

# CHAPTER- I

## INTRODUCTION

### 1.1. General Background

Financial development is one of the key indicators of economic growth for any country. Financial institutions grant regular energy for investments, which is needed for economic development. The financial sector of any country comprising banks, finance companies, insurance companies, co-operative societies, stock markets, foreign exchange markets, mutual funds, provident funds etc. play a great role in the enhancement of the country's economic sector. The country having liberal economy from non-liberal economy after reform, positive changes are visible in the financial sector of the country.

Commercial banks play an important role in affair of the economy in various ways. The operations of commercial banks record the economic pulse of the economy. The size and composition of their transaction mirror the economic happening in the country. They are essential instruments of accelerated growth in a developing economy, by mobilizing community savings and diverting them into productive channels commercial banks expand and appreciate the value of aggregate economic activity in the economy.

At present days, the entrance of various new banks is mounting in the banking industry; on the other hand, old banks are expanding their branches in many areas of the country. There is no doubt that the increment of commercial banks obviously boosts the financial activities and hence opens the door for the economic development of the country. Under liberal and open economy it is considered natural phenomena that there is high involvement of private sector, which mostly focus their activities toward commercialization generating high profits.

“Commercial Banks which are licensed under Commercial Bank Act 1974 (2031 B.S.) are the largest group of deposit taking financial institutions in Nepal”. In general, Commercial Banks can be defined as the banks undertaking business with the objective of earning profits. Commercial banks pool scattered fund and channel it to productive use. Commercial Banks can be of various forms such as Deposit Banks,

Saving Bank, Industrial Banks, and Mixed Banks etc. Commercial banks render variety of services. In the absence of commercial banks, it will be impossible to meet the financial needs of the country. “A commercial bank means bank which deals in exchanging currency, accepting deposits, giving loans and doing commercial transactions” (*Commercial Bank Act, 1974*).

For the smooth progress of the financial industry government support is vital. Taking Nepal in the context, after the liberalization policy is carried out, government of Nepal also focused for the development of the investment institution in order to fulfill the need of financial and investment deficit that had seen in financial sector. Till fiscal year 2009/10, 27 commercial banks [class ‘A’], 63 development banks [class ‘B’], 77 finance companies [class ‘C’], 15 micro finance development bank [class ‘D’] and 16 co-operatives (perform limited banking transaction) are provided license by Nepal Rastra Bank are in operation. Limited market opportunities and increasing market makers i.e. financial institutions create stiff competition in financial markets.

The financial system in Nepal has from a narrow, repressed regime till the eighties to a dynamic expanding sector in the nineties. Indicators of the last decade showed that the sector has growth both quantitatively and qualitatively. It could be observed that, at the same time, the financial market has become more competitive, dynamic and also compels. This constitutional network and the volume of operations of financial system have expanded and diversified with the number of increased in commercial banks. The adoption of the market economy has led to birth too many private commercial banks in the country as said earlier. So far, all these banks are doing very well in the slowdown in the economy, interest rates are falling down. All the banks are with funds and looking for safe and profitable avenues to invest in it.

Macroeconomics stability is prerequisite. Least developed country like ours “Nepal”, where industrial development is in initial stage, these pre-mentioned prospects are essential for sustainable economic development. “It is needed that Government and all concerned must restore peace, improve investment climate by strengthening legal, institutional and regulatory framework for the private sectors, foster links with the country’s rapidly growing neighbor to tap the economic benefits of the integration, and accelerate the pace of ongoing governance reforms. Nepal entry into WTO, commitments in SAFTA and BIMSTEC too makes it important to improve in investment and business climate.”

Financial institutions, in order to generate capital flow, play major roles for the proper functioning of the economy. It is how these institutions act as intermediary between the individuals as well as institutions who lend and who borrow. Accepting deposits and lending money is the playing of money that the commercial banks do to reap the profit along the side. Certain rate of interest is provided to the customers for the deposit made in the company. In addition, most of the commercial banks need collateral against the loan. The quality of loan, quality of borrower and quality of securities determines the health of any financial institution. The efficiency of commercial banks lies in how it multiplies and makes productive the deposits of its depositors. Hence, Lending should be accomplished by some basic principles and practices. No commercial banks would be willing to give loan unless it has sufficient confidence in the borrower that it will not be necessary to seek the help of court for recovery. The deposits made by the banks are generally invested in productive sector. Investment by commercial banks is made by lending the same money in higher interest rate and purchasing government securities and investing funds in the likely profitable sectors. Thus, the main operation of commercial banks can be recognized as accumulating the scattered funds from public, providing them some interest against their saving and lending the money to the public charging some interest. Generally, the interest charged is higher than the interest paid and this is how the company manages to make some profit to distribute dividend to the shareholders.

