 2064, p.285-289.)

### **"Statement by the International Monetary Fund"**

#### **Progress since NDF (Nepal Development Forum) 2002** (Hisanobu Shishido,2004)

Nepal has made progress in a number of areas since the last NDF in 2002. Reform implementation was particularly strong in the financial sector, where a new Nepal Rastra Bank Act was adopted, new prudential regulations were promulgated, and external management teams were installed at the two large, financially troubled commercial banks. These teams embarked on intensive efforts to recover non-performing loans and reduce operating costs. Since the approval of the Poverty Reduction and Growth Facility (PRGF) arrangement, significant progress has been made in financial and public sector reforms. In the financial sector, steps were taken on three fronts —

improved loan recovery and banking environment (establishing the Debt Recovery Tribunal, issuing strengthened directives for blacklisting defaulters, and promulgating the Banking and Financial Institutions Ordinance),

- ) strengthening of the NRB (improving its organizational structure and reducing overstaffing), and
- ) restructuring of commercial and development banks (reducing nonperforming loans and overstaffing at commercial banks and designing restructuring plans for the major development banks).

**"The level of NPL"**(<http://www.suryasun.com/non-performing-loans-in-nepal.html>)

Going by statistics, the crucial issue of non-performing loans (NPL) ailing the financial sector in Nepal may appear to have been sorted out. The level of NPL, which stood at a whopping 60 per cent prior to the financial sector reforms in 2002 and hovered around 30 per cent in 2003, has come down to 14.22 per cent in 2006. But thereby hangs a story of massive write-off of loans and interest on loans. Nepal Bank Ltd has written off loans amounting to almost Rs 4 billion and an interest of around Rs 8 billion, points out Nepal Rasta Bank. According to the bank regulator, even Rashtriya Banijya Bank is planning to write off a total of Rs 12 billion loans. "But the problem is far from solved," avers Surender Man Pradhan, NRB executive director (Regulation), "as the NPL level remains far above the acceptable level of less than five per cent." Although the management teams have struggled to recover Rs 17 billion from medium and small-sized loans this year, the big fish have gone scot free.

## **A Study on the Performance of Non-Performing Assets (NPAs) of Indian Banking During Post Millennium Period**

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### **Abstract**

NPA is a virus affecting banking sector. It affects liquidity and profitability, in addition posing threat on quality of asset and survival of banks. NPA may be classified into Gross NPA and Net NPA. Gross NPA is the total of substandard advances, doubtful assets and loss assets. Net NPA is calculated by deducting the total of; (1) balance in interest suspense account, (2) DICGC/ECGC claims received and held for pending adjustment, (3) part payment received and kept in suspense account, and (4) total provisions held from the Gross NPA.

The economic progress of a nation and development of banking is invariably interrelated. The Banking sector is an indispensable financial service sector supporting development plans through channelizing funds for productive purpose, intermediating flow of funds from surplus to deficit units and supporting financial and economic policies of government. The importance of bank's stability in a developing economy is noteworthy as any distress affects the development plans (Rajaraman and Vasishtha, 2002) thereby the economic progress (Thiagarajan, et al, 2011). Like any other business, success of banking is assessed based on profit and quality of asset it possesses. Even though bank serves social objective through its priority sector lending, mass branch networks and employment generation, maintaining asset quality and profitability is critical for banks survival and growth. A major threat to banking sector is prevalence of Non-Performing Assets (NPAs). NPA represent bad loans, the borrowers of which failed to satisfy their repayment obligations. Michael et al (2006) emphasized that NPA in loan portfolio affect operational efficiency which in turn affects profitability, liquidity and solvency position of banks. Batra, S (2003) noted that in addition to the influence on profitability, liquidity and competitive functioning, NPA also affect the psychology of bankers in respect of their disposition of funds towards credit delivery and credit expansion. NPA generate a vicious effect on banking survival and growth, and if not managed properly leads to banking failures. Many researches including Chijoriga, MM (2000) and Dash et al (2010) showed the relationship bank failures and higher NPA worldwide.

#### Causes of NPA

Various reasons can be cited for an account becoming NPA. An asset leads to NPA when the borrower fails to repay the interest and/or principal on agreed terms. The

reasons for NPA are classified differently; into systematic and situational causes (Istrate et al 2007) into overhand component and incremental component (Poongavanam, S. 2000; Kumar, BS. 2005), into internal and external factors (Misra and Dhal. 2011;

Muniappan. 2002), into random and non-random factors (Biswas and Deb, 2005) based on its effects (Islam, et al. 2005) and into bank-specific business and institutional environment factors (Boudriga et al, 2009). The reasons classified into internal factors and external factors are more common in literatures.

With regard to the reasons for NPA, Reddy, PK (2002) opined that the problem of NPA is not mainly because of lack of strict prudential norms, but due to legal impediments, postponement of the problem by the banks to show higher returns and manipulation by the debtors using political influence. Dash et al (2010) briefed that macro-factors that includes real effective exchange rate and growth in real GDP affect the level of NPAs. With regard to the bank specific variables, the authors found that banks which charges relatively higher real interest rates and have a penchant for taking on risk tends to experience greater non-performing loans. Gopalakrishnan, TV (2005) classified the causes for NPA into political, economic, social and technological. The author opined that neglect of proper credit appraisal, lack of follow-up and supervision, recessional pressures in economy, change in government policies, infrastructural bottlenecks, and diversion of funds etc as the major cause for NPA. Aggarwal and Mittal (2012) pointed out that the major reasons for NPA includes improper selection of borrowers activities, weak credit appraisal system, industrial problems, inefficient management, slackness in credit management and monitoring, lack of proper follow-up, recessions and natural calamities and other uncertainties.



Espinoza, R and Prasad, A (2010) emphasized that financial system shocks emanate from firm specific factors (idiosyncratic shocks) and from macroeconomic imbalances (systemic shocks). Fainstein, G (2011) classified reasons for NPA into macroeconomic, banking sector and also microeconomic level variables. Gopalakrishnan, TV (2005) has classified the factors leading to NPA into political, economic, social and technological reasons. The economic causes are further classified in internal and external causes. In a similar study on NPA, Collins, NJ and Wanjau, K (2011) explained a direct relationship between interest rate and NPA. The study noted that interest rate spread affect performing assets in banks as it increases the cost of loans charged on the borrowers, regulations on interest rates have far reaching effects on assets nonperformance, for such regulations determine the interest rate spread in banks and also help mitigate moral hazards incidental to NPAs.

Some of the important reasons for NPA, mentioned in various literatures are summarized below:

- ) Willful defaults, siphoning of funds, fraud, disputes, management disputes, mismanagement, misappropriation of funds etc.,
- ) Lack of proper pre-appraisal and follow up.
- ) Improper selection of borrowers/activities.
- ) Inadequate working capital leading to operational issues. Under financing/untimely financing.
- ) Delay in completing the project.
- ) Non-compliance of sanction terms and conditions.
- ) Poor debt management by the borrower, leading to financial crisis.
- ) Excess capacities created on non-economic costs.

- ) In-ability of the corporate to raise capital through the issue of equity or other debt instrument from capital markets.
- ) Business failures.
- ) Failures to identify problems in advance.
- ) Diversion of funds for expansion\modernization\setting up new projects\ helping or promoting sister concerns.
- ) Deficiencies on the part of the banks viz. in credit appraisal, monitoring and follow-ups, delay in settlement of payments\ subsidiaries by government bodies etc.,
- ) Time involved in the legal process and realization of securities

### **Impact of NPA**

Batra, S (2003) mentioned that the most important business implication of the NPAs is that it leads to the credit risk management assuming priority over other aspects of bank's functioning. The bank's whole machinery would thus be pre-occupied with recovery procedures rather than concentrating on expanding business. RBI, through various circulars, stipulated guidelines to manage NPA. This view was supported by Yadav, MS (2011) and stated that higher NPA engage banking staff on NPA recovery measures that includes filing suits to recover loan amount instead of devoting time for planning to mobilization of funds. Thus NPA impact the performance and profitability of banks. The most notable impact of NPA is change in banker's sentiments which may hinder credit expansion to productive purpose. Banks may incline towards more risk-free investments to avoid and reduce riskiness, which is not conducive for the growth of economy.

Sethi, J and Bhatia, N (2007), clarified on implications of NPA accounts that Banks cannot credit income to their profit and loss account to the debit of loan account unless recovery thereof takes place. Interest or other charges already debited but not recovered have to be provided for and provision on the amount of gross NPAs also to be made. All the loan accounts of the borrower would be treated as NPA, if one account is NPA. Many authors emphasized the straddling impact of NPA and stressed its impact on loan growth. A higher NPA force banks to invest in risk-free investments, thus directly affect the flow of funds for productive purpose. (Tracey and Leon, 2011; Heid and Kruger, 2011 and O'Brien, 1992)

Bloem et al (2001) remarked that issues relating to NPA affect all sectors (in particular if parallel issues with defaulting trade credit is also considered). The most serious impact, however, is on the financial institutions, which tend to own large portfolios, indirectly; the customers of these financial intermediaries are also implicated; deposit holders, share holders and so forth. Add to this, NPA is not only affecting the banks and its intermediaries, it is having impact on the development of the nation as well. For a bank, NPA means unsettled loan, for which they have to incur financial losses. The cost for recovering NPA is as well considerable. There are banking failures on account of the mounting NPA since it is affecting the profitability and long run survival of the bank.

Karunakar, M et al (2008) explained that NPA results in deleterious impact on the return on assets. It happens in the following ways;

- ) The interest income of banks will fall and it is to be accounted only on receipt basis.
- ) Banks profitability is affected adversely because of the provision of doubtful debts and consequent write off as bad debts.

- ) Return on Investment (ROI) is reduced.
- ) The capital adequacy ratio is disturbed as NPAs are entering into the calculation.
- ) The cost of capital will go up.
- ) The assets and liability mismatch will widen.
- ) The economic value additions (EVA) by banks gets upset because EVA is equal to the net operating profit minus cost of capital, and
- ) It limits recycling of the funds.

### **Management of NPA**

Ranjan and Dhal (2003) opined that horizon of maturity of credit, better credit culture, favorable macroeconomic and business conditions lead to lowering of NPAs. In its annual report (2010) RBI noted that “management of NPA by banks remains an area of concern, particularly, due to the likelihood of deterioration of the quality of restructured advances”. The NPA of banks is an important criterion to assess the financial health of banking sector. It reflects the asset quality, credit risk and efficiency in the allocation of resources to the productive sectors. Ahmed, JU (2010) noted that since the reform regime there has been various initiatives to contain growth of NPA to improve the asset quality of the banking sector. Commercial banks have envisaged the greatest renovation in their operation with the introduction of new concepts like income recognition, prudential accounting norms and capital adequacy ratio etc which have placed them in new platform. The growing competition from internal and external constituents and sluggish growth in economy coupled with poor credit-deposit ratio, the large volume of NPAs in the balance sheet and lack of

automation and professionalization in the operation have been affecting the banking situation in the country.

Murinde, V and Yaseen, H (2004) on management of NPA made it clear that the traditional approaches to bank regulation are not conducive for management of NPA. These approaches emphasized the view that the existence of capital adequacy regulation plays a crucial role in the long-term financing and solvency position of banks, especially in helping the banks to avoid bankruptcies and their negative externalities on the financial system. In general, capital or net worth serves as a buffer against losses and hence failure. Rather than accommodating measures to combat the NPA issues, the traditional measures tried to protect the interests of deposits through maintaining adequate capital in liquid form. This has impacted the availability of funds for productive purpose, since banks were not able to lend it, rather forced to keep as reserves.

Strengthening financial systems has been one of the central issues facing emerging markets and developing economies. This is because sound financial systems serve as an important channel for achieving economic growth through the mobilization of financial savings, putting them to productive use and transforming various risks. Borbora, RR (2007) emphasized that the essential components of sound NPA management are i) quick identification of NPAs, ii) their containment at a minimum level and iii) ensuring minimum impact of NPAs on the financials. Panta, R (2007) noted that all kinds of lending involves three stages where discretion needs to be exercised (a) Evaluation and assessment of the proposal (b) Timely monitoring and evaluation and (c) Proper assessment of exit decision and modality.

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## **Interview/ Opinion Excerpts**

) Mr. Narandra Bhattarai, Chairman, Nepal Banker's Association, while giving interview with Business Age said, "The current economic slump has severely affected the banking sector. Particularly it has adversely affected the recovery of interest and principal of loan resulting in high non performing assets."( Bhattarai, 2003, p.74)

### **) "Rescuing NBL Project"**

Mr. J Craig McAllister, Ex-CEO Nepal Bank Limited, in his interview given to nepalnews.com which was published in Nepal Bank Limited Samachar stated that "the lack of success in overcoming the focused and aggressive opposition of a small group of willful defaulters to the repayment of their non-performing loans has been very disappointing. Approximately 40% of non-performing loans at NBL are held by about 15 groups of influential borrowers. One borrower accounts for 15% of our bad loans. The vast majority of NBL borrowers have been responsive to the plight of the bank and have honored their obligations to the extent they are able, sometimes with great personal difficulty. On the hand, this small group of willful defaulters has been steadfast in their refusal to negotiate in good faith. Willful defaulters can best be defined as blacklisted borrowers with the capacity to resolve obligations if they chose, but who are unwilling to do so. They utilize their influence to remain above the law and pose a grave danger to the recovery of Nepal Bank. They also represent a clear and continuing danger to other commercial banks and the Nepalese economy as a whole."(Mr. McAllister, 2062, p.7)

### **2.2.2 Review of Related Thesis**

**Ms. Anjana Shilpakar**(2003) in her thesis "A Study on Lending Practices of Finance Companies of Nepal" aimed to analyze performance of finance company regarding lending quantity and quality and its contribution in profitability. She concluded that loans and advances is one of the main sources of income of finance companies. This is what is also shown by the high degree positive correlation between total income and loans and advances. "Loan loss provision is like a by-product of loans and advances, thus, with loans and advances, loan loss provision does increase in synchronize." She recommended that loans and advances of finance companies are increasing and so are the non-performing loans and loan loss provision. Hence extra efforts should be enforced to control over NPL.

**Niva Shrestha** (2004) in her study "A Study on Non-Performing Loan and Loan and Loan Loss Provisioning of Commercial Banks" with reference to Nepal Bank Limited, NABIL Bank Limited and Standard Chartered Bank Nepal Limited, has made an attempt to analyze the various aspects of non-performing loan in the commercial banks. Her main objective of the study is to find out the proportion of non-performing loan, factors leading to accumulation of non-performing loan, relationship between loan and loan loss provision and impact of loan loss provision on profitability of the commercial bank.

She concludes," increasing non-performing loan is the serious problem of the banking sector in Nepal. Non-performing assets directly affects the income flow of the bank. It has been found that NBL has very high portion of non-performing loan resulting to higher portion of provisioning. Hence, even the bank has the highest investment in the

most income generating assets i.e. loan and advances, it is in loss. Even, the private sector bank like NABIL has higher non-performing loan and accordingly higher provision. NABIL's average proportion on non-performing loan during the study period is higher

than the acceptable. However, in recent two year NABIL's non-performing loan has shown significant decrement and accordingly provision has also decreased. Among the three banks SCBNL has the least non-performing loan and thus the least loan loss provision. From these indicators it can be said that SCBNL is the best among the three banks. However, SCBNL seems less oriented towards lending. Hence, the lower percentage of NPL and provisioning of SCBNL is not only due to proper lending function but also due to relatively lower investment in loans and advances." She also have concluded that," ineffective credit policy, political pressure to lend uncreditworthy borrowers, overvaluation of collateral are the major cause of mounting non-performing assets in government owned banks like NBL. Other factors leading to accumulation of NPAs are weak loan sanctioning process, ineffective credit monitoring and supervision system, economic slowdown, borrower's misconduct etc. In addition to this establishing recovery cell hiring Assets Management Company is also measure to resolve the problem of NPL".

She recommended that the factor which leads to non-performing loan are improper credit appraisal system, ineffective credit monitoring and supervision system etc. Beside 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 caution and realistic while granting loans and advances. After advancing loan there should be regular supervision and follow up for proper utilization of loan. She also recommended the banks to initiate training and development program for the



employees to make them efficient and professional in credit appraisal, monitoring and proper risk management. The regulation regarding loan classification and provisioning is stringent and tighter than the previous. Hence NRB should not only impose directives but also create supportive environment for the commercial banks. NRB is recommended to strength Credit Information Bureau so that banks can get required credit information about the borrowers on time. This help in reducing NPL.

**Shama Bhattaria (2004)** has stated in her research "Implementation of Directives Issued by Nepal Rastra Bank: A Comparative Study of Nepal SBI Bank Limited and Nepal Bangladesh Bank Limited" to analyze the various aspects of NRB directives such as capita adequacy and loan classification and loan provisioning. As per her view the process of continual review and classification of loans and advances enables banks to monitor the quality of loan portfolios and to take remedial action to counter deterioration of credit quality of their portfolios.

She concluded that 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. However, the true picture of the quality of the assets will be painted in the coming years. She recommends, "The banks should be very careful while analyzing the paying capacity of its credit clients. With longer period of past due, the bank will end up increasing its provisions which will keep the bottom line low if the banks are not careful."

**Dinesh Kumar Khadka(2004)** in his thesis titled "Non-Performing Assets of Nepalese Commercial Banks" with reference to Nabil Bank Ltd., Nepal SBI Bank

Ltd, Nepal Investment Bank, Nepal Bangladesh Bank and Bank of Kathmandu has examined the level of NPAs in total assets, total deposit and total lending. He showed the effects of non-performing assets on return on assets and return on equity of the referred banks.

He has pointed out the problems of commercial banks as "Escalating level of NPAs has been becoming great problem in banking business in the world. In this context Nepal can not be run off from such situation. The level of NPA in Nepalese banking business is very alarming. It is well known fact that the bank and financial institution in Nepal have been facing the problem of swelling non-performing assets and the issue is becoming more and more unmanageable day by day. He added from different financial reports, newspaper and news, it is understood that total NPA in Nepalese banking system is about 35 billion, while it is very worse in case of two largest commercial banks i.e. Rastriya Banijya Bank(RBB) and Nepal Bank Limited(NBL)."

Finally, he concludes that "the level of NPA in sampled Nepalese commercial bank is not so alarming. The situation is quite satisfactory. But the increasing trend remains continuing in the coming days, the situation will be unmanageable and alarming. The commercial banks could not give full attention towards supervising their lending and towards recovering their bad loans perfectly. Level of NPA has been increasing. The level of NPA of Nepal Bangladesh Bank Limited (NBBL), Nepal SBI Bank Limited (NSBIBL), and Bank of Kathmandu Limited (BOKL) seems very unsatisfactory. If the situation is not handled right now, it will be unmanageable and difficult.

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

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

**Arun Bhattra** (2005) in his thesis "A study on Non-Performing Assets and Non-Banking Assets of Commercial Banks" with reference to Nepal Bangladesh Bank Ltd, Nepal SBI Bank Ltd and Bank of Kathmandu Ltd has made an attempt to analyze the non-performing assets and non-banking assets. The main objective of his study is to identify the cause of NPA and its impact on the financial position of the banks. The researcher has also attempted to identify some strategies for the management of NPA Level in commercial banks.

In his study he summarizes that there is positive growth of operating profit maintained by all the referred banks but the growth of net profit is negative due to increase in loan loss provisioning. As the provisioning required as per NRB circular is much strict, major chunk of operating profit has been allocated for maintaining loan loss

provisioning. Non banking assets are created due to having NPA but it is not certain that NPA always creates non banking assets. He has summarized that the relationship of borrowers with top management is the major determining factor in lending. Since loan flotation is made without being choosy it results the high level of NPA in commercial banks. It is derived that follow up of over due loan and advances in commercial banks starts one month later after the maturity of the loan. It proves the poor loan recovery system in commercial banks. Similarly bad intension, weak monitoring, mismanagement are the most responsible factor for NPA growth.

He concluded that," profitability of the commercial banks has been affected due to increasing level of NPA. Bad intension, weak monitoring and mismanagement were found the major responsible factors of NPA growth."

Further he has recommended:

- ) Loans should only be disbursed on the basis of the business position, scope of viability and business need. The offered security should be assessed properly as on the distress situation if the retained security is good then the loan can be recovered.
- ) There should be strong follow up system in commercial banks for the recovery of due loans. Strict monitoring and control system should be there for the timely recovery of loans.
- ) There should be approach of portfolio management Lending should be done to the different sectors of economy so that if there is recession to the any specific sectors remaining sectors of the economy may function.
- ) Government should formulate strong legal system to support the loan recovery process of commercial bank.

J Effective Asset Management Company is required for the proper handling of the NPA of the banks.

**Kumar Pradhan**(2006), has conducted a research with a thesis entitled, " A Study on Non-Performing Assets of Commercial Banks in Nepal" with reference to Nepal Bank Limited, Rastriya Banijya Bank Limited, Nepal Bangladesh Bank Limited, Everest Bank Limited and Standard Chartered Bank Limited. The main objective of the study was to analyze the impact of non-performing assets in the performance of commercial bank by evaluating the proportion of non-performing loan and the level of NPAs in total assets, total deposits and total lending in the selected commercial banks. The objective was also to evaluate the relationship between loan and loan loss provision in the commercial banks.

After study he summarized that NBBL and EBL have the highest proportion of loan and advances to total assets of bank but SCBNL has relatively lower proportion of loan and advances during his study. RBB have the highest NPA is total loans and advances which

comes around 56.95% which is very higher ration than the acceptable standard of minimum 10%. The second highest NPA is 48.83% of NBL. From his study he summarizes that NBL has made higher provision for loan loss and SCBNL has also relatively higher loan loss provision to non-performing assets. Where as RBB, NBBL and EBL has moderate loan loss provision to NPA.

Mr. Pradhan concludes, "Improper credit policy and credit appraisal system, lack of supervision and monitoring, economic slowdown, overvaluation of collateral, borrower's misconduct, political pressure to lend for un-creditworthy parties, etc are the major causes of occurring NPAs. In recent years, not only the private sector's bank

(like NBBL, EBL and SCBNL) but also public sector's banks (RBB and NBL) are trying to maintain their loan and advances and reduce the NPAs." Finally, he recommends that RBB and NBL should take fast and proper action to recover the bad loans. The loan loss provision of RBB has decreased in year 2003 at lower level but the loans and advances are not decreasing. It is also recommended that the bank should not decrease the loan loss provision without decreasing the total loans and advances. Provision amount should be increased by RBB to cover the bad loan. Similarly, he recommends that the banks should take enough collateral, so that in case of default the banks should at least be able to recover the principle and interest amount. Proper financial analysis should be done before lending. Banks are advised to provide appropriate training regarding loan management, risk management, credit appraisal etc to the employees.