This research has attempted to analysis the lending practices of NABIL, EBL, HBL and NSBI and their lending strength which will reveal the lending practices of commercial banks of Nepal. For the purpose, different tools and techniques have been applied to judge the lending practices of these organizations, drawn out the strength and weakness of the firms and try to prescribe measures to improve the lending practices of these three banks.

### **1.1.1 Commercial Banking in Nepal**

Nepalese financial sectors were dominated by two commercial banks viz. Nepal Bank Ltd. (semi government) and Rastriya Banijya Bank (fully government owned) till 1984. Commercial banking Act 1974 was amended in 1984 to increase competition between commercial banks. So, provision was made to allow private sector including foreign investment to open commercial banks. As a result, Nabil Bank Ltd. the then Nepal Arab Bank Ltd. was established in July 12, 1984 with the partnership of Emirates Bank International Ltd., Dubai. Similarly, Nepal Investment Bank Ltd, former Nepal Indosuez Bank, was established in 27<sup>th</sup> February 1986, with the joint venture of Indosuez Bank of France. Nepal Grindlays Bank, present Standard Chartered Bank was established on 30<sup>th</sup> Jan 1987 with 15% share of general public, 35% share of NBL and 50% share of Grindlays Bank Ltd.(UK). Then after many banks are established and reached at 89 in the fiscal year 2008/09, of which 26 are commercial and rest 63 are development banks.

Though the commercial banks were established with the concept of supplying short-term credit and working capital need of the industries, they have been providing long-term loans for up to 15 years. After the enforcement to lend to priority and deprived sector, these banks initiated to provide credit to small and cottage industries, agriculture and services. Presently, commercial banks must lend 5% of their total lending in priority and deprived sector and among these, 3 percent being compulsory to the deprived sector. NRB has a provision of refinance facility also for such loan provided to priority and deprived sector including export credit.

### **1.1.2 Brief Profile of Selected Banks**

In this section the banks profile of the above subjected banks are presented to know better of the banks individually.

#### **Nabil Bank Limited (NABIL)**

Authorized Nabil Bank Limited, the first joint venture bank of Nepal, started operations in July 1984 as the name of Nepal Arab Bank Ltd under the Company Act. Dubai Bank Ltd. was the initial foreign joint venture partner of this bank with 50% equity investment. The shares owned by DBL were transferred to Emirates Bank International Ltd (EBIL), Dubai. Later EBIL sold its entire holding to National Bank Ltd, Bangladesh (NBLB). Hence, 50% of equity shares of Nabil Bank Ltd are held by NBLB and out of remaining, financial institutions have taken 20% and

30% were issued to general public of Nepal. Nabil was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, Nabil provides a full range of commercial banking services through its 28 points of representation across the nation and over 170 reputed correspondent banks across the globe. Nabil, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business. Highly qualified and experienced management team manages operations of the bank, including day-to-day operations and risk management. Bank is fully equipped with modern technology, which includes ATM's, credit cards, state-of-art world-renowned software from Infosys Technologies System, Bangalore, India and Internet Banking System and Tele-Banking System.

**Table 1.1**

**Share Ownership of NABIL**

<b>Share Ownership</b>	<b>Percentage</b>
Nepal Government	0
Foreign Institution	50
A' Class Licensed Institutions	0
Other Licensed Institutions	6.15
Other Entities	11.08
Individuals	2.77
Others	0
General Public	30
<b>Total</b>	<b>100</b>

*(Source: Annual General Meeting Report, 15<sup>th</sup> July 2009)*

### **Everest Bank Limited (EBL)**

Everest Bank Limited (EBL) started its operations in 1994 with a view and objective of extending professionalized and efficient banking services to various segments of the society. Punjab National Bank (PNB) which is the largest nationalized bank in India is the joint venture

partner of this bank. The bank has set up its representative officials at New Delhi (India) to support Nepalese citizen remitting money and advising banking related services.

The bank is providing customer-friendly services through its Branch Network. All the branches of the bank are connected through Anywhere Branch Banking System (ABBS), which enables customers for operational transactions from any branches.

With an aim to help Nepalese citizens working abroad, the bank has entered into arrangements with banks and finance companies in different countries, which enable quick remittance of funds by the Nepalese citizens in countries like UAE, Kuwait, Bahrain, Qatar, Saudi Arabia, Malaysia, Singapore and UK.

The bank has been conferred with 'Bank of the Year 2006, Nepal' by the banker, a publication of financial times, London. Moreover, the bank was bestowed with the 'NICCI Excellence award' by Nepal India chamber of commerce for its spectacular performance under finance sector.

**Table 1.2**  
**Share Ownership of EBL**

<b>Share Ownership</b>	<b>Percentage</b>
Nepal Government	0
Foreign Institution	20
A' Class Licensed Institutions	0
Other Licensed Institutions	0
Other Entities	9.34
Individuals	40.66
Others	0
General Public	30
<b>Total</b>	<b>100</b>

*(Source: Annual General Meeting Report, 15th July 2009)*

### **Himalayan Bank Limited (HBL)**

Himalayan Bank was established in 1993 in joint venture with Habib Bank Limited, one of the largest commercial bank of Pakistan. It is the sixth commercial bank of Nepal. Despite the cut-throat competition in the Nepalese Banking sector, Himalayan Bank has been able to maintain a lead in the primary banking activities like loans and deposits. Apart from commercial activities, bank also offers industrial and merchant banking facilities. The authorized capital of the bank has been Rs2000 million. Similarly, the paid up and issued capital of the bank has been Rs.1013.51million until the fiscal year 2009.

With the highest deposit base and loan portfolio amongst private sector banks, HBL holds of a vision to become a leading bank of the country, ensuring attractive and substantial returns to the stakeholders of the bank. The bank's mission is to become preferred provider of quality financial services in the country. There are two components in the mission of the Bank- Preferred Provider and Quality Financial Services. Therefore HBL believe that mission will be accomplished only by satisfying these two important components with the Customer at focus. The Bank always strives positioning itself in the hearts and minds of the customers.

**Table 1.3**  
**Share ownership of HBL**

<b>Share Ownership</b>	<b>Percentage</b>
Nepal Government	0
Foreign Institution	20
A' Class Licensed Institutions	0
Other Licensed Institutions	0
Other Entities	65
Individuals	0
Others	0
General Public	15
<b>Total</b>	<b>100</b>

*(Source: Annual Report HBL 16 July, 2008)*

### **Nepal SBI Bank Limited (NSBI)**

Nepal SBI Bank Ltd. (NSBI) is the first Indo-Nepal venture in the financial sector sponsored by three institutional promoters, namely State Bank of India (SBI), Employees Provident Fund (EPF) and Agricultural Development Bank Ltd (ADBL) through a Memorandum of Understanding signed on 17<sup>th</sup> July 1992. NSBI was incorporated as a public limited company at the office of the Company Register on 28<sup>th</sup> April 1993 with an authorized capital of Rs.12 crores and was licensed by Nepal Rastra Bank on July 6, 1993. This bank commenced operation with effect from July 7, 1993 with one full-fledged office at Durbarg Marg, Kathmandu with 18 staff members.

In terms of the Technical Services Agreement concluded between SBI and the NSBI, SBI provides management support to the bank through its 3 expatriate officers including Managing Director who is also the CEO of the Bank. A core management team viz. Central Management Committee (CENMAC) consisting of the Managing Director, Chief Operating Officer, Chief Financial Officer and Assistant General Manager (Credit) oversees the overall banking operations in the Bank. ADBL divested its stake in the Bank by selling its entire 5% promoter shares to SBI on 14<sup>th</sup> June, 2009 and eventually the bank's capital structure at fiscal year 2009 is as under.

**Table 1.4**  
**Share ownership of NSBI**

<b>Share Ownership</b>	<b>Percentage</b>
Nepal Government	0
Foreign Institution	55
A' Class Licensed Institutions	0
Other Licensed Institutions	15
Other Entities	0
Individuals	0
Others	0
General Public	30



<b>Total</b>	<b>100</b>
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*(Source: Annual General Meeting of NSBI- 15th June 2009)*

## **1.2. Statement of the Problems**

The financial institutions at present days are mounting and hence there is ample market for good and viable lending. Due to this sufficient return could not be achieved. The new commercial banks just share the existing market return rather from the new markets. Due to stiff competition in the market and improper management, the challenges are facing by some of the commercial banks to invest their entire fund in profitable sectors.

Economic development of a country succeeds only when the development of the capital formation mechanism exists. The major cause of this chronic problem is the lack of economic development or the slow rate of the national economic growth. With the increased sophistication and liberalization of financial markets, this has made the problem of debt management one of the most important issues in economic policy. Keeping pace with today's up growing economy itself is a risky task and with that commercial banks are facing tough competition too. The present situation of the country has made the investment insecure to high extend. As a result, today lending has become very challenging. Commercial Banks have to seek for secured and productive investment opportunity, which definitely is a tough job.