**Sandeep Karmacharya** (2008) in his study "A Study on Non-Performing Loan and Loan Loss Provisioning of Commercial Banks" with reference to Nepal Bank Limited, Machhapuchchhre Bank Limited and Nepal Credit and Commercial Bank has made an attempt to analyze the various aspects of non-performing loan in the commercial banks. His main objective of the study is to find out the proportion of non-performing loan, factors leading to accumulation of non-performing loan, relationship between loan and loan loss provision and impact of loan loss provision on profitability of the commercial bank.

He concludes," NCCBL and MBL have the highest proportion of the loans and advances in the total asset structure but NBL have relatively lower loan and advances in the total assets structure during the study period. It indicates the risk averse attitude

of the management of NBL. Same thing can be known on the basis of the loan and advances to total deposit ratio. There is higher proportion of non-performing loan in the total loans and advances of NBL, which comes around 46.73% on average, which is very much higher than the acceptable standard of 10%. Since higher provision has to be made for NPL, its loan loss provision is also significantly higher than other two banks. But we can see the decrease in the level of NPL to total loan and advances of NBL every year. Regarding NPL and LLP, NCCBL is moderate among the three and MBL has the least NPL and accordingly the least LLP. The average NPL of NCCBL is around 20.48% i.e. above the acceptable standard with average provisioning of around 13.12%. In the year 2006 there is a significant increase in the level of NPL of NCCBL. Hence, high amount of provisioning have to be made to cover the possible default situation resulting low return to the bank.

The restructuring and rescheduling process going on NBL have brought positive result to the bank. We can see that the net profit of NBL is in negative figure at the early years of study but we can see a significant rise in the net profit at the end of the study period. The high return on loan and advances of NBL is not due to the higher amount of investment in the form of loan and advances as we can see that the loan and advances of NBL is decreasing year by year and is at minimum at the end of the study period. It is simply because of successful effort made by bank to recover the bad debts. Similarly we can see that the net profit of MBL is in negative figure at the starting and positive in the end of the study period. But due to the default of some credit customer we can see that NCCBL have negative return on loans and advances in the year 2005 and 2006.

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

He recommended that the factor which leads to non-performing loan are improper credit appraisal system, ineffective credit monitoring and supervision system etc. Beside 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 caution and realistic while granting loans and advances. After advancing loan there should be regular supervision and follow up for proper utilization of loan. He also recommended the banks to initiate training and development program for the employees to make them efficient and professional in credit appraisal, monitoring and proper risk management. The regulation regarding loan classification and provisioning is stringent and tighter than the previous. Hence NRB should not only impose directives but also create supportive environment for the commercial banks. NRB is recommended to strength Credit Information Bureau so that banks can get required credit information about the borrowers on time. This help in reducing NPL.

**Maya Mallik** (2009) in his study "Credit Management of Nepalese Commercial Bank in Nepal" with reference to Nabil Bank Ltd (NABIL), Himalayan Bank Ltd (HBL) & Machhapuchchhre Bank Limited (MBL) has made an attempt to access the financial conditions of the selected commercial banks in terms of their creditability. The study



findings was with reference to data ranging from year 2001 to 2005. She has concluded that credit practices of NABIL was found relatively better in comparison of HBL and MBL. Credit efficiency of HBL and MBL was found better. Liquidity position of MBL was found relatively better in comparison to NABIL & HBL. Profitability ratio of NABIL bank was found better in comparison to HBL & MBL.

The credit practice of NABIL was found relatively better in comparison of HBL and MBL so HBL and MBL management was recommended for improvement in credit practices. Similarly the ratio of loan and advances and investment to total deposit and loan and advances to current assets ratio are found greater in NABIL. Similarly the ratio of non-performing loan to total loan and advances and loan loss provision to total loan and advances are found less in NABIL bank. Again the ratio of loan and advances to total deposit and loan and advances to total assets are found greater in MBL. Similarly the ratio of loans and advances to shareholder equity is found greater in HBL. Thus she has recommended maintaining proper level of portfolio so that profitability position could be maximized.

Similarly the percentage of non-interest bearing deposit to total deposit and interest suspense to total interest income are found high in HBL. It indicates that the HBL has used its funds in diversified sectors, successful to collect cheaper deposit and successful to manage loan and advances. Thus the bank management of both the banks NABIL and MBL are recommended to maintain proper level of balance.

Further researcher has recommended focusing into non financial performance indicators such as job satisfaction, service, quality performance, customer's satisfaction, stakeholders support, government rating, team work, human resource

development, human resource planning, human resource management, job designation, etc to improve existing credit management.

### **2.3 Research Gap**

Form the above study it has been found that non-performing loan followed by loan loss provision is one of the challenges faced by commercial banks in the present context. All Research materials relating to the subjected matter is collected from TU Central Library. Like wise Review of Related Thesis was done from TU Central Library. Earlier some researches were done in which matters relating to loan loss provisioning has been discussed. Later with the topic 'A Study on Non-Performing Loan and Loan Loss Provisioning of Commercial Banks with reference to Nepal Bank Limited, Nabil Bank Limited and Standard Chartered Bank limited ' was done in 2004. Similarly 'A Study on Non-Performing Loan and Loan Loss Provisioning of Commercial Banks with reference to Nepal Bank Limited, Rastriya Banijya Bank and Nabil Bank Limited' was done in 2006. Another research ' A Study on Non-Performing Assets of Commercial Banks in Nepal with reference to Nepal Bank Limited, Rastriya Banijya Bank, Nepal Bangladesh Bank, Everest Bank Limited and Standard Chartered Bank Limited' was done in 2006. Further research 'Non-Performing Loan and Loan Loss Provisioning with reference to Nepal Bank Limited, Machhapuchchhre Bank Limited and Nepal Credit and Commerce Bank Limited' was done in 2008. "Credit Management of Nepalese Commercial Bank in Nepal" with reference to Nabil Bank Ltd (NABIL), Himalayan Bank Ltd (HBL) & Machhapuchchhre Bank Limited (MBL) has made an attempt to access the financial conditions of the selected commercial banks in terms of their creditability. Like wise some other related thesis and articles have been reviewed which gives support to this

study. Hence the researcher had attempted to fill the research gap by taking reference of some of the commercial banks of Nepal.

This research will be able to deliver some of the present issues, latest information and data regarding loan classification and loan loss provisioning and their ratios, data and real picture of loan advances of Nepalese Commercial Banks with reference to Nepal Bank Limited, Machhapuchchhre Bank Limited, Nepal Credit and Commercial Bank Limited.

# **CHAPTER III**

## **RESEARCH METHODOLOGY**

### **3.1 Research Design**

This research is aimed at studying the non-performing loan and loan loss provisioning of commercial banks in Nepal. This research will follow analytical and descriptive research design. And it also analyzes the composition of trend of non-performing assets, loan recovery and profitability condition of commercial banks. The design for this research is made by collection of information from different sources by using various financial and statistical tools.

### **3.2 Population and Sample**

A list of licensed commercial banks was obtained from NRB. A total number of 31 commercial banks were licensed up to research period i.e., Mid July 2011. Commercial banks with head office in Kathmandu Valley were 25 in number. The commercial banks of Nepal can be categorized into two type namely public sector and private sector. Public commercial bank includes three banks- Nepal Bank Limited, Rastriya Banijya Bank & Agricultural Development Bank Limited. Private bank states other remaining 28 banks. Out of the total population following 3 banks are drawn as sample for this study:

1. Nepal Bank Limited
2. Machhapuchchhre Bank Limited
3. Nepal Credit & Commercial Bank Limited.

Nepal bank limited is selected from public commercial banks and Machhapuchchhre Bank Limited and Nepal Credit & Commercial Bank Limited are selected from private commercial banks. The table below clearly describes about total population, target population and sample drawn:

**Table No: 5**

**Total Population of Bank and Sample drawn:**

S.N.	Names	Operation Date (A.D.)	Head Office	Sample drawn
<b>1</b>	<b>Nepal Bank Limited</b>	<b>15-Nov-1937</b>	<b>Kathmandu</b>	<b>NBL</b>
2	Rastriya Banijya Bank	23-Jan-1966	Kathmandu	
3	Nabil Bank Limited	16-Jul-1984	Kathmandu	
4	Nepal Investment Bank Limited	27-Feb-1986	Kathmandu	
5	Standard Chartered Bank Nepal Limited.	30-Jan-1987	Kathmandu	
6	Himalayan Bank Limited	18-Jan-1993	Kathmandu	
7	Nepal SBI Bank Limited	7-Jul-1993	Kathmandu	
8	Nepal Bangladesh Bank Limited	5-Jun-1993	Kathmandu	
9	Everest Bank Limited	18-Oct-1994	Kathmandu	
10	Bank of Kathmandu Limited	12-Mar-1995	Kathmandu	
<b>11</b>	<b>Nepal Credit and Commerce Bank Limited</b>	<b>14-Oct-1996</b>	<b>Siddharthanagar, Rupandehi</b>	<b>NCCBL</b>
12	Nepal Industrial & Commercial Bank Limited	21-Jul-1998	Biaratnagar, Morang	
13	Lumbini Bank Limited	17-Jul-1998	Narayangadh, Chitawan	
<b>14</b>	<b>Machhapuchchhre Bank Ltd.</b>	<b>3-Oct-2000</b>	<b>Pokhara</b>	<b>MBL</b>
15	Kumari Bank Limited	3-Apr-2001	Kathmandu	
16	Laxmi Bank Limited	3-Apr-2002	Adarshanagar, Birgunj	
17	Siddhartha Bank Limited	24-Dec-2002	Kathmandu	
18	Agriculture Development Bank Ltd.	16-Mar-2006	Kathmandu	
19	Global Bank Ltd.	2-Jan-2007	Birgunj, Parsa	
20	Citizens Bank International Ltd.	21-Jun-2007	Kathmandu	
21	Prime Commercial Bank Ltd.	24-Sep-2007	Kathmandu	
22	Bank of Asia Nepal Ltd.	12-Oct-2007	Kathmandu	
23	Sunrise Bank Ltd.	12-Oct-	Kathmandu	

		2007		
24	Development Credit Bank Ltd.	25-May-2008	Kathmandu	
25	NMB Bank Ltd.	5-Jun-2008	Kathmandu	
26	Kist Bank Ltd.	7-May-2009	Kathmandu	
27	Janata Bank Nepal Ltd.	5-Apr-2010	Kathmandu	
28	Mega Bank Nepal Ltd.	23-Jul-2010	Kathmandu	
29	Commerz & Trust Bank Nepal Ltd.	20-Sep-2010	Kathmandu	
30	Civil Bank Ltd.	26-Nov-2010	Kathmandu	
31	Century Commercial Bank Ltd.	10-Mar-2011	Kathmandu	

(Source: Nepal Rastra Bank, *Banking and Financial Statistics, Mid-July 2011, No.57,p.54*)

### 3.3 Sources of Data

Secondary data has been used in this study. Following are the secondary sources of data used in the study.

- Annual reports, Annual Banking and Financial Statistics published by NRB, newsletter, brochures etc of the subjected banks
- Laws, guidelines and directives regarding the subject matter
- Text books
- Articles published in newspapers, journals, magazines, and other publications
- Unpublished thesis and dissertation
- Various reports published by NRB, CIB etc
- Various related websites
- Beside above any kind of other sources, such as assertions, interviews, remarks/opinion by experts that provides valuable data and conclusion regarding the subject matter has been considered in this study.

### **3.4 Data Collection Techniques**

The annual reports of MBL and NCCBL were collected from concerned banks websites and other reports were obtained from related websites. Some of the data of NBL was taken from the related websites and various NRB reports. Various publications of NRB were also collected from concerned department of NRB Baluwatar and NRB Bhairahawa. Similarly reports of Credit Information Bureau (CIB) have been collected from related websites. The reference of NRB directives and guidelines, Banking and Financial Statistics has been executed from website of NRB. Various reports, textbooks, journals and unpublished dissertation have been obtained by visiting Library of Shanker Dev Campus, and Bhairahawa Multiple Campus.

### **3.5 Data Analysis Tools**

The data collected from different sources are recorded systematically and identified. After collection of research data, an analysis of data and interpretation result are necessary. Applying different financial and statistical tool made data analysis easier. Further to represent the data in simple form bar diagrams and graphs are also been used.

#### **3.5.1 Financial Tools**

While adopting financial tools, a ratio is used as a benchmark for evaluating the financial position and performance to any firm. "Financial analysis is the process of identifying the financial strength and weakness of the firm by properly establishing relationship between the item of balance sheet and profit and loss account."(Pandey, 1999, p.108)

"Financial analysis is the use of financial statement to analyze a company's financial position and performance and to assess future financial performance."(Wild, Subramanyam, & Halsey, 2003, p.13)

### **3.5.1.1 Ratio Analysis**

Ratio analysis is a tool for scanning the financial statement of the firm. A ratio analysis is the widely used tool of financial analysis. A ratio is simply one number expressed in terms of another and as such it expresses the numerical or quantitative relationship between two variables. Ratio analysis reflects the relative strengths and weakness of any organization and also indicates the operating and financial growth of the organization. "Ratio helps to summarize large quantities of financial data and to make quantitative judgment about the firm's financial performance. The relationship between two accounting figure expressed mathematically is known as financial ratio."(Pandey, op cit p.10). Even though there are many ratio, only those ratios have been calculated which are related to the subject matter. Following ratios have been computed and analyzed in this study.

#### **➤ Loan and Advances to Total Assets Ratio**

Loan and advances of any commercial banks represents the major portion in volume of total assets. The loan and advances to total assets ratio measures the amount of loan and advances in the total assets. It means that it shows the proportion of loan and advances to total assets. The high degree of ratio indicates the good performance of the banks in mobilizing its fund. However in its reverse side, the low degree is representing low liquidity ratio or fund are not been mobilized properly. Granting loans and advances always carries a certain degree of risk. Thus this asset of banking business is regarded as risky assets. Thus the ratio clears out the management attitude towards mobilization of the risky assets. Higher the risk higher the profit, lower the



risk lower the profit. The low ratio is indicative of low productivity and high degree of safety in liquidity and vice versa. Thus, the loan and advances may or may not be recovered with its interest. This ratio is calculated as follows:

$$\text{Loan and Advances to Total Assets Ratio} = \frac{\text{Loan \& Advances}}{\text{Total Assets}}$$

➤ **Loan 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 loan and advances to total deposit ratio (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 loans and advances for profit generating purpose. Loans and advances yield high rate of return but liquidity requirements also needs due consideration. Greater CD ratio implies the better utilization of total deposits and better earning. Hence 70-80 % CD ratio is considered as appropriate. This ratio is calculated as follows:

$$\text{Loan and Advances to Total Deposit Ratio} = \frac{\text{Loan \& Advances}}{\text{Total Deposit}}$$

➤ **Non-Performing Assets 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 non-performing assets (NPA) to total loan and advances are preferred. As per international standard only 5% NPA is allowed. In the context of Nepal 5% NPA is acceptable. It is calculated as follows:

$$\text{Non-Performing Assets to Total Loans and Advances} = \frac{\text{Non Performing Assets}}{\text{Total Loans \& Advances}}$$

➤ **Provision Held to Non-Performing Assets Ratio.**

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 NPA is covered by the total loan provision. Higher ratio signifies that the banks are safeguarded against future contingencies that may create due to non-performing assets. So, higher the ratio better is the financial strength of the bank. This ratio is calculated as follows:

$$\text{Provision Held to Non-Performing Assets Ratio} = \frac{\text{Total Loan Loss Provision}}{\text{Non Performing Assets}}$$

➤ **Non-Performing Assets to Total Assets**

This ratio indicates the ration between the non-performing assets and total assets. Higher NPA to total assets ratio implies the bad effects in banks performance and it decreases the profitability of the banks and lower ratio implies the better performance of the bank and it increases the profitability of banks. This ratio can be calculated as follows:

$$\text{Non-Performing Assets to Total Assets} = \frac{\text{Non Performing Assets}}{\text{Total Assets}}$$

➤ **Return on Loans and Advances**

This ratio indicates the proportion of the return over total loans and advances. It describes how efficiently the bank has employed its resources in the form of loans and advances of the bank. Net profit refers to that profit which is obtained after all types of deduction like employee bonus, tax, provision etc. Higher the ratio better is the performance of the bank and vice versa. This ratio is calculated as follows:

$$\text{Return on Loan and Advances} = \frac{\text{Net Profit}}{\text{Total Loans \& Advances}}$$

### 3.5.2 Statistical Tools

Statistical tools are the mathematical techniques used to facilitate the analysis and interpretation of numerical data. The statistical tool is essential to measure the relationship of two or more variable." Statistical Analysis is one particular language, which describes the data and makes possible to talk about the relations and the difference of the variables."(Gupta, 1997, p.21).It helps to compare the performance, strength, weakness of the organization. It also helps to present the data, show the relation and deviations or differences of variables of organization. Following statistical tools have been used in this study.

#### ➤ Arithmetic Mean

The arithmetic mean or simple mean of a set of observation is the sum of all the observation divided by the number of observation. It is the best possible value of a group of variables that singly represents to whole group. In the statistical analysis the central value falls within the approximately middle value of the whole data. Mean is the arithmetic average of a variable. Arithmetic mean of a series is given by:

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

#### ➤ Standard Deviation

Standard deviation (S.D.) is the most popular and most useful measure of dispersion. It indicates the ranges and size of deviance from the middle or mean. It measures the absolute dispersion. Higher the value of standard deviation higher is the variability and vice versa. It is the positive square root of average sum of squares of deviations of observation from the arithmetic mean of the distribution. It can be calculated as follows.

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

➤ **Co-efficient of Variation(CV)**

The percentage measure of coefficient of standard deviation is called coefficient of variation. The less is the C.V 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 S.D. only. The coefficient of variation measures the relative measures of dispersion, hence capable to compare two variables independently in terms of their variability.

$$\text{Coefficient of Variation (C.V)} = \frac{\dagger}{X} \times 100$$

➤ **Correlation Coefficient(r)**

Correlation refers to the degree of relationship between two variables. Correlation coefficient determines the association between the dependent variable and independent variable. If between the variables, increase or decrease in one cause increase or decrease in another, then such variables are correlated variables. "Correlation may be defined as the degree of linear relationship existing between two or more variables. Two variables are said to be correlated when the change in the value of one is accompanied by the change of another variable."(A.B. Sthapit, Hiranya Gautam, P.R. Joshi, Prakash Man Dangol, 2003, p.362)

. There are different techniques of calculating correlation coefficient. Among various techniques we have used Karl Pearson coefficient of correlation. It is calculated as follows:

$$\text{Correlation Coefficient (r)} = \frac{XY}{N \dagger_x \dagger_y}$$

Where,

$$x = \varepsilon Z \varepsilon \quad y = Y Z Y$$

$\dagger_x$  = Standard Deviation of Series X

$\dagger_y$  = Standard Deviation of Series Y

N = No. of pairs of observation

On simplification of the equation of r, we obtain the following formula for computing Correlation Coefficient (r).

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

The Karl Pearson Coefficient of correlation always falls between -1 to +1. The value of correlation in minus signifies, the negative correlation and in plus signifies the positive correlation. If,

r = 0, there is no relationship between the variables

r < 0, there is negative relationship between the variables

r > 0, there is positive relationship between the variables

r = +1, the relationship is perfectly positive

r = -1, the relationship is perfectly negative

The reliability of the correlation coefficient is judged with the help of probable error (P.E). It is calculated as follows:

$$\text{Probable Error (P.E)} = \frac{0.6745(1 Z r^2)}{\sqrt{N}}$$

Where, r = correlation coefficient

N= No, of pairs of observation

Decision:

If r > 6 P.E, then the correlation coefficient is significant and reliable.

If  $r < 6$  P.E, then the correlation coefficient is insignificant and there is no evidence of correlation.

➤ 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 root method has been adopted to measure the trend behaviors of the 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.

$$Y_c = a + bX$$

Where,

$Y_c$  = Trend values

$a$  = 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 value of the constants  $a$ , and  $b$  can be determined by solving the following two normal equations.

$$\sum Y = Na + b \sum X \dots\dots\dots (i)$$

$$\sum XY = a \sum X + b \sum X^2 \dots\dots\dots (ii)$$

Where,  $N$  = number of years

But for simplification, if the time variable is measured as a deviation form its mean 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.

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

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

➤ Diagrammatic and Graphical Representation

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 comprehensive form. Hence various bar diagrams, pie charts and graph have been used for presentation and analysis of data.

After highlighting the research methodology the next chapter concentrated on presentation and analysis of the study.

# CHAPTER IV

## PRESENTATION AND ANALYSIS OF DATA

In this section raw form of data collected from various sources are changed into an understandable presentation using financial as well as statistical tools supported by diagrams and graphs as mentioned in the previous chapter. This chapter is the heart of the study as all the findings, conclusions and recommendation are going to be derived from the calculations and analysis done in this section.

### 4.1 Ratio Analysis

#### 4.1.1 Loans and Advances to Total Assets Ratio

Table No.6

#### Loans & Advances to Total Assets Ratio (%)

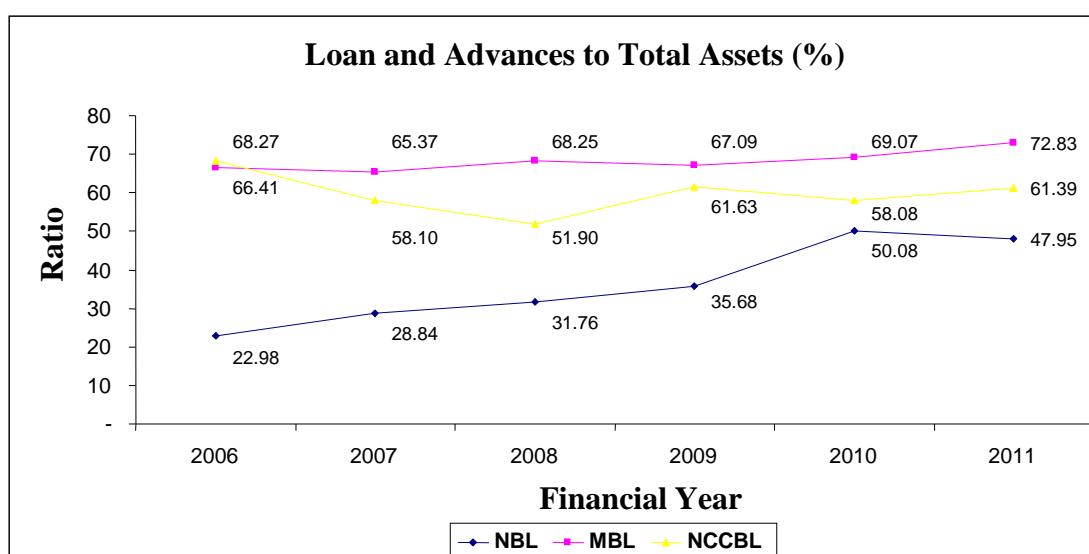
In million Rs

YEAR ( Mid July)	NBL			MBL			NCCBL		
	Loan & Advances	Total Assets	Ratio (%)	Loan & Advances	Total Assets	Ratio (%)	Loan & Advances	Total Assets	Ratio (%)
2006	12,441.59	54,133.00	22.98	6,146.57	9,255.80	66.41	5,899.16	8,640.80	68.27
2007	13,756.60	47,707.10	28.84	7,319.90	11,197.10	65.37	5,122.20	8,816.70	58.10
2008	15,770.70	49,660.00	31.76	8,969.80	13,142.30	68.25	5,281.00	10,175.90	51.90
2009	19,482.25	54,608.80	35.68	12,467.19	18,583.10	67.09	7,183.68	11,657.00	61.63
2010	25,086.80	50,093.50	50.08	14,972.07	21,677.50	69.07	8,387.77	14,442.50	58.08
2011	26,709.90	55,700.10	47.95	14,732.06	20,228.20	72.83	9,229.80	15,035.60	61.39
	Mean		36.21	Mean		68.17	Mean		59.89
	S.D		10.77	S.D		2.63	S.D		5.40
	C.V		29.73	C.V		3.86	C.V		9.02

(Source: Annual Reports & Websites of Concerned Banks)



**Figure No.4**



The table no.6 presented above, exhibits the loans and advances to total assets of three banks for six consecutive years. The ratio shows increasing trend in NBL & MBL, fluctuating trend in NCCBL. The overall ratio of three banks has been ranged from 22.98% of NBL in FY 2005/06 & 72.83% of MBL in FY 2010/11 respectively. The mean ratio of NBL, MBL and NCCBL is 36.21, 68.17 and 59.89 respectively.

Hence among the three banks, MBL has the highest proportion of loans and advances in the total assets structure followed by NCCBL & NBL. This infers that NBL has the low degree of investment in risky assets. The management of NBL is risk averse as they seems to be investing higher proportion of their assets in risk free or nominally risky assets like treasury bills, debentures, National Saving Bonds (NSBs) etc.

The increasing trend of loan and advances in proportion to total assets in NBL is post effect of the restructuring and rescheduling process. The aggressiveness of NBL management in overcoming the willful defaulters to the repayment of their non-

performing loans has resulted in the low proportion of flow of loans & advances upto FY 2005/06.

The standard deviations of NBL, MBL & NCCBL are 10.77, 2.63 & 5.40 and C.V. is 29.73, 3.86 & 9.02 respectively (Appendix3). Thus it can be interpreted that NBL has high percentage of deviation & variation. High percentage of variation in NBL is due to increasing trend of loans and advances of NBL resulting in increasing trend of ratio. The deviation of NCCBL is high and the percentage of variation in ratio is also high. The proportion of loan and advances to total assets being high has resulted in high percentage of deviation of NCCBL. Similarly the increasing trend in ratio of NCCBL has resulted in high degree of variation.

#### 4.1.2 Loans and Advances to Total Deposit Ratio

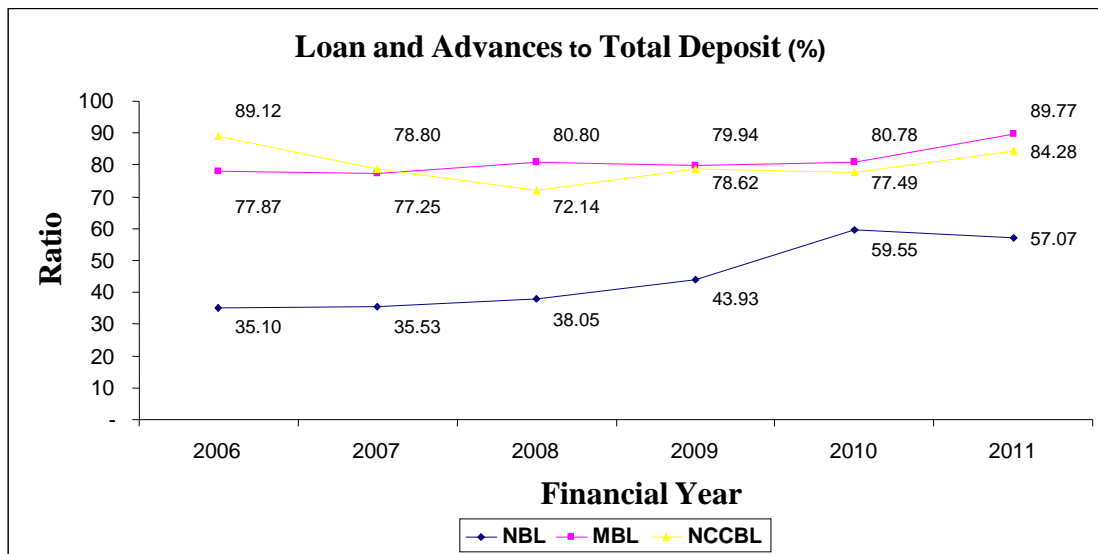
**Table No.7**  
**Loans & Advances to Total Deposit Ratio (%)**

In million Rs

YEAR ( Mid July)	NBL			MBL			NCCBL		
	Loan & Advances	Total Deposit	Ratio (%)	Loan & Advances	Total Deposit	Ratio (%)	Loan & Advances	Total Deposit	Ratio (%)
2006	12,441.59	35,444.90	35.10	6,146.57	7,893.30	77.87	5,899.16	6,619.50	89.12
2007	13,756.60	38,715.20	35.53	7,319.90	9,475.00	77.25	5,122.20	6,500.30	78.80
2008	15,770.70	41,451.70	38.05	8,969.80	11,101.10	80.80	5,281.00	7,320.20	72.14
2009	19,482.25	44,346.10	43.93	12,467.19	15,596.10	79.94	7,183.68	9,137.00	78.62
2010	25,086.80	42,129.90	59.55	14,972.07	18,533.50	80.78	8,387.77	10,824.70	77.49
2011	26,709.90	46,804.20	57.07	14,732.06	16,411.40	89.77	9,229.80	10,951.30	84.28
	Mean		44.87	Mean		81.07	Mean		80.07
	S.D		10.90	S.D		4.51	S.D		5.88
	C.V		24.30	C.V		5.57	C.V		7.34

(Source: Annual Reports & Websites of Concerned Banks)

**Figure No.5**



The above table no.7 exhibits the loans and advances to total deposit of three banks for six consecutive years. The overall ratio of three banks has been ranged from 35.10% of NBL in 2006 to 89.77% of MBL in 2011. The mean ratio of NBL, MBL and NCCBL is 44.87%, 81.07% & 80.07% respectively. Hence among the three banks MBL has the highest proportion of loans and advances in the total deposit followed by NCCBL and NBL. It signifies that MBL and NCCBL have been ahead in utilizing depositor's money on loans and advances with the objective to earn profit. This infers that proportionately NBL has very low investment in the form of loans and advances in comparison to MBL and NCCBL. The management of MBL and NCCBL seems to be aggressive as they have higher proportion of loans and advances to total deposit.

The standard deviation of NBL, MBL and NCCBL are 10.90, 4.51 & 5.88 and C.V is 24.30%, 5.57% & 7.34% respectively (Appendix 3). Thus it signifies that NBL has high deviation with higher degree of variation in ratio. MBL has the most consistent

ratio and the least deviation during the study period. NCCBL is moderate in terms of deviation and variability during the study period.

#### 4.1.3 Non-Performing Loans to Total Loans and Advances Ratio

**Table No. 8**

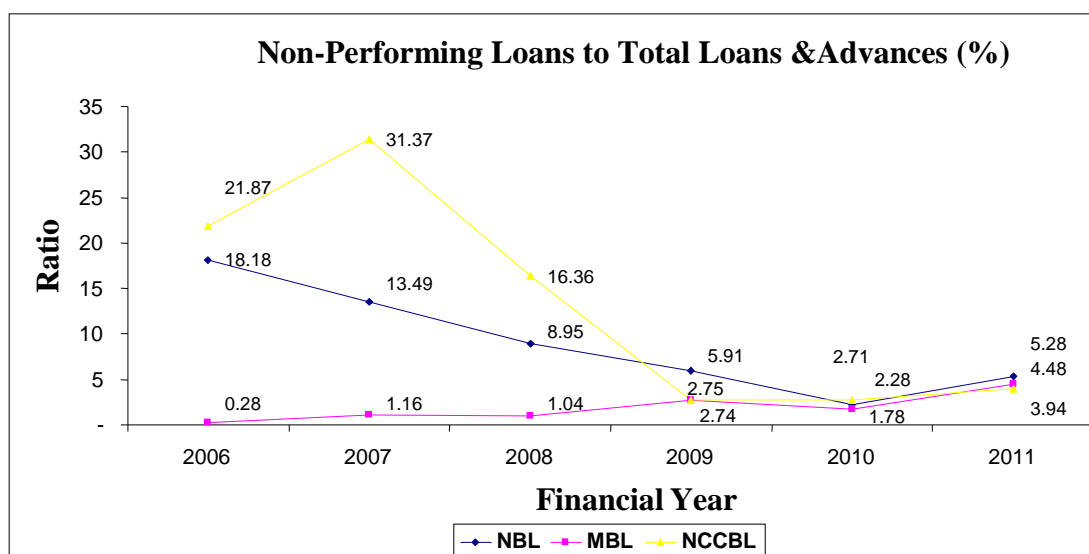
**Non-Performing Loans to Total Loans & Advances Ratio (%)**

In million Rs.

YEAR ( Mid July)	NBL			MBL			NCCBL		
	NPL	Loan & Advances	Ratio (%)	NPL	Loan & Advances	Ratio (%)	NPL	Loan & Advances	Ratio (%)
2006	2,262.18	12,441.59	18.18	16.92	6,146.57	0.28	1,289.90	5,899.16	21.87
2007	1,856.00	13,756.60	13.49	85.16	7,319.90	1.16	1,606.87	5,122.20	31.37
2008	1,410.80	15,770.70	8.95	92.90	8,969.80	1.04	864.00	5,281.00	16.36
2009	1,151.40	19,482.25	5.91	342.85	12,467.19	2.75	196.83	7,183.68	2.74
2010	573.20	25,086.80	2.28	266.27	14,972.07	1.78	227.72	8,387.77	2.71
2011	1,410.73	26,709.90	5.28	660.73	14,732.06	4.48	363.40	9,229.80	3.94
	Mean		9.02	Mean		1.91	Mean		13.16
	S.D		5.88	S.D		1.51	S.D		12.00
	C.V		65.23	C.V		78.68	C.V		91.18

(Source: Annual Reports & Websites of Concerned Banks)

**Figure No.6**



The above table no 8 exhibits the ratio of non-performing loans to total loan and advances of NBL, MBL & NCCBL for six consecutive years. The figure represented in the above table no. 8 shows that NCCBL has the highest ratio during the study period. MBL shows the least ratio during the study period but the ratio is high 2011 than 2006. NBL is moderate in this ratio in comparison to the other sampled banks. The overall ratio has been ranged from 0.28% of MBL in 2006 to 31.37% of NCCBL in 2007. The mean NPL to total loan ratio of NBL, MBL & NCCBL are 9.02%, 1.19% & 13.16% respectively. The NPL of NBL & NCCBL is very much high that the acceptable standard of 5%. Though the NPL of NBL & NCCBL is high than the acceptable standard the study shows the decreasing trend in the ration of NPL of NBL & NCCBL in 2011 in comparison to 2006. Further the mean ratio of MBL is increasing very highly in the final year of study.

The standard deviation of NBL, MBL and NCCBL are 5.88, 1.51 & 12 and C.V is 65.23%, 78.68% & 91.18% respectively (Appendix 3). Thus it signifies that MBL has least deviation but high degree of variation in the ratio. The high degree of variation in the ratio of MBL is due to the sudden increase in the NPL level in the year 2011. NBL has the least variation in ratio during the study period as the NPL level of NBL is in decreasing trend in the year 2011 in comparison to 2006. NCCBL has the highest degree of risk and variation in comparison to other sample banks. Since NPL is one of the causes of banking crisis, all the sampled banks should give serious attention to this matter.

#### 4.1.4 Loan Loss Provision to Total Loan and Advances Ratio

Table No. 9

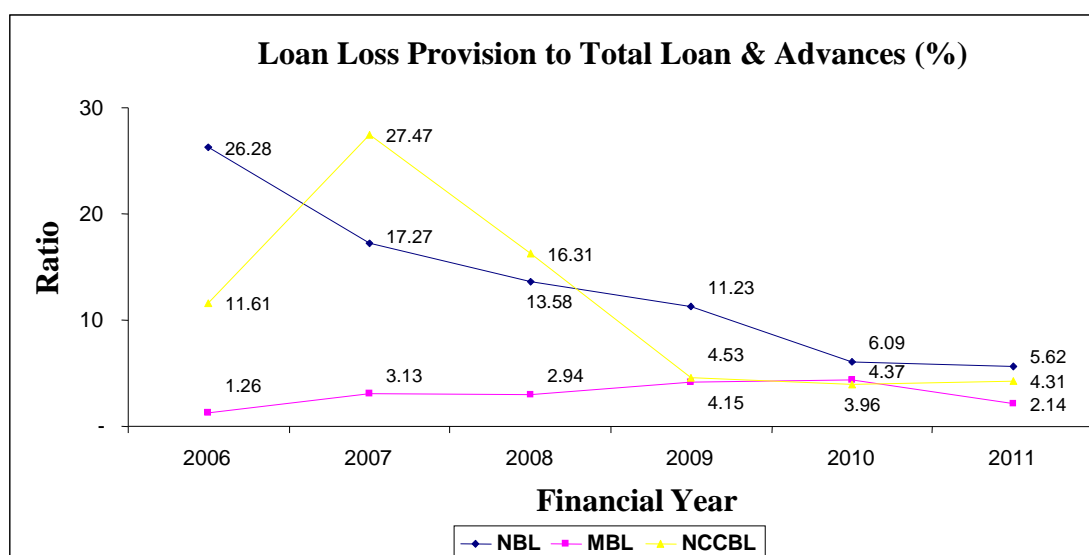
#### Loan Loss Provision to Total Loan & Advances Ratio (%)

In million Rs.

YEAR ( Mid July)	NBL			MBL			NCCBL		
	LLP	Loan & Advances	Ratio (%)	LLP	Loan & Advances	Ratio (%)	LLP	Loan & Advances	Ratio (%)
2006	3,269.60	12,441.59	26.28	77.40	6,146.57	1.26	684.70	5,899.16	11.61
2007	2,376.30	13,756.60	17.27	229.30	7,319.90	3.13	1,406.90	5,122.20	27.47
2008	2,141.80	15,770.70	13.58	263.70	8,969.80	2.94	861.40	5,281.00	16.31
2009	2,188.60	19,482.25	11.23	517.30	12,467.19	4.15	325.50	7,183.68	4.53
2010	1,527.40	25,086.80	6.09	654.61	14,972.07	4.37	332.20	8,387.77	3.96
2011	1,501.00	26,709.90	5.62	314.90	14,732.06	2.14	397.50	9,229.80	4.31
	Mean		13.35	Mean		3.00	Mean		11.36
	S.D		7.74	S.D		1.18	S.D		9.33
	C.V		58.00	C.V		39.46	C.V		82.09

(Source: Annual Reports & Websites of Concerned Banks)

Figure No.7



The above table no 9 exhibits the ratio of Loan Loss Provisioning to Total Loan and Advances of NBL, MBL & NCCBL for six consecutive years. The figure represented in the above table no. 9 shows that NBL has the highest ratio during the study period

and also shows decreasing trend of LLP & increasing trend of Loan & Advances from 2006 to 2011. This positive result in NBL is due to the positive approach of bank management in increasing the loan portfolio and recovering bad debts and increasing the ration of good loan. MBL shows the least ratio during the study period. The ratio of NCCBL is moderate in comparison to the other sampled banks. We can also see that the ratio of MBL & NCCBL is more volatile in comparison to NBL. The overall ratio has been ranged from 1.26% of MBL to 26.28% of NBL in 2006. The mean LLP to total loan & advances ratio of NBL, MBL & NCCBL are 13.35%, 3% & 11.36% respectively. The LLP of NBL is very much high in comparison to other two banks. Higher LLP is indicative of poor and ineffective credit policy, higher proportion of non-performing assets and poor performance. But here in case of NBL we can see clearly that the ration of LLP is decreasing and the ratio of Loan and advances is increasing as a result of proper management.

Further increase in the ratio of LLP due to increase in the ratio of Loan and Advances is acceptable.

The standard deviation of NBL, MBL and NCCBL are 7.74, 1.18 & 9.33 and C.V is 58%, 39.46% & 82.09% respectively (Appendix 3). Thus it signifies that MBL has least deviation and variation in the ratio. NBL has the moderate deviation & variation in ratio during the study period. NCCBL has the highest degree of risk & variation in comparison to other sample banks. The highest degree of variation in the ratio of NCCBL is due to the sudden increase in the NPL level in the year 2006 to 2008.

Since LLP has direct effect in the profit of the banks, all the sampled banks should give serious attention to decrease the level of NPL.

#### 4.1.5 Provision Held to Non- Performing Loan Ratio

Table No. 10

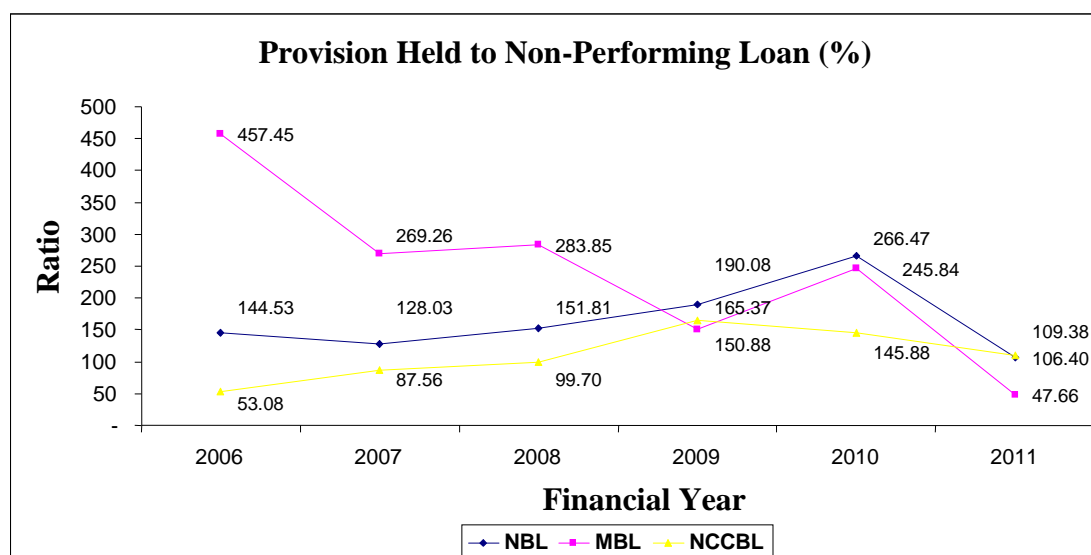
#### Provision Held to Non-Performing Loan Ratio (%)

In Million Rs.

YEAR ( Mid July)	NBL			MBL			NCCBL		
	LLP	NPL	Ratio (%)	LLP	NPL	Ratio (%)	LLP	NPL	Ratio (%)
2006	3,269.60	2,262.18	144.53	77.40	16.92	457.45	684.70	1,289.90	53.08
2007	2,376.30	1,856.00	128.03	229.30	85.16	269.26	1,406.90	1,606.87	87.56
2008	2,141.80	1,410.80	151.81	263.70	92.90	283.85	861.40	864.00	99.70
2009	2,188.60	1,151.40	190.08	517.30	342.85	150.88	325.50	196.83	165.37
2010	1,527.40	573.20	266.47	654.61	266.27	245.84	332.20	227.72	145.88
2011	1,501.00	1,410.73	106.40	314.90	660.73	47.66	397.50	363.40	109.38
	Mean		164.56	Mean		242.49	Mean		110.16
	S.D		57.13	S.D		137.84	S.D		40.50
	C.V		34.72	C.V		56.84	C.V		36.77

(Source: Annual Reports & Websites of Concerned Banks)

Figure No.8



The above table no 10 exhibits the ratio of provision held to non-performing loan of NBL, MBL & NCCBL for six consecutive years. The figure represented in the above



table no. 10 shows that MBL has the highest ratio during the study period and also shows increasing trend from 2006 to 2010. NCCBL shows the least ratio during the study period. The ratio of NBL is moderate in comparison to the other sampled banks. The overall ratio has been ranged from 47.66% in 2011 to 457.45% in 2006 of MBL respectively. The mean ratio of NBL, MBL & NCCBL are 164.56%, 242.49% & 110.16% respectively. The ratio of MBL is significantly high in comparison to other two banks and portrays that the bank has adequate provision against NPL but this ratio of NCCBL is comparatively lower.

The standard deviation of NBL, MBL and NCCBL are 57.13, 137.84 & 40.50 and C.V is 34.72%, 56.84% & 36.77% respectively (Appendix 3). Thus it signifies that MBL has highest deviation along with the highest degree of variation in this ratio. Among the three banks, NCCBL is moderate in terms of variability and NBL has the least variability of ratio during the study period.

#### 4.1.6 Return on Loans and Advances

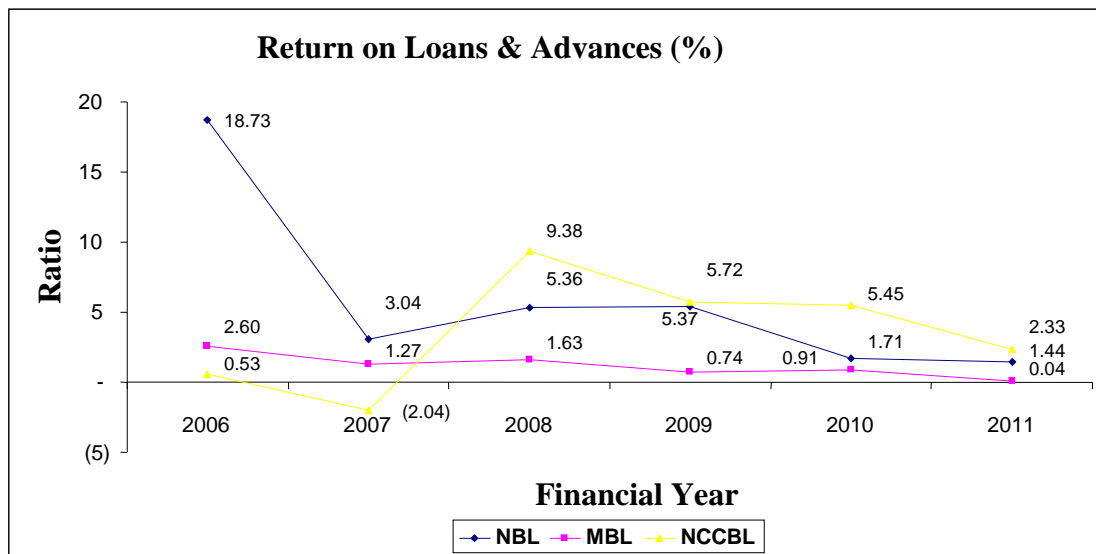
**Table No.11**  
**Return on Loans & Advances Ratio (%)**

In Million Rs.