In addition, another problem is the gradual increase in non-performing loans. Increase in Non-performing loans can be the result of present condition of the country. Due to instable political condition, insecurity and lot many factors, industries of Nepal are closing down and thus are the investments. This has also arson another problem. Loan mobilization in hire purchase and housing loans are increasing than that in term loan. Terms loans are more productive and contribute more to the economy than hire purchases and housing loans. These kinds of situations reduce the income generation level in the economy, which again affects the timely repayments of the due installments of Loans and Advances. Moreover, while granting the loan, banks which do not analyze the documents submitted by the borrowers, are resulting in rising non-performing loan.

To improve the profitability situation of the bank, it is necessary to establish the higher creditability position of the bank. Credit is the most effective area in commercial bank. Thus lending management is considered as the main issues in Nepalese banking sector. This study will try to seek the answers of the following statements relating to commercial banks of Nepal.

- ) What is the Lending strength in relative terms such as Investment to Loans and Advances and Investment, Loan and advances and investment to Total Deposit ratio, loan and advances to shareholder's equity ratio etc. of the selected commercial banks?
- ) What is the Lending strength in Absolute terms such as loan and advances, non-performing loans, interest income from loans and advances, loan loss provision, net profit of the selected banks?
- ) Does the lending efficiency of the commercial banks contribute in its total profitability?
- ) Does internal performance caused for increase in non-performing loan?
- ) How does the commercial bank manage the lending portfolio?

### **1.3 Objectives of the Study**

The Primary objectives of this study are to analyze the performance of Nabil, EBL, HBL & NSBI regarding lending quality and quantity and to recommend suggestion for the improvement thereof. Some of other objectives are:

- ) To analyze and measure the ratio and volume of Loans and Advances.
- ) To determine the lending efficiency of the commercial banks using ratios different ratios.
- ) To examine the impact of deposit, Loan and Non-performing loan on profit of selected banks.

### **1.4 Focus of the Study**

A key factor in the development of an economy is the mobilization of the domestic resources. Financial institutions are the remarkable resources that are viewed as catalyst in the process of economic growth of the country. As intermediaries, the financial institutions help in the process of

resource mobilization. The importance of financial institutions in the economy has of late grown to an enormous extent. The government in turn is required to regulate their activities so that the financial policies are implemented as per the requirement of the country. Policy such as lending to priority and deprived sectors, lending to the educated unemployed people, lending for creation of entrepreneurs in the society are certain examples which the government in developing economy try to implement with the help of financial institutions. With the growing activities of bank after the NBL and RBB, new banking policy was introduced for establishment of international investment banks and joint venture banks in foreign investment with Nepalese co-operation. Its objective was to create healthy competitive banking system and provide cheap banking facilities to people. Commercial banks are the heart of financial system. They hold the deposits on many persons, government institutions and business units. They make funds available through their lending and investing activities to borrowing; individuals, business firm and government establishments. In doing so, they assist both the flow of goods and services from the producers to consumers and the financial activities of the government. These facts show the commercial banking system of nation is important to the functioning of the economy.

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

### **1.5 Limitations of the Study**

Every works have its own restriction and limitation due to the lack of time resources and knowledge. Despite the enough efforts of researcher, this research is not free from limitation. The study is presented just for the partial fulfillment of M.B.S. (Masters of Business Studied) degree. Following are the major limitations of this thesis.

- ) The study is based on secondary data collected from annual reports published from the relevant commercial banks. Thus the result of analysis is accordance with the information and data mentioned in the annual report.
- ) The sample taken is around 15% (i.e. 6 banks out of 26 banks) for the analysis of the lending practices of the whole population/bank.

- )] The study is limited to last Five years data beginning from FY 2004/05 to 2008/09.
- )] The sources of data i.e. the published reports, articles, journals and data on website are assumed to be exact and truthful.
- )] Standard normal performance level is not available especially in Nepalese context. So, interpretations of data are depended upon common sense. In this context, concerned advice from experts is taken.
- )] The limitation and drawbacks of the tools used itself are also the limitations.

### **1.6 Significance of the Study**

There is very little research made by previous researchers on lending practices of commercial banks. The Nepalese financial market is growing day by day. New financial institutions especially finance companies and development banks are entering into the market and the existed finance companies and development banks are expanding their capital and switching into the commercial banks. They are emerging as the essential part of our economy and lending is one of the critical and crucial functions of commercial banks. Thus, this study on lending practices of four commercial banks is going to play a significant role for all other researchers who wish to study on commercial banks. Further, this can provide adequate information about studied four banks and overall trend of commercial banks to the shareholders, investors, professionals and also to the students and teachers of the management.

Besides this, the study on lending practices of commercial banks are done by very few researchers before and also the study on same topic taking four banks in reference is hardly found. Therefore, this research will be very significant for the upcoming researchers and also to the people who are interested in this field. Moreover, as I am a management graduate willing to peruse my career in banking sector, this study will prove to be significant in my individual level to enhance my career in banking sector.

### **1.7 Organization of the Study**

The study on the lending practices of NABIL, EBL, HBL and SBI has been divided into five chapters viz. Introduction, Review of Literature, Research Methodology, Presentation and Analysis of Data and Summary, Conclusion & Recommendation.

## **Chapter I: Introduction**

It includes general background of the study, historical perspective of banking industry, overview of sample banks, statements of the problem, objectives of the study, significance of the study and limitation of the study.

## **Chapter II: Review of Literature**

In this chapter concepts and principles of lending are presented. Related books, journals, and past research works are reviewed.

## **Chapter III: Research Methodology**

The third chapter briefly explains about the research methodology that has been used to evaluate the lending practices of the banks under consideration. This chapter consists of research design, sample and population, source of data and financial as well as statistical tools and techniques to evaluate the lending practices of Nabil, EBL, HBL and SBI.

## **Chapter IV: Data Presentation and Analysis**

The data required for the study has been presented analyzed and interpreted by using various financial and statistical tools and techniques to present the result relating to the study in a very lucid manner under this chapter.

## **Chapter V: Summary, Conclusion and Recommendation**

The fifth & final chapter deals with summary of the previous chapters. It also includes conclusions drawn up and recommendations made for the further improvement the area of the study.

## **CHAPTER - II**

### **REVIEW OF LITERATURE**

#### **2.1 Conceptual Frame Work/Theoretical Review**

The modern financial evaluation has greatly affected the role and importance of financial performance. Nowadays, finance is best characterized as ever changing with new ideas and techniques. Only efficient manager of the company can achieve the set up goals. If a commercial bank does not maintain proper lending policy, it makes the commercial bank more risky. If a commercial bank has inadequate lending policy, it must use proper lending policy in accordance to NRB directives.

Nepal Rastra Bank has been acting as the father figure of the commercial banks. NRB is the central supervisory authority that has every control over the running commercial bank. All the transactions commercial banks make are directed by the NRB. All the activities that commercial banks are authorized to do or restricted to do are listed out by the NRB. It is like the boundary of activities of commercial bank set by the NRB. There are NRB directives related with following areas, for commercial banks to confine them through their activities.

- ) Capital Structure
- ) Classification of Loans and provision for loan loss
- ) Per customer loan limits
- ) Collection of deposits
- ) About lending
- ) Consortium Financing
- ) Minimum liquidity requirement
- ) Interest rates etc.
- ) Financial resource in the form of deposits, loans etc.

- ) Credit information and Blacklisting
- ) Statistical Documentation
- ) Formation of Branches and offices
- ) About Shares
- ) Guidelines to be followed

Shrestha (2007) "*Fundamentals of Banking*", the author has highlighted the concept and principles of good lending. In this book the author has said that lending is the fundamental function of commercial banks. The commercial banks fulfill the credit needs of various sectors of the economy as well as the investment on securities, whether it is government or non-government. The lending policies of commercial banks are based on the profit maximizing of the institution as well as the economic enhancement of the country. Out of their total income on an average 60 to 70% of income consists from lending activities which is called as exposure based income because banks are exposed to default risk. Moreover, the writer has mentioned that safety, liquidity, purpose, profitability, spread, security, national income and suitability etc. should be wisely considered by commercial banks for doing lending practices.

According to Greenworld & Joseph, the performance of no such sector is as contingent upon the future performance of other enterprises as is that of the financial sector. This contingency is so high that it has always been difficult to the banking industry to pursue the objective of profit maximization as zealously as another industry could afford to. It is this difference, which explains precisely why lenders cannot simply lend to those who are willing to offer the highest price (interest rate).