YEAR ( Mid July)	NBL			MBL			NCCBL		
	Net Profit	Loan & Advances	Ratio (%)	Net Profit	Loan & Advances	Ratio (%)	Net Profit	Loan & Advances	Ratio (%)
2006	2,329.70	12,441.59	18.73	159.70	6,146.57	2.60	31.20	5,899.16	0.53
2007	417.70	13,756.60	3.04	93.00	7,319.90	1.27	(104.60)	5,122.20	(2.04)
2008	845.20	15,770.70	5.36	146.60	8,969.80	1.63	495.60	5,281.00	9.38
2009	1,047.00	19,482.25	5.37	92.60	12,467.19	0.74	410.60	7,183.68	5.72
2010	428.60	25,086.80	1.71	136.20	14,972.07	0.91	457.00	8,387.77	5.45
2011	383.40	26,709.90	1.44	6.40	14,732.06	0.04	214.80	9,229.80	2.33
	Mean		5.94	Mean		1.20	Mean		3.56
	S.D		6.49	S.D		0.87	S.D		4.10
	C.V		109.30	C.V		72.46	C.V		115.28

(Source: Annual Reports & Websites of Concerned Banks)

**Figure No.9**



The table no.11 presented above, exhibits the return on loans and advances of three banks for six consecutive years. The ratio of NBL & MBL shows decreasing return during the study period. But the ratio of NCCBL is fluctuating and volatile and negative during 2007. The overall ratio of three banks has been ranged from (2.04) of NCCBL on 2007 to 18.73 of NBL on 2006. The mean ratio of NBL, MBL and NCCBL is 5.94%, 1.20% and 3.56% respectively.

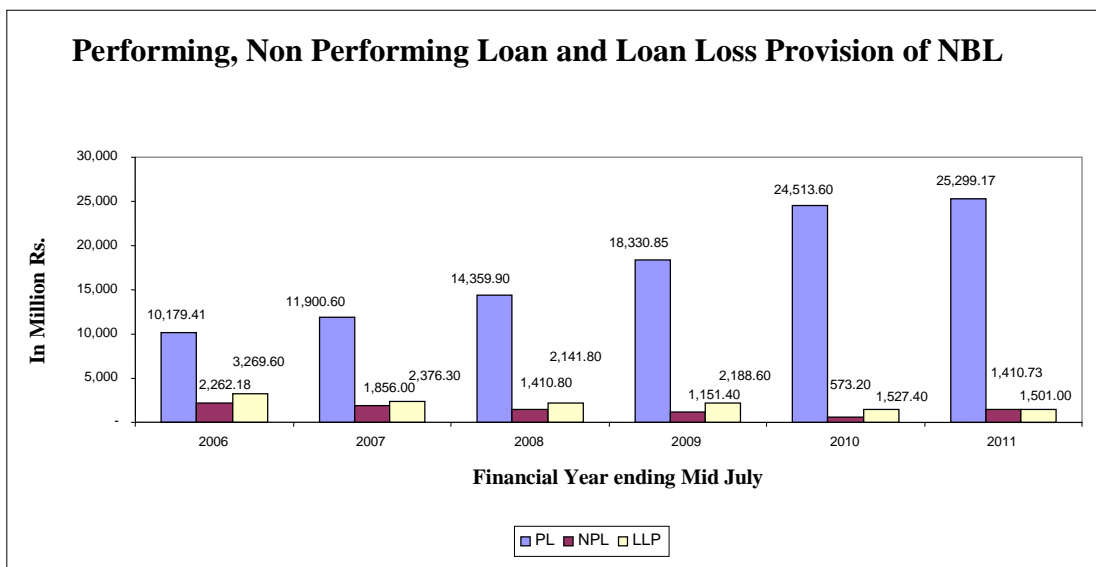
The successful and ongoing restructuring NBL resulted in better performance of whole commercial banking system. NBL was experiencing a continuous losses trend during 2000-03 but it turned to provide a positive return which resulted in the positive ratio from 2004 onwards and also during the study period.

The standard deviations of NBL, MBL & NCCBL are 6.49, 0.87 & 4.10 and C.V. is 109.30%, 72.46% & 115.28% respectively (Appendix3). Thus it can be interpreted that NBL has high percentage of deviation and moderate variation. NCCBL is moderate in terms of deviation and has moderate variability of ratio during the study

period. Similarly, MBL has least movement in the ratio resulting in the low variability with minimum risk in comparison to other sampled banks.

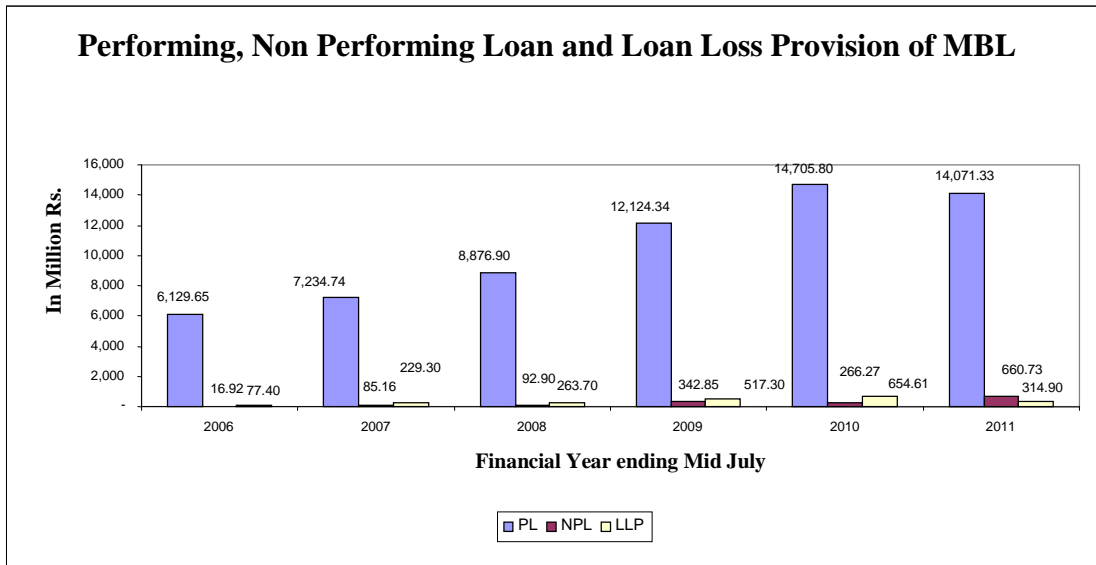
Following figure no. 10, 11 & 12 represents six year Performing Loans, Non-Performing Loans and Loan Loss Provision of NBL, MBL & NCCBL.

**Figure No.10**



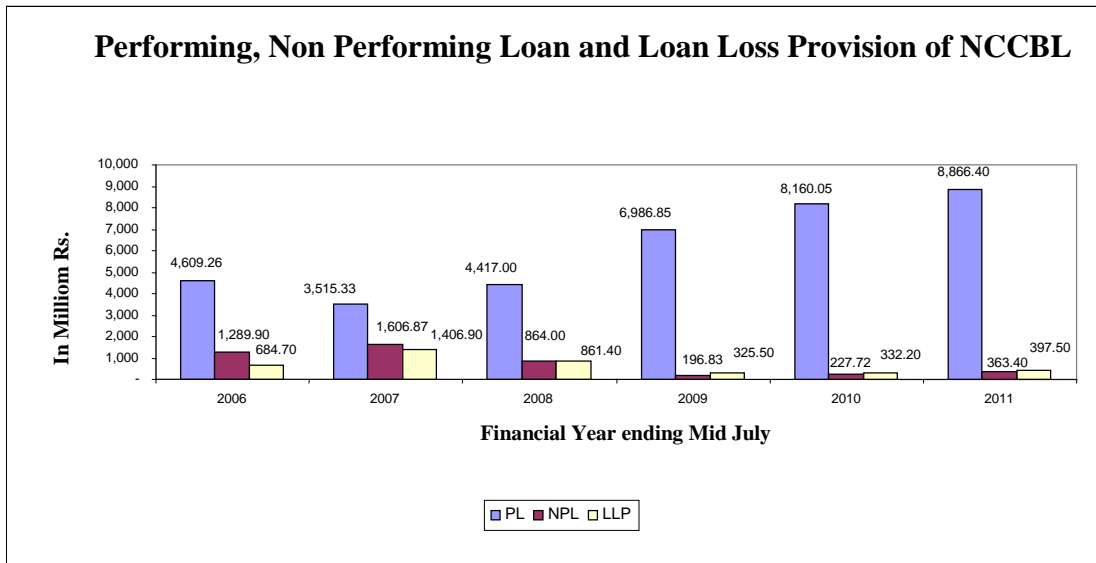
The above figure no. 10 shows the performing loan, non- performing loan and loan loss provisioning of NBL. We can clearly see the increasing figure of performing loan of NBL during the study period. This is because of the positive and strict approach of NBL management team toward recovering the Bad Loan and debts and the proper credit analysis of the NBL credit team while disbursement of the loan and regular monitoring of the credit clients.

**Figure No.11**



Similarly the above figure no. 11 shows the performing loan is increasing year by year with a minimum of increase in NPL and LLP of MBL.

**Figure No. 12**



Similarly figure no. 12 shows highest level of performing loan of NCCBL in year 2011 with a decrease in the level of same in 2007. The figure shows the rise in the level of NPL in the year 2006 and decreasing level in the year 2011.

## 4.2 Correlation Analysis

### 4.2.1 Correlation between Loan Loss Provision and Loans and Advances

The correlation between LLP 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 LLP is dependent variable.

**Table No.12**

#### **Correlation between LLP and Loans and Advances**

<b>Banks</b>	<b>Correlation Coefficient (r)</b>	<b>Probable Error (P.E.)</b>	<b>6* P.E.</b>
<b>NBL</b>	-0.8912	0.0566	0.3398
<b>MBL</b>	0.8177	0.0912	0.5474
<b>NCCBL</b>	-0.8007	0.0988	0.5930

Above table no. 12 explains the relationship between loans and advances and LLP (Appendix 4). Here the correlation coefficients of NBL & NCCBL are -0.8912 & -0.8007 and it is less than six times the value of P.E. Hence there is negative correlation between LLP and Loans and Advances of NBL & NCCBL and its correlation coefficient is insignificant. The correlation coefficient of MBL is 0.8177 and its P.E. is 0.0912 and 6P.E. is 0.5474. Since r is greater than P.E., there is positive correlation between LLP and Loans and Advances of MBL and further r is greater than 6P.E. the correlation coefficient is said to be significant.

#### 4.2.2 Correlation between Loan Loss Provision and Non Performing Loan

The correlation between LLP and NPL describes how unit increase in NPL affects the LLP. Here NPL is independent variable and LLP is dependent variable. As earlier mentioned NPL are the loan falling on the category of substandard, doubtful and loss loan and the respective provisioning requirement is 25%, 50%, & 100%. Higher the NPL higher will be the provisioning amount.

**Table No. 13**

#### **Correlation between LLP and NPL**

<b>Banks</b>	<b>Correlation Coefficient (r)</b>	<b>Probable Error (P.E.)</b>	<b>6* P.E.</b>
<b>NBL</b>	0.8277	0.0867	0.5203
<b>MBL</b>	0.4135	0.2283	1.3697
<b>NCCBL</b>	0.9057	0.0495	0.2970

Above table no. 13 explains the relationship between LLP and NPL (Appendix 4). Here NBL, MBL & NCCBL have positive correlation between LLP and NPL. That means increment in NPL leads to increment in LLP. The correlation coefficient of NBL is 0.8277 and its P.E. and 6\*P.E. is 0.0867 and 0.5203. 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 NPL during the study period and the increase in LLP of NBL is due to increase in NPL of the bank. The correlation coefficient of NCCBL is 0.9057 and its P.E. and 6\*P.E. is 0.0495 and 0.2970. Hence the value of r of NCCBL is greater than 6 times the value of P.E. The correlation coefficient is said to be significant and reliable. So it can be interpreted that there is high degree of positive correlation between LLP and NPL of NCCBL. The correlation coefficient of MBL is 0.4135, and is less than 6

times the value of P.E. Hence there is negative and insignificant correlation between NPL and LLP of MBL.

#### **4.2.3 Correlation between Loan and Advances and Deposit**

This correlation shows the relationship between the loans and advances and total deposits. Deposit is one of the major items of liability and loan and advances is the major item of assets of balance sheet of commercial banks. In this case, the deposit is the independent variable and loans and advances is the dependent variable. Hence how a unit increase in deposit impact in the volume of loan and advances is exhibited by this correlation coefficient.

**Table No. 14**

#### **Correlation between Loans and Advances and Deposit**

<b>Banks</b>	<b>Correlation Coefficient (r)</b>	<b>Probable Error (P.E.)</b>	<b>6* P.E.</b>
<b>NBL</b>	0.8382	0.0819	0.4913
<b>MBL</b>	0.9880	0.0065	0.0393
<b>NCCBL</b>	0.9645	0.0192	0.1151

The above table no. 14 shows the correlation coefficient, probable error and 6\*P.E. of the sample banks (Appendix 4). It shows there is high degree of positive correlation between loans and advances and deposit of NBL, MBL %& NCCBL. The respective values of correlation coefficient of NBL, MBL & NCCBL are 0.8382, 0.9880 & 0.9645 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 of NBL, MBL & NCCBL is certain and significant. That means increase in the volume of deposit leads to increment in loans and advances of NBL, MBL & NCCBL.

### 4.3 Trend Analysis

Trend analysis is a statistical tool, which helps to forecast the future values 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 square method is widely used in practices. Hence in this study also least square method has been adopted to measure the trend behaviors of the sampled banks. However, trend analysis is based on the assumption that past tendencies continues in future. Under this heading the effort has been made to calculate trend values of following variables from mid July 2006 to mid July 2011 and forecast is done for next five years from mid July 2012 to mid July 2016.

#### 4.3.1 Trend Analysis of Loans and Advances

The values of average loans and advances (a), rate of change of loans and advances (b) and trend values of loans and advances of three banks for 11 years from mid July 2006 to mid July 2016 are as follows. (Appendix 5)

**Table No. 15**

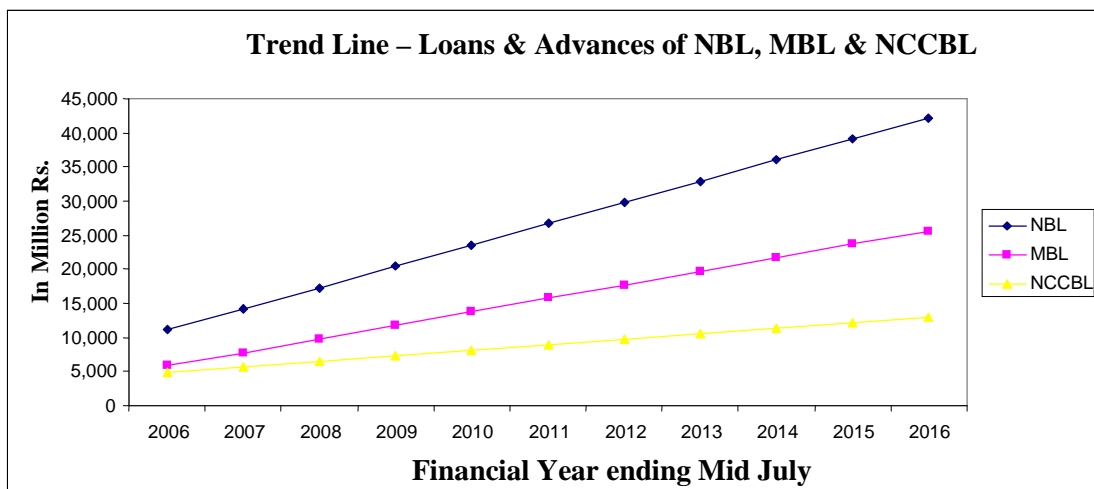
#### **Trend values of Loans & Advances**

Years (Mid July)	Banks		
	NBL a = 18,874.64 b = 3,115.53	MBL a = 10,767.93 b = 1,982.32	NCCBL a = 6,850.60 b = 810.07
2006	11,085.80	5,812.12	4,825.42
2007	14,201.34	7,794.45	5,635.49
2008	17,316.87	9,776.77	6,445.56
2009	20,432.41	11,759.09	7,255.64
2010	23,547.94	13,741.42	8,065.71
2011	26,663.48	15,723.74	8,875.79
2012	29,779.01	17,706.07	9,685.86
2013	32,894.54	19,688.39	10,495.93
2014	36,010.08	21,670.72	11,306.01
2015	39,125.61	23,653.04	12,116.08
2016	42,241.15	25,635.36	12,926.16



The above table no.15 shows that all the sampled banks has increasing trend. The average loan and advances of NBL is Rs. 18,874.64 which is increasing at the rate of Rs. 3,115.53 every year. Loans and advances are expected to increase from Rs. 29,779.01M in 2012 to Rs. 42,241.15 in 2016. MBL's average loans and advances is Rs.10,767.93M which is increasing every year by Rs.1,982.32M. Hence the expected loans and advances of MBL are supposed to increase from Rs.17,706.07M in 2012 to Rs.25,635.36M in 2016. Similarly, average loans and advances of NCCBL is Rs.6,850.60 with a increase of Rs.810.07M each year. The expected loans and advances of NCCBL is also supposed to be Rs.9,685.86M in 2012 and Rs.12,926.16M in 2016. The below presented Figure no. 7 explains about the trend of flow of loans and advances of the sampled banks.

**Figure No. 13**



The decreasing trend of loan and advances of NBL is due to the post effect of restructuring and rescheduling process. The aggressiveness of NBL management in increasing the volume of Loan & Advances after overcoming the restructuring and rescheduling process has resulted in increasing trend of loans & advances. Where as the trend line of MBL and NCCBL is moving upward which directs the increase in

the flow of loans and advances during the projection period also. The rate of increase in the loans and advances of NCCBL is low in comparison to NBL & MBL. Hence NBL & MBL is investing high on loans and advances.

#### 4.3.2 Trend Analysis of Non- Performing Loan

The calculated values of average Non Performing Loan (a), rate of change in NPL (b) and trend values of NPL of 11 years from mid July 2006 to mid July 2016 is as follows: (Appendix 5)

**Table No. 16**

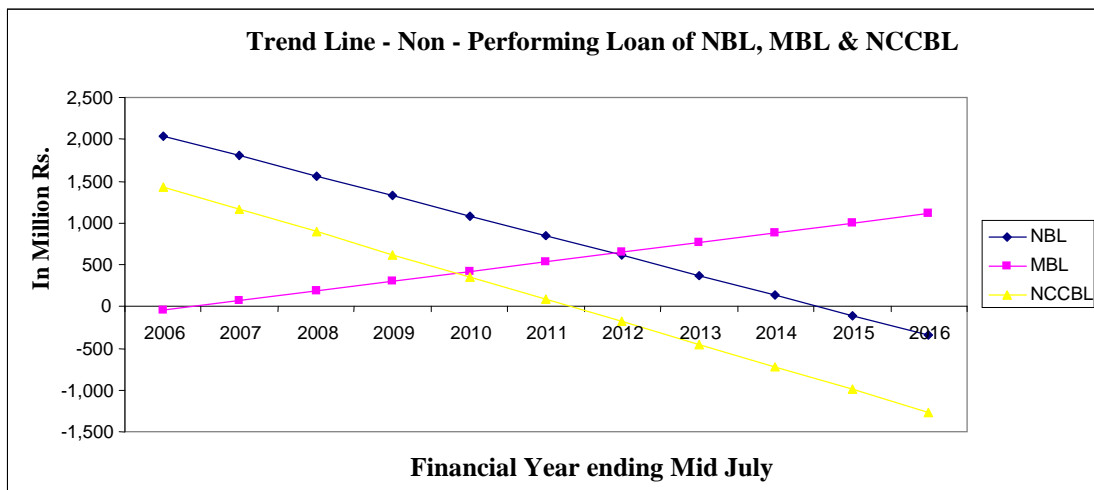
#### **Trend values of Non- Performing Loan**

<b>Years (Mid July)</b>	<b>Banks</b>		
	<b>NBL a = 1,444.05 b = (239.00)</b>	<b>MBL a = 244.14 b = 114.64</b>	<b>NCCBL a = 758.12 b = (269.63)</b>
<b>2006</b>	2,041.56	(42.46)	1,432.20
<b>2007</b>	1,802.55	72.18	1,162.57
<b>2008</b>	1,563.55	186.82	892.94
<b>2009</b>	1,324.55	301.46	623.30
<b>2010</b>	1,085.55	416.10	353.67
<b>2011</b>	846.55	530.73	84.04
<b>2012</b>	607.55	645.37	(185.59)
<b>2013</b>	368.55	760.01	(455.22)
<b>2014</b>	129.54	874.65	(724.86)
<b>2015</b>	(109.46)	989.29	(994.49)
<b>2016</b>	(348.46)	1,103.92	(1,264.12)

The above presented table no. 16 shows the increasing trend of NPL of MBL and decreasing trend of NPL of NBL and NCCBL. The average NPL of MBL is Rs. 244.14M with an average increase of Rs. 114.64M every year. NPL of MBL is

expected to increase from Rs. 645.37M to Rs. 1,103.92M during the projection period respectively. The NPL of NBL and NCCBL is decreasing every year. The average NPL of NBL and MBL is Rs. 1,444.05M and Rs. 758.12M which is decreasing every year by Rs. -239.00M and Rs. -269.63M respectively. The NPL of NBL and NCCBL is expected to decrease from Rs. 607.55M and Rs. -185.59M in 2012 to Rs. -348.46M and -1,264.12M in 2016 respectively. The below presented Figure no. 8 explains about the trend of flow of Non Performing Loans of NBL, MBL & NCCBL.