Radhasawami & Vasudevan (1979), "The mechanism of credit creation is used to expand the business. Fluctuation in the credit facilities granted by banks has an important bearing on the level of economic activity. Expansion of banks credit is followed by increase in production, employment, sales and prices. In a developing economy the banks offer more and more credit and increase the resources of the industries, thereby causing faster economic development. Banks play a decisive role in the industrial development of the country. The credit facilities extended by banks must be uniform and rational; otherwise there will be haphazard development of country. The flow of credit is very much like

smooth and uniform throughout the organs of human body, so also credit should flow steadily and evenly through various sectors of the economy. If credit flow is artificially plugged or arrested, it would be irreparable harm to economy just as clotting of our blood vessels would lead to fatal results."

“Lending is the essence of commercial banking; consequently the formulation and implementation of sound Lending policies are among the most important responsibilities of bank directors and management. Well-conceived Lending policies and careful Lending practices are essential if a bank is to perform its credit creating function effectively and minimizing the risk inherent in any extension of credit” (*Cross, 1963:56*).

“Lending is a form of trade. It means giving up purchasing power now in exchange for power in the future” (*Kohn, 1996:32*).

“Commercial Banks perform a very important service to all sectors of the economy by providing facilities by lending and investing activities to the people. The primary function of commercial banks is the extension of credit to worthy borrowers. In making credit available, commercial banks are rendering a great social service, through their actions production is increased, capital investments are expanded, and a higher standard of living is realized. Although the investment activities of commercial banks are usually considered separately from lending, the economic effects and social results are the same” (*Reed, Cotter, Gill & Smith, 1980:1-5*).

### **2.1.1 Principles of Good Lending**

Needless to say, lending is the major income generating activity of any commercial banks and it is also one of their main functions. Even though, commercial banks cannot just go on giving loan to just anyone and any institution. It is one of major income generating technique of banks. However, if loans are not distributed properly and cautiously then it may be the main cause of the failure of the company as well. In case loans were advanced carelessly and the borrower fails to pay out their debts, company can be history. Flow of money is lifeblood of banks and the bad loans arise there can interrupt the flow. Thus, it should be well analyzed beforehand to give out any loans. Below given are the factors whereupon any prospect loan should be analyzed.



**(i) Safety**

The bank should ensure that the money lent by them goes to the ideal type of borrower and is utilized in a proper way in pre-mentioned purpose so that it will not only be safe at the time of lending but will remain so throughout the transactions. Moreover, after serving a useful purpose in the trade of industry where sum of lent money is utilized is finally repaid back with interest.

**(ii) Liquidity**

Besides 'safety' factor, it is also necessary that the money lent out must be repaid in accordance with agreed terms of repayment. In order to achieve this, the borrower must have reliable sources of sufficient income.

**(iii) Purpose**

The purpose of lending should be productive so that money not only remains safe but also provides a definite source of repayment.

**(iv) Profitability**

Financial institution should generate sufficient income to cover the expenses. Such expenses are interest expenses on deposits, staff expenses, office operating expenses, provision for depreciation on their fixed assets, provision of bad or doubtful debts; to pay bonus for staffs, income tax to government and of course dividend to its shareholders and plough back returns to expand its business volume. Considering these costs, financial institute should decide upon lending rates.

**(v) Security**

The primary objective of commercial banks is not to lend against security. It should lend on the basis of character, capacity of the borrower. However, security is considered as assurance of a cushion to fall back upon in case of failure to repay the loan and interest dues by the borrower due to various reasons.

#### **(vi) Spread**

There is a popular saying that “Do not keep all the eggs in the same basket. If invested in a certain project and the projects fails whole business is ruined. “Diversification of lending is another important principle of good lending. An element of risk is always present in every loan advanced however secure it might appear to be. In fact, the entire lending business is one of the taking calculated risks and a successful financier is in expert in assessing such risk. Thus commercial bank should diversify its lending program in various sectors of economy, business and industry and geographical areas.

#### **(vii) National Interest, Suitability**

Even if loan advanced satisfies all the aforementioned principles, still it might not be appropriate. The lending program may run contradict with national interests. Central bank has issued directives prohibiting commercial banks to allow particular types of loan and advances.

### **2.1.2 Loan Proposal Processing**

While granting and providing approval to the loan proposal any financial institution should undergo different process. The analysis and procedure of loan granting may be more detailed based on the volume or amount of loan. If the amount of loan is high then detailed analysis is mandatory. Generally, following study and analysis is performed while granting the loan.

#### **Proposal Submit**

Firstly, the proposal consisting of detailed information regarding the loan is submitted for demanding the loan to the financial institution. And the bank should start to study and analyze the proposal.