**Figure No. 14**



Here we can see that NBL have high amount of NPL in comparison to other two sampled banks but we can see the regular decrease in the amount of NPL every year. This is because of the post effect of restructuring and rescheduling process. Hence we can say that the number of defaulters in NBL is decreasing year by year. The effort of NBL to decrease the level of NPL is quite appreciable and note worthy. On other side the decrease in the loans of advances may too be the reason for the decreasing trend of NPL. We can see that on year 2016 there is a negative figure of NPL which may not be the case during the assumption period as the bank may increase it lending and there may be the rise in the level of NPL too. Similarly the trend of NPL of NCCBL is also

in decreasing trend. The trend of MBL is moving upwards which is acceptable with the rise in the loan and advances. The level of MBL is in increasing order during the projection period.

#### 4.3.3 Trend Analysis of Loan Loss Provision

The calculated values of average loan loss provision (a), rate of change of LLP (b) and trend values of LLP for 11 years from mid July 2006 to 2016 of the sampled banks are as following: (Appendix 5)

**Table No. 17**

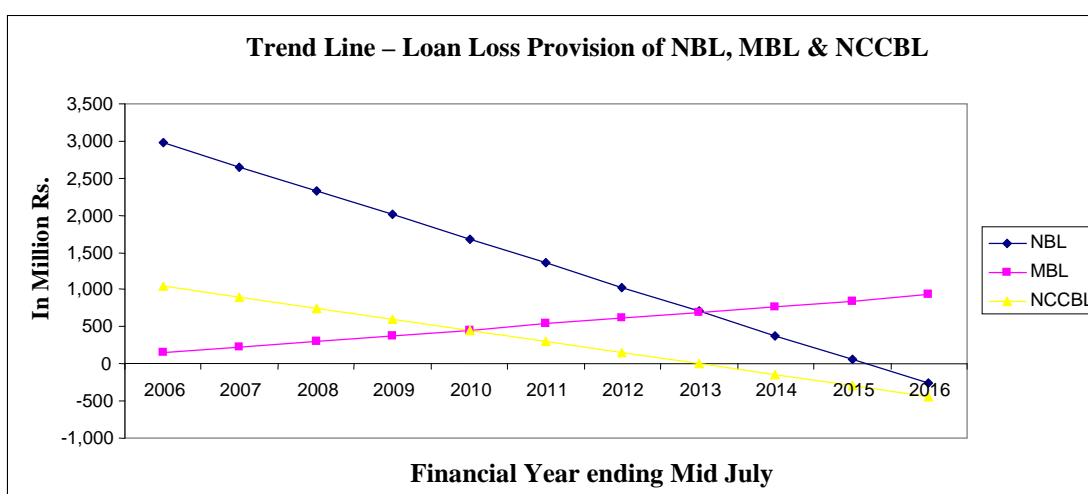
#### **Trend values of Loan Loss Provision**

<b>Years (Mid July)</b>	<b>Banks</b>		
	<b>NBL a = 2,167.45 b = (324.08)</b>	<b>MBL a = 342.87 b = 77.63</b>	<b>NCCBL a = 668.03 B = (148.46)</b>
<b>2006</b>	2,977.66	148.79	1,039.18
<b>2007</b>	2,653.57	226.42	890.72
<b>2008</b>	2,329.49	304.05	742.26
<b>2009</b>	2,005.41	381.68	593.80
<b>2010</b>	1,681.33	459.31	445.35
<b>2011</b>	1,357.24	536.94	296.89
<b>2012</b>	1,033.16	614.57	148.43
<b>2013</b>	709.08	692.20	(0.02)
<b>2014</b>	384.99	769.83	(148.48)
<b>2015</b>	60.91	847.46	(296.94)
<b>2016</b>	(263.17)	925.09	(445.40)

The above table no. 17 shows that NBL and NCCBL have decreasing trend but MBL have increasing trend of Loan Loss Provisioning. The average LLP of NBL & NCCBL is Rs. 2,167.45M & Rs.668.03M which is decreasing at the rate of Rs. -324.08M & Rs.-148.46M every year respectively. LLP of NBL is expected to decrease from Rs.

1,033.16M in 2012 to Rs. -263.17M in 2016 & LLP of NCCBL is expected to decrease from Rs. 148.43M in 2012 to Rs. -445.40M in 2016. The average LLP of MBL is Rs. 342.87M which is increasing at the rate of Rs.77.63M every year. LLP of MBL is expected to increase from Rs. 614.57M in 2012 to Rs. 925.09M in 2016. The below presented Figure no. 9 explains about the trend of increase and decrease in flow of Loan Loss Provisioning on NBL, MBL & NCCBL respectively.

**Figure No.15**



Here we can see the decreasing trend line of LLP of NBL & NCCBL. This is because of the decrease in the non performing loan of NBL & NCCBL. As we know that higher the NPL higher will be LLP. Similarly there is a rise in the LLP of MBL which is quite acceptable with the increase in the level of NPL. The trend line of NBL & NCCBL is decreasing quite notably during the forecasting period which may not be the case in actual as there may be the rise in the level of NPL in NBL & NCCBL and hence the level of LLP may also increase.

Overall we can say that the management team and the loan recovery cell of NBL & NCCBL has done appreciable job to reduce the LLP from the alarming level and the restructuring and rescheduling process has given them fruitful result.

#### 4.3.4 Trend Analysis of Net Profit

The calculated values of average Net Profit (a), rate of change of Net Profit (b) and trend values of Net Profit for 11 years from mid July 2006 to 2016 of the three banks are as follows: (Appendix 5)

**Table No. 18**  
**Trend values of Net Profit**

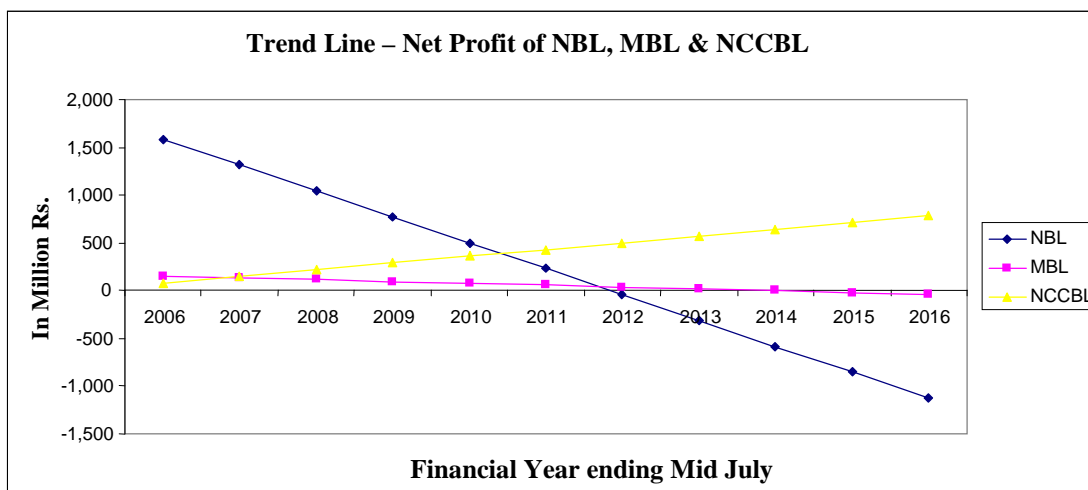
In Million Rs.

Years (Mid July)	Banks		
	NBL a = 908.60 b = (271.34)	MBL a = 105.75 b = (19.74)	NCCBL a = 250.77 b = 71.94
2006	1,586.96	155.10	70.92
2007	1,315.61	135.36	142.86
2008	1,044.27	115.62	214.80
2009	772.93	95.88	286.74
2010	501.59	76.14	358.67
2011	230.24	56.40	430.61
2012	(41.10)	36.66	502.55
2013	(312.44)	16.92	574.48
2014	(583.79)	(2.82)	646.42
2015	(855.13)	(22.56)	718.36
2016	(1,126.47)	(42.30)	790.30

The above table no. 18 shows that NCCBL have increasing trend of net profit. But NBL & MBL have a negative trend of net profit. The average net profit of NBL and MBL is Rs. 908.60M and Rs.105.75M respectively. The trend analysis of NBL & MBL shows annual reduction of Rs.-271.34 & Rs.-19.74M in net profit. Similarly, the trend analysis of NCCBL shows average net profit of Rs.250.77 with the annual increment of Rs.71.94M in net profit. The forecasting shows the reduction in net profit from Rs.-41.10 to Rs.-1,126.47 & Rs.36.66 to Rs.-42.30 from year 2012 to

2016 of NBL & MBL respectively. Similarly, the net profit of NCCBL is increasing from Rs.502.55 to Rs.790.30 from year 2012 to 2016. The below presented Figure no. 10 explains about the trend of increase and decrease in Net Profit of NBL, MBL and NCCBL respectively.

**Figure No. 16**



The above figure states that NCCBL is ahead in generating net profit and its rate of increment of net profit is higher than NBL & MBL. Even though the net profit of NBL & MBL is positive at the starting but is decreasing during the projected period. Similarly the growth rate of the net profit of NCCBL is acceptable and noteworthy.

#### **4.4 Analysis of Loan Classification and Loan Loss Provisioning Directives**

Nepal Rastra Bank, central bank of Nepal issues and amends various directives regarding banking regulation from time to time in order to streamline the financial activities and rescue the banks from financial crisis. In 2001, NRB 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 10 years,

the loan was categorized into two groups, namely large loans and small loans. The entire loan below Rs. 100,000 was categorized under small loans and rest as large loans. The classification of large loans were to be made in six categories on the basis of some clearly defined and some not so clearly defined parameters while 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 came in effect from July 16, 2001. The table no. 19 presents the major changes brought by the new directives issued in 2001.

**Table No. 19**

**Comparative Table of Loan Classification and Provisioning**

<b>Area of Changes</b>	<b>Old Directive (Effective from March 22, 1991 to July 15, 2001)</b>	<b>New Directive (Effective from July 16, 2001 onwards)</b>																								
Basis of Classification	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.	Classification to be made on the basis of ageing of past dues for all loans.																								
Loan Categorization & Provisioning	Loans are to be classified into six categories with following percent of provision.  <table border="0"> <thead> <tr> <th><b>Loan Category</b></th> <th><b>Provision</b></th> </tr> </thead> <tbody> <tr> <td>Good</td> <td>1%</td> </tr> <tr> <td>Acceptable</td> <td>1%</td> </tr> <tr> <td>Evidence of Substandard</td> <td>5%</td> </tr> <tr> <td>Substandard</td> <td>25%</td> </tr> <tr> <td>Doubtful</td> <td>50%</td> </tr> <tr> <td>Bad</td> <td>100%</td> </tr> </tbody> </table>	<b>Loan Category</b>	<b>Provision</b>	Good	1%	Acceptable	1%	Evidence of Substandard	5%	Substandard	25%	Doubtful	50%	Bad	100%	Loans are to be classified into four categories with following percent provision.  <table border="0"> <thead> <tr> <th><b>Loan Category</b></th> <th><b>Provision</b></th> </tr> </thead> <tbody> <tr> <td>Pass</td> <td>1%</td> </tr> <tr> <td>Substandard</td> <td>25%</td> </tr> <tr> <td>Doubtful</td> <td>50%</td> </tr> <tr> <td>Loss</td> <td>100%</td> </tr> </tbody> </table>	<b>Loan Category</b>	<b>Provision</b>	Pass	1%	Substandard	25%	Doubtful	50%	Loss	100%
<b>Loan Category</b>	<b>Provision</b>																									
Good	1%																									
Acceptable	1%																									
Evidence of Substandard	5%																									
Substandard	25%																									
Doubtful	50%																									
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<b>Loan Category</b>	<b>Provision</b>																									
Pass	1%																									
Substandard	25%																									
Doubtful	50%																									
Loss	100%																									
Overdue Period	<table border="0"> <thead> <tr> <th><b>Loan Category</b></th> <th><b>Overdue Period</b></th> </tr> </thead> <tbody> <tr> <td>Good</td> <td>Not Overdue</td> </tr> <tr> <td>Acceptable</td> <td>Upto 1 month</td> </tr> </tbody> </table>	<b>Loan Category</b>	<b>Overdue Period</b>	Good	Not Overdue	Acceptable	Upto 1 month	<table border="0"> <thead> <tr> <th><b>Loan Category</b></th> <th><b>Overdue Period</b></th> </tr> </thead> <tbody> <tr> <td>Pass</td> <td>Not Overdue &amp; Due upto 3 months</td> </tr> <tr> <td>Substandard</td> <td>3 to 6 months</td> </tr> </tbody> </table>	<b>Loan Category</b>	<b>Overdue Period</b>	Pass	Not Overdue & Due upto 3 months	Substandard	3 to 6 months												
<b>Loan Category</b>	<b>Overdue Period</b>																									
Good	Not Overdue																									
Acceptable	Upto 1 month																									
<b>Loan Category</b>	<b>Overdue Period</b>																									
Pass	Not Overdue & Due upto 3 months																									
Substandard	3 to 6 months																									



	Evidence of 1 to 6 months	Doubtful	6 month to 1 year
	Substandard	Substandard	6 months to 1 years
	Substandard	Doubtful	1 year to 5 year
	Doubtful	Bad	More than 5 years
	The period of overdue of each category of loan is longer.		The period of overdue of each category of loan is shorter.

Source: NRB Directives

The above table no. 19 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 safeguard the banks from crisis and to ensure that the banks remain liquid even during economic downturns.

#### **4.4.1 Analysis of Classification of Loans and Provisioning as per New Directive**

As per the new directive, loans and advances are to be classified into four categories, namely Pass, Substandard, Doubtful & Loss on the basis of ageing of past dues with provisioning of 1%, 25%, 50%, & 100% respectively. Beside this in case of insured priority sector 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, & Loss are 0.25%, 6.25%, 12.50%, & 25% respectively of the loan outstanding. In case of rescheduled or restructured or swapped loan, if such loan falls under Pass category, the minimum provisioning requirement is 12.50% 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, & 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 & Doubtful is 21%, 45% and 70% respectively. Hence it can be concluded that Loan Loss Provision

Required for different category of loan ranges as follows:

<b>Loan Category</b>	<b>Loan Loss Provision (range)</b>
Pass	0.25% to 21.00%
Substandard	6.25% to 45.00%
Doubtful	12.50% to 70.00%
Loss	25.00% to 100.00%

In addition loans and advances have to be classified on the basis of other factors too like CIB blacklisting, collateral value, misuse of fund, bankruptcy of the borrowers etc. The loan falling under Pass category is termed as performing loan and the loan falling under remaining categories is termed as Non- performing loans. The LLP set aside for performing loan is defined as General Loan Loss Provision (GLLP) and LLP set aside for Non Performing Loan is defined as Specific Loan Loss Provision (SLLP). Beside this, if a bank provides any provision in excess of the proportion required under the directives of NRB, the whole amount of such additional provision may be included in GLLP. If it is appropriate in the views of the bank management, there is not restriction in classifying the loan and advances from low risk category to high risk category. For instance, loans falling under substandard may be classified into doubtful or loss and loans falling under doubtful may be classified into loss category. The 'term' loan and advances also includes Bill purchased and Discounted. The new directive issued in 2001, regarding loan classification and provisioning was effective from fiscal year 2001/02. Three years data representing loan classification and its provisioning of the sampled banks are analyzed as follows.

**Table No. 20**

**Loan Classification and Provisioning of NBL**

In Million Rs.

Particulars	As on 31st July 2009				As on 31st July 2010				As on 31st July 2011			
	Loan US	% of Total Loan	LLP	LLP % to Total US	Loan US	% of Total Loan	LLP	LLP % to Total US	Loan US	% of Total Loan	LLP	LLP % to Total US
Performing Loan	18,075.00	92.41	565.00	3.13	23,708.90	94.64	509.09	2.15	25,171.00	94.26	770.00	3.06
Pass (1%)	18,075.00	92.41	565.00	3.13	23,708.90	94.64	509.09	2.15	25,171.00	94.26	770.00	3.06
Non-Performing Loan	1,485.00	7.59	1,380.00	92.93	1,343.00	5.36	983.09	73.19	1,534.00	5.74	1,265.00	82.46
Restructured (12.50%)	513.00	2.65	455.00	89.77	124.00	0.48	16.00	12.90	181.00	0.69	23.00	12.50
Substandard (25%)	67.00	0.33	20.00	30.77	326.00	1.30	32.00	25.15	78.00	0.29	50.00	25.64
Doubtful (50%)	15.00	0.09	11.00	61.11	16.00	0.06	3.00	50.00	100.00	0.37	50.00	50.00
Loss (100%)	885.00	4.52	881.00	100.00	877.00	3.50	877.09	100.00	1,172.00	4.39	1,172.00	100.00
Additional Provision												
<b>Total</b>	<b>19,560.00</b>	<b>100.00</b>	<b>1,945.00</b>		<b>25,051.90</b>	<b>100.00</b>	<b>1,492.09</b>		<b>26,705.00</b>	<b>100.00</b>	<b>2,035.00</b>	

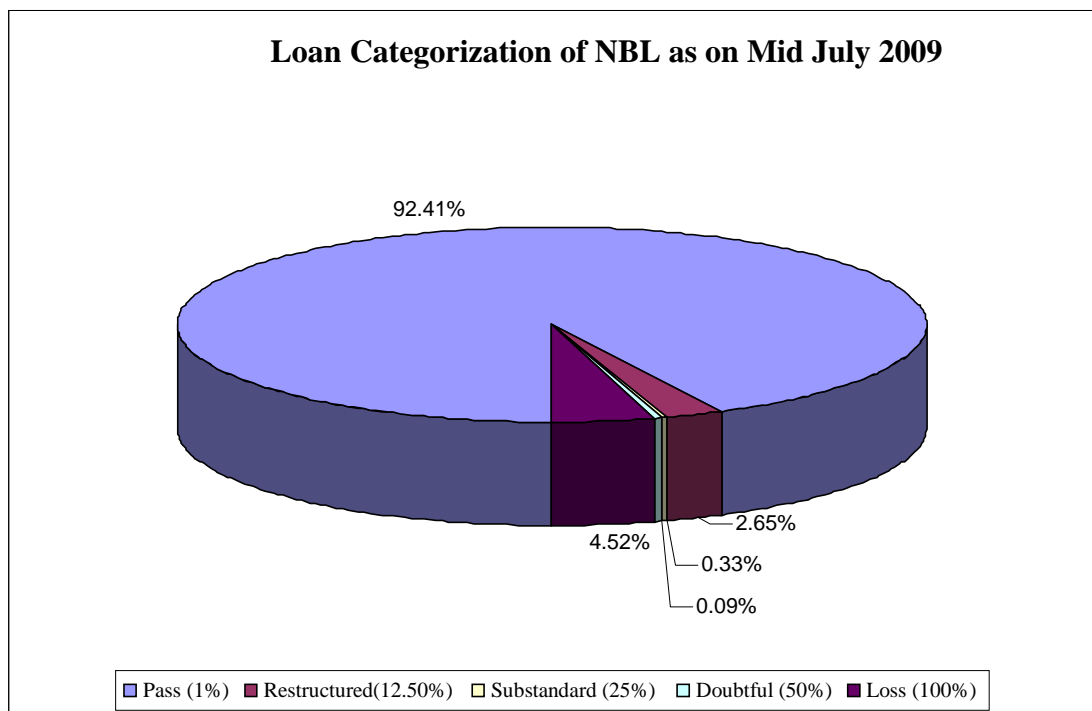
(Source: NBL & NRB)

The above table no. 20 shows different categories of loans and advances and the provision provided to each category of loans of NBL for the fiscal year 2008/09, 2009/10 & 2010/11. Here we can see the flow of loans and advances outstanding during the study period i.e. Rs. 19,560M, Rs. 25,051M & Rs. 26,705M for 2009 2010 & 2011 respectively. In the year 2009 out of the total loan Pass, Restructured, Substandard, Doubtful and Loss loan comprises 92.41%, 2.65%, 0.33%, 0.09% & 4.52% respectively. Hence 92.41% of total loan is performing and remaining 7.59% is non-performing. LLP of Rs. 565M is done for the Pass Loan and Rs. 1,380 for the remaining. Further in the year 2010 out of the total loan Pass, Restructured, Substandard, Doubtful and Loss loan comprises 94.64%, 0.49%, 1.30%, 0.06% & 3.50% respectively. Hence 94.64% of total loan is performing and remaining 5.36% is non-performing. LLP of Rs. 509M is done for the Pass loan and Rs. 983M for the remaining category of loan. Similarly in the year 2011 out of the total loan Pass, Restructured, Substandard, Doubtful and Loss loan comprises 94.26%, 0.69%, 0.29%,

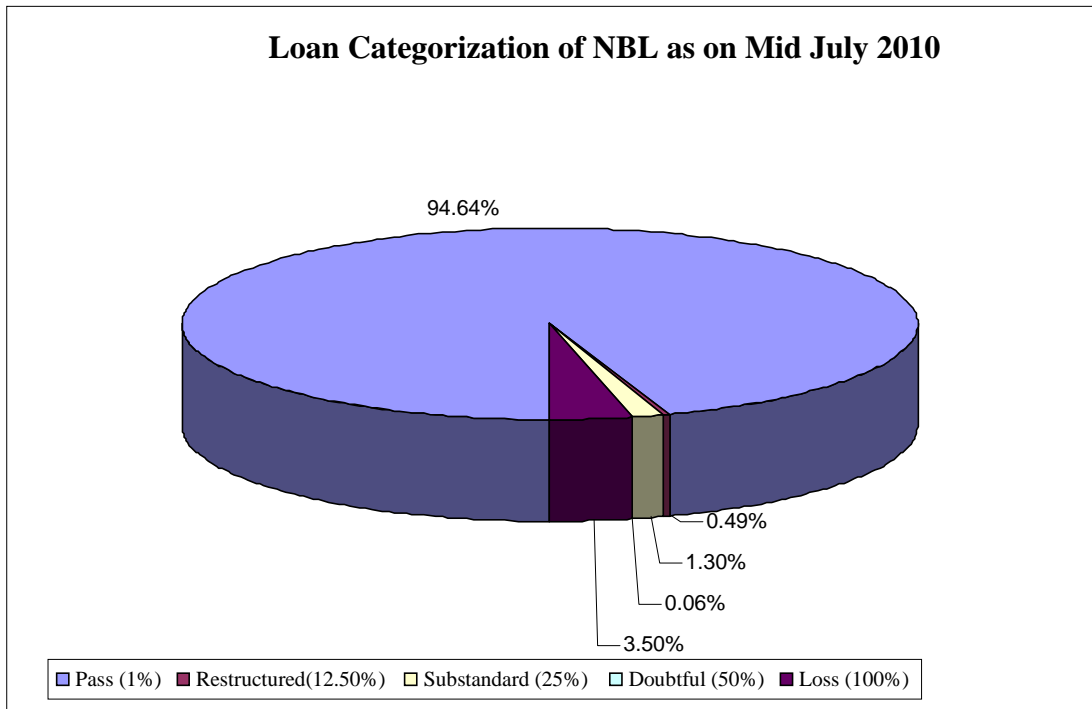
0.37% & 4.39% respectively. Hence 94.26% of total loan is performing and remaining 5.74% is non-performing. LLP of Rs. 770M is done for the pass category of loan and remaining Rs. 1,265M for the other category.

Following Pie-charts presents the loan categorization of NBL for 2009, 2010 & 2011 respectively.

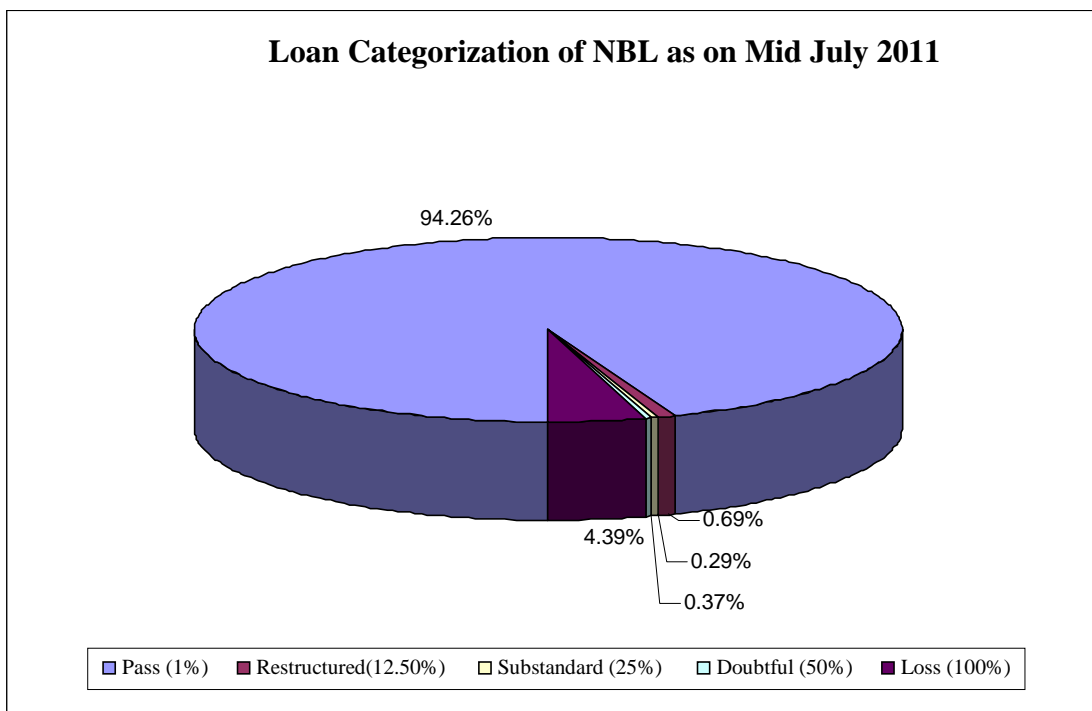
**Figure No. 17**



**Figure No. 18**



**Figure No. 19**



**Table No. 21**

**Loan Classification and Provisioning of MBL**

In Million Rs

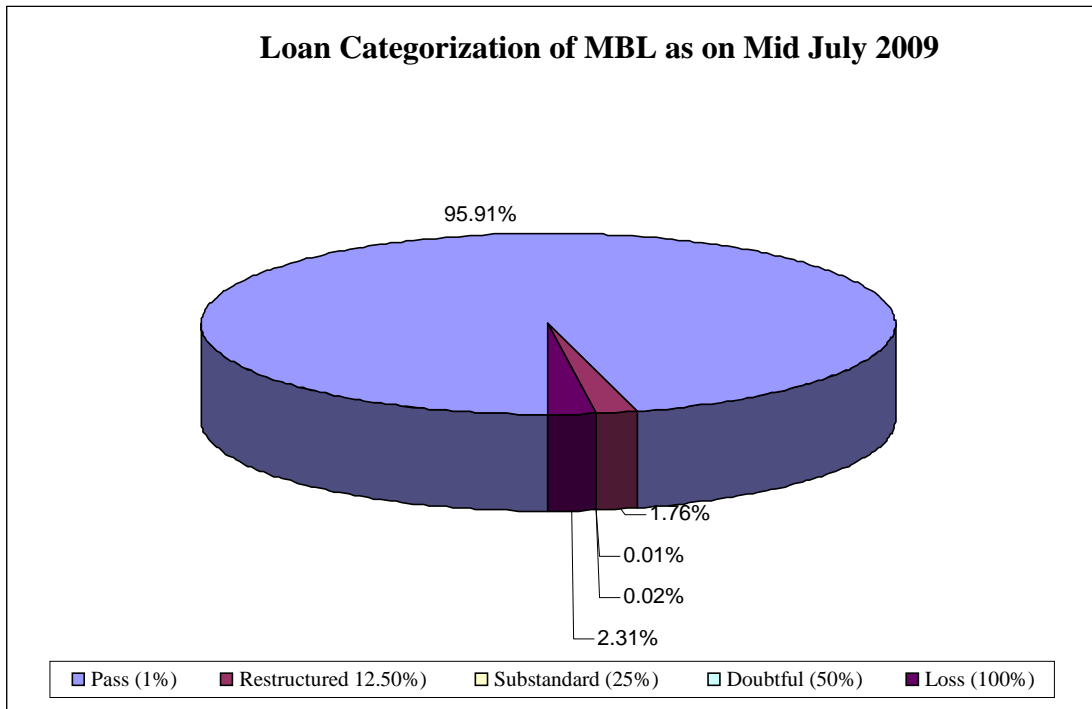
Particulars	As on 31st July 2009		As on 31st July 2010				As on 31st July 2011				
	Loan US	% of Total LLL Loan	LLP % to Loan US Loan US	% of Total LLP Loan	LLP % to Loan US	Loan US	% of Total LLP Loan	LLP % to Loan US	Loan US	% of Total LLP Loan	LLP % to Loan US
Performing Loan	12,453.60	95.91	1.01	14,446.09	96.49	291.00	2.01	14,117.00	95.83	147.00	1.04
Pass (1%)	12,453.00	95.91	1.01	14,116.00	96.45	291.00	2.01	14,117.00	95.83	147.00	1.01
Non Performing Loan	531.40	4.09	342.50	64.50	526.09	3.51	392.00	74.52	614.00	4.17	175.00
Restructured (12.50%)	226.00	1.76	41.00	17.98	173.00	1.19	22.00	15.36	136.00	2.97	59.00
Substandard (25%)	1.00	0.01	0.50	59.00	40.00	0.27	18.00	1.00	91.00	0.62	37.00
Doubtful (50%)	2.00	0.02	1.00	50.00	33.00	0.25	19.00	50.00	12.00	0.08	6.00
Loss (100%)	300.00	2.31	300.00	199.00	270.09	1.80	333.00	122.33	73.00	0.50	73.00
Admitted Provision											
<b>Total</b>	<b>12,984.60</b>	<b>100.00</b>	<b>468.50</b>	<b>14,972.09</b>	<b>100.00</b>	<b>683.00</b>		<b>14,731.00</b>	<b>100.00</b>	<b>322.00</b>	

(Source: MBL & NRB)

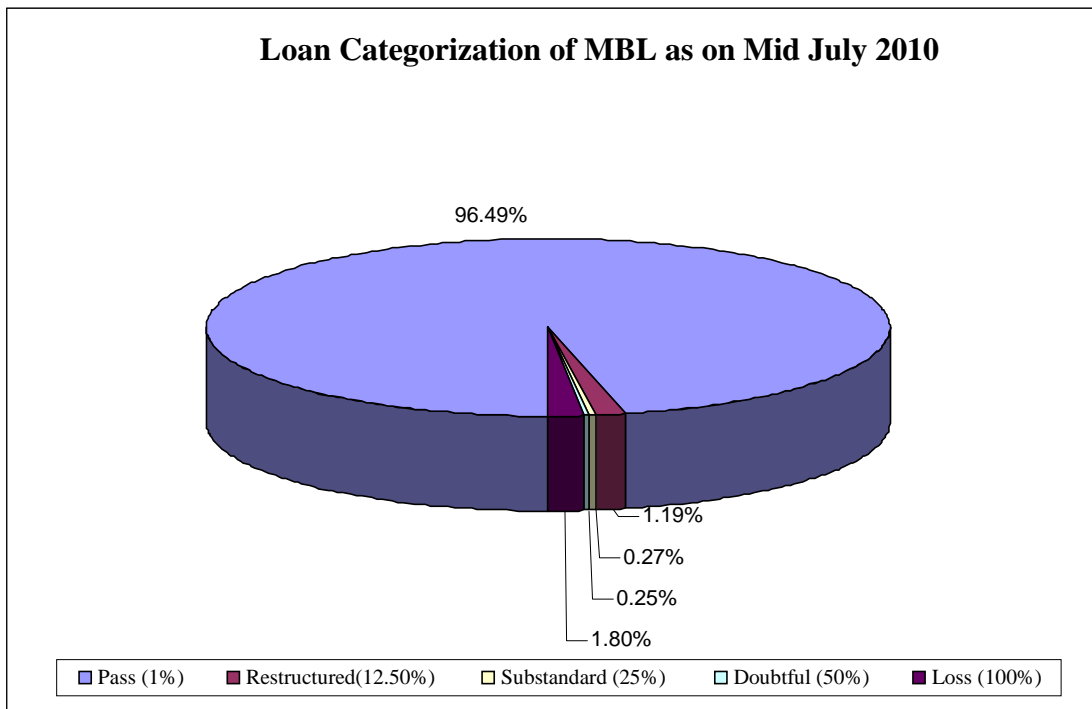
The above table shows different categories of loans and advances and the loan loss provision to each category of loans of MBL for the fiscal year 2008/09, 2009/10 & 2010/11. Here we can see loans and advances outstanding during the study period i.e. Rs. 12,984M, Rs. 14,972M & Rs. 14,731M for 2009, 2010 & 2011 respectively. In the year 2009 out of the total loan Pass, Restructured, Substandard, Doubtful and Loss loan comprises 95.91%, 1.76%, 0.01%, 0.02% & 2.31% respectively. Hence 95.91% of total loan is performing and remaining 4.09% is non-performing. Further in the year 2010 out of the total loan Pass, Restructured, Substandard, Doubtful and Loss loan comprises 96.49%, 1.19%, 0.27%, 0.25% & 1.80% respectively. Hence 96.49% of total loan is performing and remaining 3.51% is non-performing. Similarly in the year 2011 out of the total loan Pass, Restructured, Substandard, Doubtful and Loss loan comprises 95.83%, 2.97%, 0.62%, 0.08% & 0.50% respectively. Hence 95.83% of total loan is performing and remaining 4.17% is non-performing.

Following Pie-charts presents the loan categorization of MBL for 2009, 2010 & 2012 respectively.

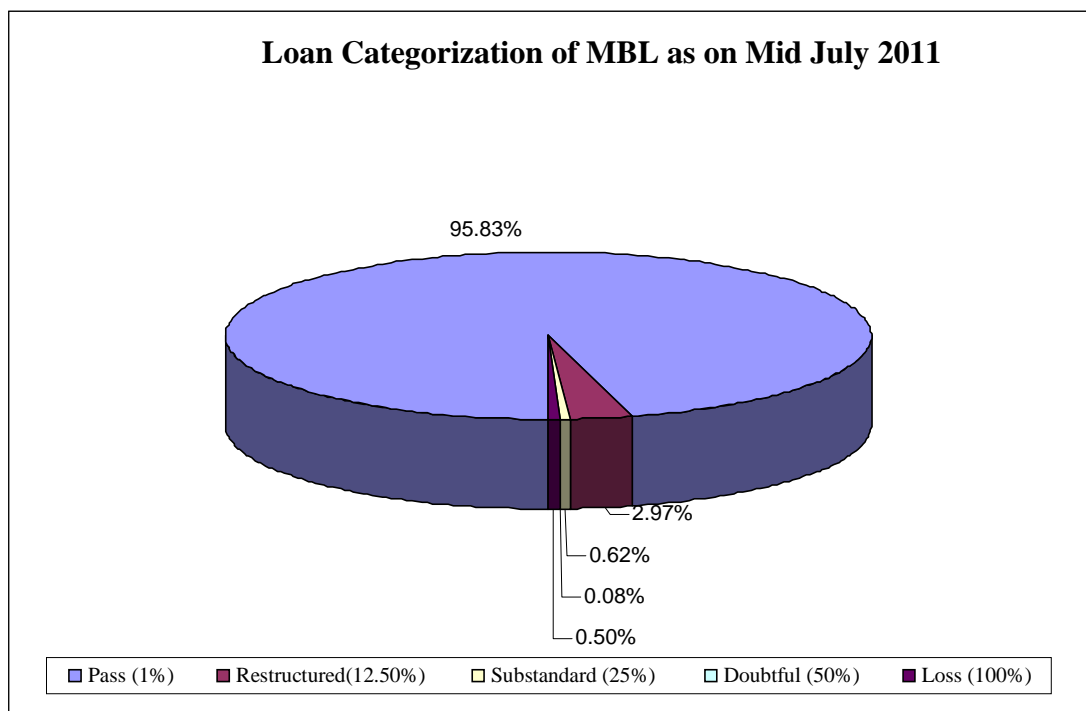
**Figure No. 20**



**Figure No. 21**



**Figure No. 22**





**Table No. 22**

**Loan Classification and Provisioning of NCCBL**

In Million Rs

Particulars	As on 30th July 2009				As on 30th July 2010				As on 30th July 2011			
	Loan US	% of Total Loan	L.P.	LLP % to Loan US	Loan US	% of Total Loan	L.P.	LLP % to Loan US	% of Total Loan	L.P.	LLP % to Loan US	
Performing Loan	6,861.00	95.52	73.00	1.06	8,036.00	95.74	87.00	1.08	8,877.00	96.18	98.00	1.10
Pass (%)	6,861.00	95.52	73.00	1.06	8,036.00	95.74	87.00	1.08	8,877.00	96.18	98.00	1.10
Non Performing Loan	322.00	4.48	252.00	78.26	357.00	4.26	307.00	85.99	353.00	3.82	295.00	83.57
Restructured (12.50%)	125.00	1.71	72.00	57.60	118.00	1.38	109.00	91.97	101.00	1.13	103.00	93.11
Substandard (25%)	12.00	0.17	3.00	25.00	21.00	0.25	8.00	38.10	41.00	0.48	11.00	25.00
Doubtful (50%)	12.00	0.17	6.00	50.00	58.00	0.69	29.00	50.00	52.00	0.56	28.00	53.85
Loss (100%)	173.00	2.41	171.00	98.84	162.00	1.93	161.00	99.38	153.00	1.66	152.00	100.00
Additional Provision												
<b>Total</b>	<b>7,183.00</b>	<b>100.00</b>	<b>325.00</b>		<b>8,387.00</b>	<b>100.00</b>	<b>394.00</b>		<b>9,230.00</b>	<b>100.00</b>	<b>393.00</b>	

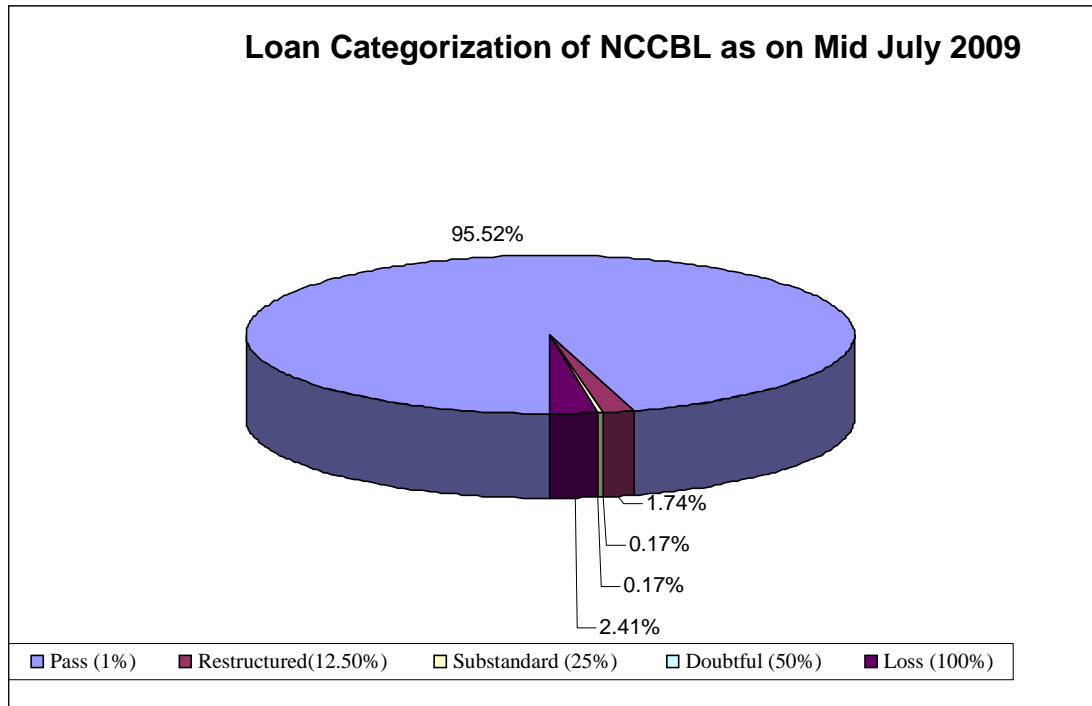
(Source: NCCBL & NRB)

The above table no. 22 shows different categories of loans and advances and the provision provided to each category of loans of NCCBL for the fiscal year 2008/09, 2009/10 & 2010/11. Here we can see the flow of loans and advances outstanding during the study period i.e. Rs. 7,183M, Rs. 8,387M & Rs. 9,230M for 2009, 2010 & 2011 respectively. In the year 2009 out of the total loan Pass, Restructured, Substandard, Doubtful and Loss loan comprises 95.52%, 1.74%, 0.17%, 0.17% & 2.41% respectively. Hence 95.52% of total loan is performing and remaining 4.48% is non-performing. LLP of Rs. 73M is done for the Pass Loan and Rs. 252 for the remaining. Further in the year 2010 out of the total loan Pass, Restructured, Substandard, Doubtful and Loss loan comprises 95.74%, 1.38%, 0.25%, 0.69% & 1.93% respectively. Hence 95.74% of total loan is performing and remaining 4.26% is non-performing. LLP of Rs. 87M is done for the Pass loan and Rs. 307M for the remaining category of loan. Similarly in the year 2011 out of the total loan Pass, Restructured, Substandard, Doubtful and Loss loan comprises 96.18%, 1.13%, 0.48%, 0.56% & 1.66% respectively. Hence 96.18% of total loan is performing and

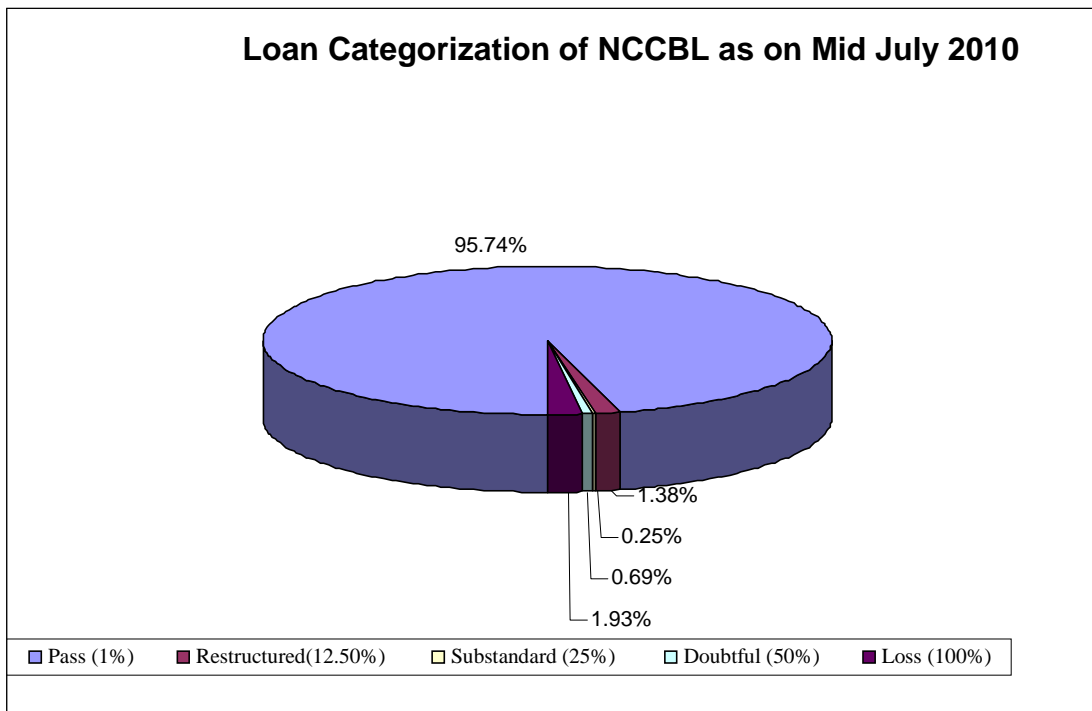
remaining 3.82% is non-performing. LLP of Rs.98M is done for the pass category of loan and remaining Rs.295M for the other category.

Following Pie-charts presents the loan categorization of NCCBL for 2009, 2010 & 2011 respectively.