#### **Sector Analysis**

Before granting loan the bank needs to analyze about the type of loan. The loan demanded by the client is related to which sector should be analyzed. For example, whether the loan is consumer loan or financial loan etc. Similarly, the subsector should also be studied. The present

condition as well as the future prospectus of the sector is also studied. Furthermore, the restriction (for example government restriction on the sector), local convenience or support, competition of the sector on which loan is proposed is analyzed. If it seems to be viable from above studies the study is done about the client.

The market status or goodwill of the client is studied. Nature of client, capacity of client is analyzed. Whether the client is the regular consumer or the first to the bank, whether he is taking loan from other intuitions too or not, whether client is demanding loan as per the volume of business or not etc. are analyzed.

### **Client & Credit Information Analysis**

The market status or goodwill of the client is studied. Nature of client, capacity of client is analyzed. Whether the client is the regular consumer or the first to the bank, whether he is taking loan from other intuitions too or not, whether client is demanding loan as per the volume of business or not etc. are analyzed.

Credit analysis is primarily historical based on available credit information; it is compiled to make a prediction of future behavior. In fact, credit analyst believes that history or past information is a clue to the future.

### **Credit Information for Consumer Lending**

#### **(i) Payment Record**

Past payment behavior of the client (loan taker) is regarded as the most important factor judging credit quality. Regular payments of installments of previously taken loan can be the example of regular payment records. Furthermore, whether the client is taking loan from other institutions or not is also studied. If, he is taking loan, then to what volume, should also be studied. If the client is taking loan above 10 lakh from other institution then the bank need to demand credit information of client form that institution.

**(ii) Income**

Income consists of wages/salary, rental and business income if self-employed. These incomes are verified with employer/industry average – comparing with wage and salary of other employers of similar nature. In the case of business income, nature of business, sales turnover, profit margin cash flow analysis etc. are verified. Matching between the cash flow of client and the installment of loan is conducted. If possible, a total asset (moveable plus immovable) of the client is also assessed.

**(iii) Residence**

An address checking is a routine part of the verification. The size and types of residence are also indications of the applicant's housing expenses, social responsibilities and wealth. Plus point is if the customer is a permanent local resident, it is likely that he/she would pay his/her dues in time and there is less probabilities of him/her having any intentions of fraud.

**(iv) Marital Status**

Information about single, married, widowed, divorced or separated marital status of the applicants is sometimes sought and considered important while accessing consumer credit. Martial relationship may affect income and obligations as well as person's happiness. Loan default and collection problems repeatedly arise from martial adjustments. Besides it is important that while granting loans, the spouse is taken as a personal guarantee.

**(v) Age**

Age of the applicant may be another factor in accessing credit risk. Too young and old applicants may be regarded as high credit risk. Too young applicant are usually not financially established and often considered transient and uncommitted. Older persons are recipients of limited income and prone to illness. Thus, people who are aged within the working period of life should be more preferred to others.

**(vi) References**

References from previous creditors, friends and business associates, persons who have treated others fairly and loyally are likely to give the same consideration to a new credit relationship.

### **Collateral/ Security Analysis**

It is most important and critical factor while granting loan to the client. Assets and income that may be liquidated provide a backup means of payment when the income stream cease. Securities and real estate without heavy debt payment are good reserve assets. Types of collateral, marketability of collateral deposited are studied. In this days, most of the client deposit their land and houses as collateral while taking loan. If the collateral is land, then the location, certificate of four boundaries are to be studied. If the land is located near the highway or in the city then it is good. For the large volume of loan, field study and valuation report of the land deposited as collateral is to be compulsorily conducted.

After above studies and analysis is done then as per the loan limit proposal is submitted to the concern authority for final approval. If the loan amount is large, the Board of Directors may sit the meeting and give final decision for the approval of loan. After the loan is approved, collateral deposited are made banned to sale and use for other activities.

### **2.1.3 Commercial Credit Information**

In addition to similar kinds of information as consumer application, commercial credit information contains the following: -

#### **a) Financial Statement**

- (i) Usually balance sheet, income statement and cash flow statement certified by management and auditors.
- (ii) Shows the position, trend and flow of applicant's business.

#### **b) Customers and creditors listing**

- (i) Provide means and authorization to make inquiries with those doing business with the applicants.

#### **c) Credit Bureaus**

## **d) Credit Applications/ Interview etc.**

### **2.1.4 Analysis of Credit Risk**

#### **Five 'C's of Credit**

##### **(i) Character**

The quality of willingness to repay debts duly is ranked above all other considerations. The good character and intentions of the borrower is very important and thus should be seriously considered. Information about the character of the client can be gathered from his working place, references, neighbors and other places he is associated with. This job is tedious but should be carried out for safe investment.