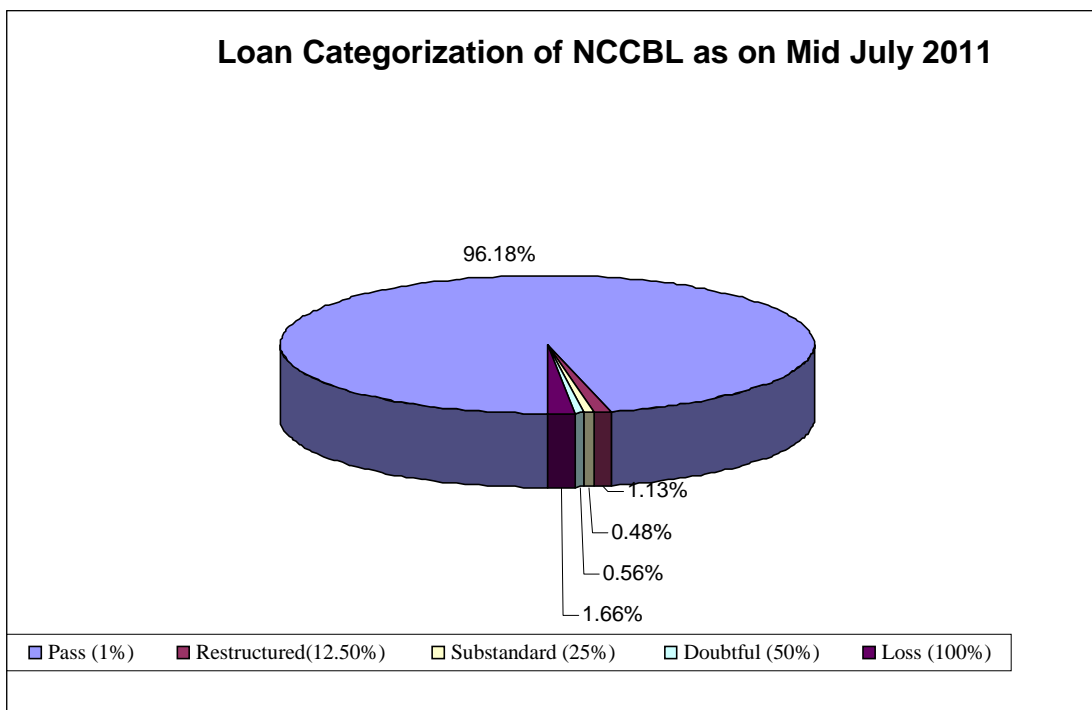
**Figure No. 23**



**Figure No. 24**



**Figure No. 25**



Loan Loss Provisioning is deducted from the profit of the banks so it has a great impact on profitability of the banks. Hence increase in LLP means decrease in the net

profit of the banks. This directly impacts of the Earning Per Share (EPS), Dividend Per Share (DPS) and Market Value Per Share (MVPS). However, the impact of Loan Loss Provision on profitability of banks is of short term. When banks have enough provision for the loss loans the profitability can rise up. Hence in the long run 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 analysis of the data of NBL, MBL & NCCBL, following findings have been obtained.

The average loans and advances to total assets ratio of NBL, MBL & NCCBL during the study period is found to be 36.21%, 68.17% & 59.89%. The loan and advances in comparison to the total assets is very low. The relatively low ratio of NBL is the indication of risk averse attitude that the management team is implementing to reduce the percentage of the NPL. NBL shows the highest degree of variation with high degree of deviation. The mean ratio and deviation is lowest in MBL. The loans and advances of MBL & NCCBL is increasing with the increase in the total assets. NCCBL is moderate in terms of ratio and its variation.

The core banking function is to mobilize the funds obtained from the depositors. CD ratio simply helps in measuring how successfully banks are utilizing their total deposit on creating credit. The average CD ratio of NBL, MBL & NCCBL during the study period is found to be 44.87%, 81.07% & 80.07% respectively. The average CD ratio of MBL and NCCBL is nearly same but the CD ratio of NBL is relatively low with

high deviation and variability in comparison to MBL and NCCBL. NCCBL is moderate among the three banks in terms of ratio, its deviation and variability.

The level of NPL determines the profitability of the bank. Higher the level of NPL in total loans and advances lower will be the return. The average NPL to total loans of NBL, MBL & NCCBL were 9.02%, 1.91% & 13.16% respectively. The level of NPL of NBL & NCCBL is very high among the sampled banks. However in recent years NBL has shown significant decrement in NPL which is the result of the restructuring and rescheduling process and efforts to recover the bad debts by the management team. The level of NPL in total loans and advances of MBL is very low with least of deviation among the sampled banks. The study also shows that the level of NPL of all three sampled banks is decreasing year by year.

The level of NPL also determines the percentage provisioning which have to be done as per the new directives of NRB. Higher the level of NPL in total loan higher will be the LLP. The average LLP of NBL is higher than the average LLP of MBL and NCCBL. The average LLP of NBL, MBL & NCCBL is 13.35%, 3% & 11.36% respectively. Here we can see NBL have higher level of LLP with the high level of NPL and MBL with lower LLP with low NPL. The level of LLP in total loans and advances is decreasing year by year which means NBL's quality of loans and advances is improving. NCCBL has highest deviation and variation among the sample banks.

The average LLP to total NPL of NBL, MBL & NCCBL was found to be 164.56%, 242.49%, & 110.16% respectively. MBL have highest provisioning in comparison to

other two banks, which portrays that the bank has adequate provision against non-performing loan but the ratio of NCCBL is comparatively low. NBL is moderate in terms of ratio with minimum of deviation and variability. The level of NPL of NBL is decreasing year by year which have resulted in decreasing level of LLP.

The ratio of Net Profit to Total Loan & Advances indicates how efficiently the bank has employed its resources in the form of loans and advances. The main objective of commercial banks is to earn profit through mobilization of fund. The ratio of all three sampled banks is fluctuating and volatile during the study period. The overall ratio of three banks has been ranged from (2.04) % on 2007 of NCCBL to 18.73% on 2006 of NBL respectively. The mean ratio of NBL, MBL and NCCBL is 5.94%, 1.20 % and 3.56% respectively. Thus it can be interpreted that NBL has high percentage of deviation and variation. NCCBL is moderate in terms of deviation and variability of ratio during the study period. Similarly, MBL has least movement in the ratio resulting in the low variability with minimum risk in comparison to other sampled banks.

The correlation coefficient between LLP and loans and advances of NBL, MBL & NCCBL is -0.8912, 0.8177 & -0.8007. The correlation coefficients of NBL & NCCBL are -0.8912 & -0.8007 and it is less than six times the value of P.E. Hence there is negative correlation between LLP and Loans and Advances of NBL & NCCBL and its correlation coefficient is insignificant. The correlation coefficient of MBL is 0.8177 and its P.E. is 0.0912 and 6P.E. is 0.5474. Since  $r$  is greater than P.E., there is positive correlation between LLP and Loans and Advances of MBL and further  $r$  is greater than 6P.E. the correlation coefficient is said to be significant.

The analysis of correlation between loan and advances and deposit revealed high degree of positive correlation between loans and advances and deposit of NBL, MBL & NCCBL. The respective values of correlation coefficient of NBL, MBL & NCCBL are 0.8382, 0.9880 & 0.9645 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 of NBL, MBL & NCCBL is certain and significant. That means increase in the volume of deposit leads to increment in loans and advances of NBL, MBL & NCCBL.

Trend analysis was done based on the data of past six years and forecast was made for next five years. The trend of loans and advances showed increasing trend in NBL, MBL and NCCBL.

The study of trend analysis of NPL showed that NPL is increasing in case of MBL but is decreasing in case of NBL & NCCBL. The NPL of NBL & NCCBL is decreasing every year at the rate of Rs.2394M & Rs.269.63M respectively. The study also revealed that the NPL level of MBL is increasing at the rate of Rs.114.64M every year. The decreasing level of NPL of NBL is due to its efforts towards recovering bad debts. The management team of NBL & NCCBL seems qualified in handling the NPL level then that of MBL.

From the trend analysis of LLP, it is found that the LLP is expected to increase in coming years for MBL and decrease for NBL & NCCBL. The LLP of NBL & NCCBL is decreasing at the rate of Rs.324.08 & Rs.148.46 respectively. The level of LLP of MBL is increasing every year at the rate of Rs.77.63M. The decreasing trend in LLP of NBL & NCCBL is due to its recovery efforts toward reducing NPL. The

rise in the level of LLP is acceptable with the increase in the loan and advances and NPL.

From the trend analysis of net profit, it is found that net profit is expected to increase in coming years for NCCBL. The trend shows decrease in net profit of NBL & MBL. The analysis shows the increment of net profit every year by Rs.71.94 of NCCBL. The analysis shows the net profit of NBL & MBL is decreasing by Rs.271.34 & Rs. 19.74 respectively. Hence the management team of NBL & MBL has to take major steps towards recovering bad debts and minimizing operating cost to increase the level of profit.

As per the latest directive, loans and advances have to be classified into four categories, namely Pass, Substandard, Doubtful & Loss with provisioning of 1%, 25%, 50% & 100% respectively on the basis of ageing of past dues. Beside this in case of insured priority and deprived sector loan, the provisioning requirement is one-fourth of that of normal loan loss provisioning requirement. The respective provisioning requirement for Pass, Substandard, Doubtful & Loss are 0.25%, 6.25%, 12.50% & 25% of the loan outstanding. In case of rescheduled or restructured or swapped loan, if such loan falls under Pass category, the minimum provisioning requirement is 12.50% 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 & Doubtful is 21%, 45% & 70% respectively.

From the analysis of loan classification and provisioning of NBL it has been found that out of the total loan Pass, Restructured, Substandard, Doubtful & Loss loan



comprises 92.41%, 2.65%, 0.33%, 0.09% & 4.52% respectively in mid July 2009 and that of mid July 2010 is 94.64%, 0.49%, 1.30%, 0.06% & 3.50% and that of mid July 2011 is 94.26%, 0.69%, 0.29%, 0.37% & 4.39% respectively. NBL has the highest proportion of loss loans which is an indication of bad quality of its assets.

From the analysis of loan classification and provisioning of MBL it has been found that out of the total loan Pass, Restructured, Substandard, Doubtful & Loss loan comprises 95.91%, 1.76%, 0.01% 0.02% & 2.31% respectively in mid July 2009 and that of mid July 2010 is 96.49%, 1.19%, 0.27%, 0.25% & 1.80% and that of mid July 2011 is 95.83%, 2.97%, 0.62%, 0.08% & 0.50% respectively. MBL has the highest proportion of performing loan with the NPL less than 5% which shows the good quality of assets.

From the analysis of loan classification and provisioning of NCCBL it has been found that out of the total loan Pass, Restructured, Substandard, Doubtful & Loss loan comprises 95.52%, 1.74%, 0.17%, 0.17% & 2.41% respectively in mid July 2009 and that of mid July 2010 is 95.74%, 1.38%, 0.25%, 0.69% & 1.93% and that of mid July 2011 is 96.18%, 1.13%, 0.48%, 0.56% & 1.66% respectively. NCCBL has the highest proportion of performing loan with the NPL less than 5% which shows the good quality of assets.

NPL and its increasing level resulting rise in the LLP is burning problem of Nepalese banking sector. Improper credit appraisal system, ineffective credit monitoring & supervision system, economic slow down, borrower's misconduct, political pressure to lend to un-creditworthy parties etc are the major factors leading to non-performing assets. Setting up recovery cell, hiring Assets Management Company etc are some of

the measures to resolve the problem of NPA. Loan classification and loan loss provisioning also helps to confront the problem created due to non-performing loan. 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

Finally this chapter includes the summary, conclusions and recommendation based on the result of the analysis of the data.

### 5.1 Summary

Financial sector have major role to play in the development of the country. Banks are the financial regulator, which collects funds and invest them in productive sectors. There is not so long history of commercial banks in Nepal. Nepal Bank Limited is the first bank in Nepal, established in 30th Kartik, 1994. But now there are 31 Commercial banks as per Nepal Rastra Bank, Banking and Financial Statistics, Mid-July 2011 extending their services in different part of the country.

The successful working of the banks depends on ability of the management to distribute the fund among the various kinds of investment known as loans and advances. Loans and advances are the most profitable assets of a bank. These assets constitute primary source of income to the bank. As being a business institution a bank aims at making huge profit since loans and advances are more profitable than any other assets of the bank, it is willing to lend as much as its fund as possible. But bank have to be careful about the safety of such loan and advances. It means the bank has to be careful about the repayment of loan and interest before giving loan.

This research is aimed at studying the non-performing loan and loan loss provisioning of commercial banks. For this purpose, descriptive cum analytical research design was adopted. Out of the total population of 31 commercial banks, only three banks were taken as sample using judgmental sampling method. Nepal bank limited was selected from public sector banks and Machhapuchchhre Bank Limited & Nepal Credit and Commerce Bank Limited were selected from private sector banks. Secondary data have been used in the study. Secondary data were collected from annual reports and other publication. The data collected from various sources are recorded systematically and presented in appropriate forms of tables and charts and appropriate mathematical, statistical, financial, graphical tools have been applied to analyze the data. The data of six consecutive years of the three selected banks have been analyzed to meet the objective of the study.

NCCBL and MBL have the highest proportion of the loans and advances in the total asset structure but NBL have relatively lower loan and advances in the total assets structure during the study period. It indicates the risk adverse attitude of the management of NBL. But further we can also see increasing trend of loan and advances of NBL in comparison to the increase in the total assets. Same thing in case of NBL can be known on the basis of the loan and advances to total deposit ratio. There is higher proportion of non-performing loan in the total loans and advances of NCCBL, which comes around 13.16% on average, which is very much higher than the acceptable standard of 5%. Since higher provision has to be made for NPL, its loan loss provision is also significantly higher than other two banks. But we can see the decrease in the level of NPL to total loan and advances of NCCBL every year.

Regarding NPL and LLP, NBL is moderate among the three and NCCBL has the least NPL and accordingly the least LLP.

The restructuring and rescheduling process going on NBL have brought positive result to the bank. We can see that the net profit of NBL in lower figure at the early years of study but we can see a significant rise in the net profit at the end of the study period. The high return on loan and advances of NBL is not due to the higher amount of investment in the form of loan and advances as we can see that the loan and advances of NBL is decreasing year by year and is at minimum at the end of the study period. It is simply because of successful effort made by bank to recover the bad debts. Similarly we can see that the net profit of NCCBL is in negative figure in 2007 and positive in the end of the study period because of the default of some credit customer.

There is positive correlation between LLP and loans and advances of MBL & negative correlation of NBL & NCCBL. The provisioning amount 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 also increase. In case of NBL the level of NPL is decreasing with the increase in the loan and advances. But the study presented that the level of NPL of MBL is increasing with the increase in the loans and advances. The same indication can be found from the study of correlation between LLP and NPL of all the three banks. The LLP of NBL & NCCBL is very high then the level of NPL which shows the negative correlation but we can also summarize that NBL & NCCBL have made sufficient provisioning for its bad loans.

The trend analysis of loans and advances shows increasing trend in case of all three sampled banks during the study period. The trend analysis of NPL show that the level of NPL of NBL & NCCBL is decreasing year by year with the increase in the level of loan and advance. Similarly the level of NPL of MBL is increasing year by year with the increase in the level of loan and advances.

Further the trend analysis shows that LLP of NBL & NCCBL is also decreasing with the decrease in the NPL. Here we can also see that the Loan and advances of NBL & NCCBL is increasing in the future analysis. This may not be the case in real time as the increase in the level of loan and advance will force increase in the level of NPL & LLP of NBL & NCCBL. The trend analysis of MBL on loan and advances, NPL & LLP is seemed quite realistic as its shows increase in the level of NPL & LLP with the increase in loan and advances.

Similarly, during the study period the net profit of the sampled bank is not increasing with the increase in the level of loan and advances hence, resulted in the negative return of net profit of NBL & MBL during the forecast period. Again this may not be the result in the actual time as the management of this bank may apply strong recovery policy. Further there may also be refund of LLP due to proper recovery policy and recovery of bad debt. The trend analysis shows the increasing trend of net profit of NCCBL.

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 provisioning of 1%, 25%, 50% and 100% respectively. The loan falling under Pass category is regarded as performing loan and the other as non-performing loan. NBL has the highest proportion of loss graded loan followed by doubtful loan in the total NPL which is an indication of bad quality of assets of NBL in the form of loans

and advances. NCCBL have higher proportion of loss loan followed by doubtful. NPL of NBL is above and NPL of MBL & NCCBL is below the international standard of 5%.

In the distant past, banks had to deal with only few cases of bad-loans. For the last ten/twelve years, banks are suffering from a large chunk of non-performing loans (assets) as a consequence of economic as well as non-economic factors in the country. Improper credit appraisal system, ineffective credit monitoring and supervision system, economic slowdown, borrower's misconduct, over valuation of collateral, political pressures to lend to un-creditworthy parties etc are the major factors leading to non-performing assets. Recovery of bad loans by banks and financial institutions has turned into a big issue in the financial sector of Nepal. This has greatly caused negative impact upon Banks' profit, government revenue and the overall financial sector of the country. This calls for an effective system and mechanisms that ease the early recovery of debts of Banks and also of bank-like institutions as specified by Nepal Rastra Bank-the Monetary Authority. Setting up recovery cell, hiring Assets Management Company etc are some of the measures to resolve the problem of NPA. Loan classification and loan loss provisioning also helps to confront the problems created due to non-performing loan. 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 bank leading to decrease in profitability of the bank.

## 5.2 Conclusions

Banking sector in Nepal has expanded substantially in the last one and a half decade, following the financial liberalization policy. People now have several choices in pursuing their banking activities. This sector has gradually embraced modern technologies to deliver value added product and services to its clientele. However, the expansion and adoption of new technologies has brought new types of risk to the fore, the management of which is crucial for the bank and the banking industry in the long run. At the beginning of the 1980s when financial sector was not liberalized, there were only two commercial bank, and two development banks performing banking activities in Nepal. Consequently, by the end of mid – July 2011, altogether 272 banks and non- bank financial institutions licensed by NRB are in operation. Out of them, 31 are “A” class commercial banks, 87 “B” class development banks, 79 “C” class finance companies, 21 “D” class micro-credit development banks, 16 saving and credit co-operatives and 38 NGOs. In mid- July 2011, the commercial banks branches reached to 1245 with the population of twenty one thousand per branch..

➤ Nepalese banking industry is faced with variety of serious challenges the prominent being the management of large volume of non performing loans and the development of corporate values and ethics among the stakeholders in the banking industry. There is already a stiff competition between the market players and the possibility of entry of new players is going to further add to the pressure. So, in such a scenario, stakeholders including NRB have to be vigilant that banks do not compromise on the prudent risk management practices in order to survive the competition, which might ultimately lead to the bank failure. At the same time, NRB



has to keep tight vigil in the banking industry so as to be able to take corrective measures in creating and maintaining a stable and a sound banking industry.

➤ It has been found that successful restructuring of NBL have resulted to decrease in the level of NPL during the study period resulting in less provisioning. The loan and advances of NBL is also found in decreasing trend hence we can conclude that the ongoing restructuring and rescheduling process have resulted in low level of investment in the form on loan and advances. The overall deposit level is at the constant level this may be due to the low rate of interest NBL is providing to its deposit customer. Total assets of NBL seem to be less volatile and have remained in same level but have a slight decrease in 2010. The net profit of NBL is increasing from 2007 to 2009. The result is due to the recovery of the bad debts and reduction in operating cost. So we can say that the ineffectiveness of NBL towards creating area of investment the cost of fund is high. NBL have to create new are of lending so that it can return interest to the depositors and still make profit in the future.

➤ The total loan and advances, assets, deposits and net profit of MBL is increasing year by year where as the level of NPL is not increasing as much to the ratio of increment in the other balance sheet and off balance sheet items. The increase in the LLP shows the sound position of MBL to recover form the loss created by the defaulters.

➤ Similarly we can see that the net profit of NCCBL is negative at the end years of the study period. This is because of the high level of NPL resulting in the high amount of LLP which have the direct effect in the net profit of the bank. But we can

also see that the level of loan and advances, total assets and deposit is increasing year by year.

➤ The quality of loan has a direct bearing on the bank's financial health. The banks are required to develop reserves and provision in accordance to the quality of loans. A rapidly deteriorating loan portfolio is a huge drain on the bank's profitability and subsequently on the capital adequacy. This has the potential to erode the bank's capital in no time. Thus, the quality of loan is arguably the key determinant of bank's financial health. Among other factors, it was the quality of loan portfolio of two of the largest Nepalese banks which required the supervisory intervention. Poor corporate governance and risk management practices are the key reasons for high level of NPL in our banking system. Other causes are economic slowdown, legal hurdles in recovery and poor quality of credit information. Management practices in many banks are still very weak, particularly in the areas of credit analysis, credit administration and risk management and internal control system. Hence, the management of NPL is a great challenge for the Nepalese banking sector. It is high time that we start strengthening and reshaping the reform process. It is a must not only to capitalize on the achieved robustness of the banking industry, but also to integrate it with the global economy deep into the twenty first century.

➤ We can say that continual review and classification of loans enables banks to monitor quality of their loan portfolio and to take remedial action to counter deterioration in credit quality. In addition to this establishing recovery cell, hiring Assets Management Company are also measures to resolve the problem of NPL. The

present loan classification and provisioning directives seems more stringent than the previous one.

### **5.3 Recommendations**

High level of non-performing loan not only decreases the profitability of banks but also affect the entire financial as well as operational health of the organization. If the NPA level is not controlled immediately, it will be main cause for failure of bank in future. Therefore following are some of the recommendations which will help to reduce the level of NPA of Nepalese Commercial Banks:

☞ The successful restructuring of NBL resulted in better performance. The bank was experiencing continuous loss trend but it turned to post a profit after the foreign management team succeeded to decrease the level of NPL and operating cost. However now NBL functioning under the management team of NRB must find new sources of equity. NBL must reestablish an equity base in compliance with the rules and regulations of the Nepal Rastra Bank capital adequacy requirements as quickly as possible. Profitable operations in the bank must be expanded to support the new equity base and to spur growth in the bank, in our customers and the economy as well.

☞ The average CD ratio of NBL, MBL & NCCBL during the study period is found to be 44.87%, 81.07% & 80.07% respectively. The average ratio of MBL and NCCBL is nearly same but the CD ratio of NBL is relatively low. The average CD ration around 70-80% is considered as appropriate. It has also been observed that the loans and advances of NBL is increasing but not in ratio to the increase in the level of total assets and deposit. Hence it is recommended for NBL for exploring new areas of

investment to maintain a sufficient spread between the cost of interest on deposit and interest from loans and advances. The rise in the Housing loan, Education Loan, Auto Loan and Personal Loan will certainly cover the CD gap. Low rate of interest margin in such credit product will certainly increase the credit customer.

⊗ As per international standard only 5% NPA is allowed which is also applicable in Nepal and NPA level above 5% is not acceptable. The mean NPL to total loan ratio of NBL, MBL & NCCBL are 9.02%, 1.91% & 13.16% respectively. The NPL of NBL & NCCBL is very much high that the acceptable standard of 5%. Though this ratio seems moderate in NBL in comparison to NCCBL both NBL and NCCBL have to do proper homework for decreasing the level of NPL. However NBL has succeeded in reducing the NPL to total loan in the final year of study. Which is also the case of other two sampled banks. The average percentage of NPL to total loan of MBL is below the prescribed standard. Since NPL is one of the causes of banking crisis, all the sampled banks should give serious attention to this matter. Hence proper homework should be done before lending to the new customer as well as while increasing the limit of the old customer too. Proper credit appraisal, site visit, financial analysis, etc should be done to decrease the credit risk which will certainly play a vital role in decreasing the level of NPL as well as to maintain a balance in the Level of NPL to Total Loan.

⊗ The main factors which leads to non-performing loans are improper credit appraisal system, ineffective credit monitoring and supervision system etc. Beside 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. Banks are the business partner of its credit customer. Bank should be advisor of their credit customer.

⌘ No work can be success without proper management. It is recommended to initiate training and development program for the employees to make them efficient and professional in credit appraisal, monitoring and proper risk management.

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

⌘ Lack of proper financial analysis of the borrower by the banks is one of the major causes behind increasing NPA of Nepalese commercial banks. Thus proper financial analysis should be done before lending to the borrowers.

⌘ 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 held in reducing NPL.

⌘ If 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 about its borrowers so that necessary precautions can be taken in time.

⌘ It is also recommended that banks and financial institution should demand support from Government of Nepal to recover from the bad loans specially created because of willful defaulters.

⌘ The amount involved in non-performing loans may rise considerably as a result of less predictable incidents, such as when the costs of fuel, prices of key export products, foreign exchange rates, or interest rates change abruptly. For example fall in the prices of loan collaterals (often real estate) may cause more loans to become classified as doubtful. So banks should be a watch dog of its economy as well as the effect of changes in the international market to its credit customers.

⌘ The chances for the financial sector to derail are usually considered to be much higher under conditions of deficient bank management, poor supervision, over optimistic assessments of creditworthiness and moral hazard that results from generous government guarantees or the expectation of assured bailouts.

⌘ Proper management auditing system should be implemented to monitor the overall performance of the bank. Regular monitoring by both the internal and external (NRB auditors and Private Co. auditors) auditors is most.

## **5.4 Future Avenues**

Findings of the present research can be meaningful and valuable piece of work for academicians, practitioners, researchers, and investors. Findings of study can be a reference for all the bankers and businessmen. The findings of the study can be supportive to bankers and business to make future strategy. Researchers still can further explore many more areas relating to Non-Performing Loans and their provisioning and Credit Management of Commercial Banks.

### **The following are future avenues:**

1. The same topic could be carried forward and taking into account the entire available A class commercial banks.
2. The study gives a general hint to the status of Non-Performing Loans and their provisioning and Credit Management of Government Owned Commercial Banks and Private Commercial Banks.

## **BIBLIOGRAPHY**

- Bhattarai, Arun (2003). A study on Non-Performing Assets and Non-Banking Assets of Commercial Banks" with reference to Nepal Bangladesh Bank Ltd, Nepal SBI Bank Ltd and Bank of Kathmandu Ltd. An Unpublished Master Degree Thesis, Kathmandu: Shanker Dev Campus, T.U.
- Bhattarai, Narendra (March, 2003). I Took Up This New Job Because I Eager For Challenges. *Business Age*. Vol.5, No.3.
- Bhattaria, Shama (2004). Implementation of Directives Issued by Nepal Rastra Bank: A Comparative Study of Nepal SBI Bank Limited and Nepal Bangladesh Bank Limited. An Unpublished Master Degree Thesis, Kathmandu: Shanker Dev Campus, T.U.
- Credit Information Bureau (2062 B.S.). *Annual Report (2061/62)*.p.5.
- Dahal, Bhuvan & Sarita (2002). *A Hand Book to Banking*. Kathmandu: Asmita Books & Stationery.
- Hisanobu Shishido (May 6, 2004). IMF External Relations Department, Asia and Pacific Department. *At the 2004 Nepal Development Forum*. Kathmandu.
- KC, Dr. Bijay (2064 B.S). Competition in the Banking Industry in Nepal-Growth of Financial Sector and Banking industry-Governance. *Arunodaya*. p.263.
- Khadka, Dinesh Kumar (2004). Non-Performing Assets of Nepalese Commercial Banks" with reference to Nabil Bank Ltd., Nepal SBI Bank Ltd, Nepal Investment Bank, Nepal Bangladesh Bank and Bank of Kathmandu. An Unpublished Master Degree Thesis, Kathmandu: Shanker Dev Campus, T.U.
- Khadka, Sherjung and Singh, Hridayabir, (2004/5). *Banking and Insurance, Principles, Legislation & Practice*. Kathmandu: Asia Publication.



- Machhapuchchhre Bank Limited (2002/2006). *Annual Reports*. (2001/02-2005/06).  
Kathmandu: Machhapuchchhre Bank Limited.
- McAllister, Craig J. (2062 B.S). Rescuing NBL Project. *Nepal Bank Limited Samachar*. Chaitra,p.7
- Nepal Credit and Commerce Bank Limited (2001/2006). *Annual Reports*. (2001/02-2005-06). Kathmandu: Nepal Credit and Commerce Bank Limited.
- Nepal Rastra Bank (Mid-July 2006) Banking and Financial Statistics.
- NRB (2063 B.S). *Annual Report*. NRB (2062/63).
- NRB Directives* (2062 B.S). Guidelines, Circulars-Unified Directives
- Pandey, I.M. (1999). *Financial Management*. (Eight Edition). New Delhi: Vikas Publishing House Pvt. Ltd.
- Pandey, Ravindra P. (2064, B.S). Challenges of Banking Sector in Nepal-High Volume of Non Performing Loans (NPL). Kathmandu: *Arunodaya*.
- Pandit, Gandhi (August, 2002). Legal Complication between Deloitte & NRB. *Business Age*. Vol. 4:8.
- Pradhan, Kumar (2006). A Study on Non-Performing Assets of Commercial Banks in Nepal" with reference to Nepal Bank Limited, Rastriya Banijya Bank Limited, Nepal Bangladesh Bank Limited, Everest Bank Limited and Standard Chartered Bank Limited. An Unpublished Master Degree Thesis, Kathmandu: Shanker Dev Campus, T.U.
- Radhaswami and Vasudevan (1991). A Text Book of Banking: Law and Practice & Theory of Banking. New Delhi: S. Chand & Co. Ltd.
- Regmi, Yogendra (2062 B.S). *Non-Performing Assets Management*. p.75

- Shilpakar Anjana (2003). A Study on Lending Practices of Finance Companies of Nepal. An Unpublished Master Degree Thesis, Kathmandu: Shanker Dev Campus, T.U.
- Shrestha, Niva (2004). A Study on Non-Performing Loan and Loan and Loan Loss Provisioning of Commercial Banks" with reference to Nepal Bank Limited, NABIL Bank Limited and Standard Chartered Bank Nepal Limited. An Unpublished Master Degree Thesis, Kathmandu: Shanker Dev Campus, T.U.
- Sthapit, A.B., Hiranya Gautam, Joshi P.R., Dangol, Prakash Man (2003). *Statistical Methods*. Kathmandu: Buddha Academic Publishers & Distribution P. Ltd.
- Vaidya, Shakespeare (1998). *Project Failures and Sickness in Nepal, Challenges to Investors for Investment Risk Management*. Kathmandu: Monitor Nepal.
- Wild, John J, Subramanyam, K.R & Haskey, Robert (2003). *Financial Statement Analysis*. (8<sup>th</sup> Edition). New York: McGraw Hill.

#### **Websites**

<http://www.machbank.com>.

<http://www.nccb.com.np>

<http://www.nepalbank.com.np>

<http://www.nrb.org.com>

<http://www.suryasun.com/non-performing-loans-in-nepal.html>

## APPENDIX 1

### **Brief Profile of the Subjected Banks**

#### **1. Nepal Bank Limited (NBL)**

His Majesty King Tribhuvan inaugurated Nepal Bank Limited on Kartik 30, 1994 Bikram Sambat. This marked the beginning of an era of formal banking in Nepal. Until then all monetary transactions were carried out by private dealers and trading center. Then Prime Minister Maharaja Juddha Shumsher J.B.R. speaking on the occasion with the kind permission of His Majesty the King stated this work which is being done in the larger interest of the nation is a great moment for me. Until today a bank could not be opened in Nepal. Therefore this bank, which is being established under the name of Nepal Bank Limited to fill that, need and to be inaugurated by His Majesty the King, is a moment of great joy and happiness. The Bank's objectives to render service to the people whether rich or poor and to contribute to the nation's development will also need the support and best wishes of all, which I am confident, will be forthcoming.

In that era, very few understood or had confidence in this new concept of formal banking. Raising equity shares were not easy and mobilization of deposits even more difficult. This was evident when the bank floated equity shares worth NRs. 2,500,000, but was successful only in raising NRs. 842,000. "In the absence of any bank in Nepal the economic progress of the country was being hampered and causing inconvenience to the people and therefore with the objective of fulfilling that need by providing service to the people and for the betterment of the country, this law is hereby promulgated for the establishment of the Bank and its operation"

The total deposits for the first year was NRs. 1,702,025 where current deposits was about NRs. 1,298,898 fixed was about NRs. 388,964 and saving was NRs. 14,163. Loan disbursed and outstanding at the end of the first year was NRs. 1,985,000. From the very conception and its creation, Nepal Bank Ltd, was as joint venture between the government and the private sector. Out of 2500 equity shares of NRs. 100 face value, 40%

was subscribed by the government and the balanced i.e. 60% was offered for the sale to private sector. There were only 10 shareholders when the bank first started.

Nepal Bank Limited (NBL) was established on November 15, 1937 AD (Kartik 30, 1994 BS). This marked the beginning of an era of formal banking in Nepal. NBL is the pioneer financial institution of Nepal. At present the bank is operating through 109 branches in the 55 districts of the country with 2976 staffs. Nepal Bank Limited seeks to provide an environment within which the bank can bring unique financial value and services to all customers. It will be a sound institution where depositors continue to have faith in the security of their funds are receive reasonable returns; borrowers are assured of appropriate credit facilities at reasonable prices; other service- seekers receive prompt and attentive service at reasonable cost; employees are paid adequate compensation with professional career growth opportunities and stockholders receive satisfactory return for their investment.

NBL was experiencing difficulty in terms of unpaid loan and felling profits. KPMG, in its diagnostic review of the bank, concluded that the bank is in need of complete restructuring. His Majesty's Government of Nepal, in consultation and agreement with the World Bank has come forward to restructure the bank and reform it to profitability. The bank was put under control of Nepal Rastra Bank and hired the services of The Bank of Scotland (Ireland) Ltd., ICC Consulting effective July 22, 2002 for the management of the bank for an initial period of 2 years. The contract was renewed subsequently for one more year and will be extended now through July 2007. The team of consultants comprises mix of both foreign and Nepali nationals.

In its effort to restructure the bank, the ICC team has been successful in providing leadership to return the bank to its former position of financial leadership within the country. Numerous systems in every functional area of bank management e.g. Credit, Accounting, Human Resources, Internal Audit, and Treasury have been modernized. Voluntary Retirement schemes were successfully launched reducing the staff size by almost half. Large numbers of employees are provided with training in various disciplines. Online computerization of 44 bank branches is nearing completion. Sustainable Profitability has been restored with impressive NPA recoveries. (<http://www.nepalbank.com.np>)

## **2. Machhapuchchhre Bank Limited (MBL)**

**Machhapuchchhre Bank Limited**, registered in 1998 is the first commercial bank in the western part of the Kingdom of Nepal having head office in Pokhara (Nayabazar). The bank has its own land and well-built three storied office building with sufficient parking area and electronic surveillance system. The bank with perception of tremendous business potentials outside Kathmandu, in a very short span of time, expanded branches in Kathmandu (Putalisadak, Newroad, Gwarko), Banepa, Damauli, Bhairahawa, Birgunj, Pokhara (Mahendrapul, Rambazar, Bagar). A full-fledged banking branch is opened in Jomsom too. The bank aims to serve the people of urban and rural areas. Machhapuchchhre Bank Limited is a pioneer in introducing the latest technology in banking in the country. It is the first bank to introduce centralized banking software named GLOBUS BANKING SOFTWARE developed by Temenos NV, Switzerland. Recently, the bank has been awarded with ISO 9001:2000 certificates by UKAS Quality Management Company after conducting a thorough study of its services and banking process. Certification will ensure customers with uniformity in services among all its branches and improved quality of services as well. The bank currently extends services such as Anywhere Banking, Internet Banking, Mobile Banking, Locker Facilities and ATMs, among others. The bank has the future plan to open branches in Baluwatar in Kathmandu and Ithari, and operate extended counter service in Thapathali. Machhapuchchhre Bank Limited Strives to facilitate its customer needs by delivering the best services in combination with the state of the art technologies and best international practices. Funds can be transferred to the bank from anywhere, in most of the major currencies through our Correspondent Banks, Financial Institutions in Middle East, Europe and East Asia and also from Other Banks. Funds can also be transferred to the bank from the following cities of the country directly from our branches as well as via our local correspondents. Outward remittances in Indian Rupees and other foreign currencies will be made as per the rules and regulation of Nepal Rastra Bank (i.e., Central Bank of Nepal). Machhapuchchhre Bank Limited is being managed by a team of qualified and highly experienced professionals. There are all together 196 employees working in the bank. (<http://www.machbank.com>.)

### Share Holding Pattern

1. Promoter	70%
2. General public	30%

### **3. Nepal Credit and Commerce Bank Limited (NCCBL)**

Nepal Credit & Commerce Bank Ltd. (NCC Bank) formally registered as Nepal - Bank of Ceylon Ltd. (NBOC), commenced its operation on 14th October, 1996 as a Joint Venture with Bank of Ceylon, Sri Lanka. It was the first private sector Bank with the largest authorized capital of NRS. 1,000 million. The Head Office of the Bank is located at Siddhartha Nagar, Rupandehi, the birthplace of LORD BUDDHA, while its Corporate Office is placed at Bagbazar, Kathmandu. The name of the Bank was changed to Nepal Credit & Commerce Bank Ltd., (NCC Bank) on 10th September, 2002, due to transfer of shares and management of the Bank from Bank of Ceylon, an undertaking of Government of Sri Lanka to Nepalese Promoters. At present, NCC Bank provides banking facilities and services to rural and urban areas of the Kingdom through its 17 branches. The Bank has developed corresponding agency relationship with more than 150 International Banks having worldwide network.

#### **CAPITAL STRUCTURE**

Authorized Capital -Rs.1,000million, Issued Capital -Rs.1,000million

Paid-up Capital -Rs. 700million

The Bank is using Pumori Plus, the most commonly used software by Nepalese Banks. The Bank offers Any Branch Banking Service (ABBS) in branches operating in Kathmandu and Banepa. Telex and SWIFT are other modes of communication for efficient and effective transmission of information. In order to facilitate the customers with state of art technology, Bank is providing Debit Card facilities under the SCT (Smart Choice Technology) Network jointly in consortium with 12 other member Banks. This facility enables the customers to withdraw cash from any of the 26 ATM Terminals located at different parts of the country and to purchase goods from more than 250 shopping complexes and departmental stores under POS arrangement. NCC Bank has strategic alliance with ICICI Bank, which facilitates our customers to remit their money to more than 670 locations of India through ICICI Bank branches and their correspondent Banks in India. The bank is globally connected through various prominent Banks in Asia, Europe and North America like American Express Bank, Standard Chartered Bank, UBAF etc. NCC bank provides services across the globe which includes remittance, draft arrangement, import and export business, guarantee etc. NCC Bank has a goal to provide a wide range of banking services and products in the emerging socio-economic environment within and outside the country maintaining high standards of integrity and efficiency with excellence. (<http://www.nccbank.com.np>)

## APPENDIX 2

### Figures used in the study

#### Nepal Bank Limited

Year	Loan & Advances	Total Assets	Total Deposits	Non-Performing Loan	Loan Loss Provisioning	Net Profit
2006	12,441.59	54,133.00	35,444.90	2,262.18	3,269.60	2,329.70
2007	13,756.60	47,707.10	38,715.20	1,856.00	2,376.30	417.70
2008	15,770.70	49,660.00	41,451.70	1,410.80	2,141.80	845.20
2009	19,482.25	54,608.80	44,346.10	1,151.40	2,188.60	1,047.00
2010	25,086.80	50,093.50	42,129.90	573.20	1,527.40	428.60
2011	26,709.90	55,700.10	46,804.20	1,410.73	1,501.00	383.40

#### Machhapuchchhre Bank Limited

Year	Loan & Advances	Total Assets	Total Deposits	Non-Performing Loan	Loan Loss Provisioning	Net Profit
2006	6,146.57	9,255.80	7,893.30	16.92	77.40	159.70
2007	7,319.90	11,197.10	9,475.00	85.16	229.30	93.00
2008	8,969.80	13,142.30	11,101.10	92.90	263.70	146.60
2009	12,467.19	18,583.10	15,596.10	342.85	517.30	92.60
2010	14,972.07	21,677.50	18,533.50	266.27	654.61	136.20
2011	14,732.06	20,228.20	16,411.40	660.73	314.90	6.40

#### Nepal Credit and Commerce Bank Limited

Year	Loan & Advances	Total Assets	Total Deposits	Non-Performing Loan	Loan Loss Provisioning	Net Profit
2006	5,899.16	8,640.80	6,619.50	1,289.90	684.70	31.20
2007	5,122.20	8,816.70	6,500.30	1,606.87	1,406.90	(104.60)
2008	5,281.00	10,175.90	7,320.20	864.00	861.40	495.60
2009	7,183.68	11,657.00	9,137.00	196.83	325.50	410.60
2010	8,387.77	14,442.50	10,824.70	227.72	332.20	457.00
2011	9,229.80	15,035.60	10,951.30	363.40	397.50	214.80

Note:

- ) The entire figures presented above are rounded up 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 MBL & NCCBL. The data of NBL is based on websites and NRB reports.
- ) Loans and Advances also include Bill Purchased & Discounted.

### APPENDIX 3

**Calculation of Mean, S.D. & C.V of Loans & Advances to Total Assets**  
**Ratio of Machhapuchchhre Bank Limited (Sample Calculation)**

Rs. In Million

<b>Years (Mid July)</b>	<b>Ratio (X) %</b>	$(X - \bar{X})$	$(X - \bar{X})^2$
2001	66.41	(1.76)	3.10
2002	65.37	(2.80)	7.82
2003	68.25	0.08	0.01
2004	67.09	(1.08)	1.17
2005	69.07	0.90	0.81
2006	72.83	4.66	21.71
<b>N=6</b>	<b>X =409.02</b>		<b><math>(X - \bar{X})^2 = 34.62</math></b>

We have,

$$\text{Mean } (\bar{X}) = \frac{\sum X}{N} = \frac{409.02}{6} = 68.17 \%$$

$$\text{Standard Deviation } (\dagger) = \sqrt{\frac{\sum (X - \bar{X})^2}{N}} = \sqrt{\frac{34.62}{6}} = 2.63$$

$$\text{Coefficient of Variation (C.V)} = \frac{\dagger}{\bar{X}} \times 100 = \frac{2.63}{68.17} \times 100 = 3.86$$

**Similarly the Mean, S.D. & C.V of other ratios of the three banks have been calculated.**



## APPENDIX 4

### Calculation of Correlation Coefficient, P.E. & 6 P.E. of Machhapuchchhre Bank Limited (Sample Calculation)

Rs. In Million

Years (Mid July)	Loans & Advances (X)	LLP (Y)	$x X(X Z \bar{X})$	$y X(Y Z \bar{Y})$	$x^2$	$y^2$	$xy$
2006	6,146.57	77.40	(4,621.36)	(265.47)	21356983.65	70,473.44	1226825.179
2007	7,319.90	229.30	(3,448.03)	(113.57)	11888922.37	12,897.77	391587.2097
2008	8,969.80	263.70	(1,798.13)	(79.17)	3233277.491	6,267.63	142355.0872
2009	12,467.19	517.30	1,699.26	174.43	2887478.883	30,426.41	296404.4632
2010	14,972.07	654.61	4,204.14	311.74	17674779.13	97,182.87	1310605.091
2011	14,732.06	314.90	3,964.13	(27.97)	15714313.44	782.23	-110870.063
<b>N=6</b>	<b>X = 64,607.59</b>	<b>Y = 2,057.21</b>	<b><math>x^2 = 0</math></b>	<b><math>y^2 = 0</math></b>	<b><math>x^2 =</math> 72,755,754.97</b>	<b><math>y^2 =</math> 218,030.33</b>	<b><math>xy =</math> 3,256,906.97</b>

We have, Karl Pearson Correlation coefficient,

$$\text{Correlation Coefficient (r)} = \frac{XY}{N \uparrow_x \uparrow_y}$$

On simplification of the equation of r, we obtain the following formula for computing r.

$$\text{Correlation Coefficient (r)} = \frac{xy}{\sqrt{x^2 y^2}} = \frac{3,256,906.97}{\sqrt{72,755,754.97 \mid 218,030.33}} = 0.8117$$

$$\text{Probable Error (P.E)} = \frac{0.6745(1 Z r^2)}{\sqrt{N}} = \frac{0.6745(1 Z 0.8117^2)}{\sqrt{6}} = 0.0912$$

$$6 \text{ P.E.} = 6 \times 0.0912 = 0.5474$$

**Similarly the Correlation coefficients, P.E & 6 P.E between different variables of three banks have been calculated.**

## APPENDIX 5

### Calculation of Trend Values of Loans & Advances of Machhapuchchhre Bank Limited (Sample Calculation)

Years (Mid July)	Loans & Advances (Y)	Deviation from Mid July (X)	$X^2$	XY	$Y_c = a + bX$
2006	6,146.57	(2.50)	6.25	(15,366.43)	5,812.12
2007	7,319.90	(1.50)	2.25	(10,979.85)	7,794.45
2008	8,969.80	(0.50)	0.25	(4,484.90)	9,776.77
2009	12,467.19	0.50	0.25	6,233.60	11,759.09
2010	14,972.07	1.50	2.25	22,458.11	13,741.42
2011	14,732.06	2.50	6.25	36,830.15	15,723.74
<b>N=6</b>	<b>Y = 64,607.59</b>	<b>X = 0</b>	<b><math>X^2 =</math> 17.5</b>	<b>XY = 34,690.68</b>	

Here,

When,  $X = 0$ , from the normal equations,

$$a = \frac{\phi Y}{N} = \frac{64,607.59}{6} = 10,767.93$$

$$b = \frac{\phi XY}{\phi X^2} = \frac{34,690.68}{17.5} = 1,982.32$$

Thus,

Average Loans & Advances (a) = Rs. 10,767.93

Rate of change of Loans and Advances (b) = Rs. 1,982.32

Hence, the equation of straight – line trend is

$$Y_c = a + bX$$

$$Y_c = 10,767.93 + 1,982.32 | X$$

#### **Expected Trend Values of Loans & Advances (2007- 2011)**

Years (Mid July)	Deviation from Mid July (X)	$Y_c = a + bX$
2012	3.5	17,706.07
2013	4.5	19,688.39
2014	5.5	21,670.72
2015	6.5	23,653.04
2016	7.5	25,635.36