##### **(ii) Capacity**

Repaying back as per the schedule made. The gross income, expenses and net income of the client/borrower should be analyzed whether the borrower lives on salary /wages or any other forms of income source. Whether the borrower has some extra income sources other than salary/wages that can be used to repay the scheduled installments should be considered. It should be analyzed beforehand whether the borrower has enough income to pay the scheduled installments.

##### **(iii) Capital**

Capital provides a cushion to absorb operating and asset losses that might otherwise harm debt repayment. This is in fact, is the assurance against the loans granted to the borrowers.

##### **(iv) Collateral**

Adequacy of collateral is a must to ensure the recovery of loan. In case of default, by any cause, the collateral kept should have value enough to recover the loan granted and interest borne by it. It is recommended that only 50% of the value of collateral to be granted as loan. But considering other factors like character of borrower and his credit worthiness, this percentage can be made flexible.

**(v) Conditions**

Borrowers may be under unfavorable economic conditions beyond their control. Repayment depends not only upon character, capacity and collateral but also on those factors over which the borrower exercises little or has not control as for example natural calamities or drastic economic crises.

**2.1.5 Basic Requirements in a Borrower**

There are some basic requirements that should be fulfilled by the client to justify him/herself as a probable borrower. Commercial Bank cannot lend money to justify anyone blindly. It should be confident regarding the trustworthiness and intentions of the probable borrower beforehand. The borrower, on the other hand, should provide the Bank with all pertaining documents that the company seeks to build confidence on borrower. The basic requirements of borrowers are as follows: -

**If the applicant is an individual**

- a. Applicant should be a Nepali citizen.
- b. Should have good knowledge about the work they intend to commence.
- c.
- d. Applicant should present the job-planning scheme.
- e. Personal Information.
- f. Business registration and income tax.
- g. Quotation and personal guarantee.
- h. Driver's License
- i. Others.

Normally the applicant should not have taken

loan from any other similar kind of institutions.

**If the application is Partnership Firm**

- a. The firm should be registered in related department.
- b. The person dealing with the borrowing of the firm should be specified in the partnership contract.
- c. Income tax registration certificate.
- d. And other required and possible items from point 1.

**If the applicant is Private Limited Company or Public Limited Company**

- a. Company should be registered.
- b. Working place, project place should be specified and all the assets should be in the name of the company.
- c. Audited Balance Sheet, Profit and loss Accounts and other required financial documents, at least of one year, should be presented.
- d. If the work place and/or project place is leased, the lease contract should be presented.
- e. The authorized person should apply for the loan.
- f. Loan amount applied must be within the limit of memorandum of the company or must be decided by the board.
- g. Decisions of the promoters.
- h. Personal Information of the main person.
- i. Written personal guarantee of proprietors.
- j. Citizenship of promoters and proprietors
- k. And other required and possible items from points 1 and 2.

**2.2 Review of Relevant NRB Directives**



Funds used by commercial banks for the purpose of advancing of loans are that of public. Commercial banks collect deposits from public and it is very same fund they use to make profit. Thus, to prevent this public fund being mis-utilized and to protect the savings of public, NRB has given directives to the commercial banks regarding investment of public fund along with the directives to perform all other jobs of commercial bank. Since loan and advances and leased assets is the first and the main sector of investment, to minimize the risk here, NRB has specifically given guidelines relevant to loan and advances and leased assets in NRB directives for commercial banks 2066 No. 2, 3, 12 & 15.

### **NRB Directives No. 2/066**

Under this directive, using the authority of Nepal Rastra Bank Act 2058 section 79, NRB has given criteria for classification of loan and advances with accordance to calculation of loan loss provision. The main objective of doing this, as specified by NRB, is to minimize the risk of bankruptcy leading to endowment of public fund due to incautious investment in bad loan and advances.

As guidelines provided by the directives of NRB, licensed institution shall, as of end of Asoj, Poush, Chaitra and Ashad, preparation of statement of outstanding loan and advances classified on the basis of aging and submit the particulars as per the enclosed forms to Supervision Department of NRB within one month from the end of each quarter.

In the directives given by NRB, loan and advances are initially categorized as performing loan and non-performing loan. Pass loan and advances are defined as performing loan whereas Sub-standard, doubtful and loss loan fall under the categorization of non-performing loan. All loan and advances extended against gold and silver, fixed deposit receipts, credit card and against security of HMG securities and NRB bonds shall be included in "Pass" Category.

Loan cases like loan granted to the project which is not presently working or misutilization of loan (not been used for the purpose originally intended) or blacklisted or whose borrower has run away or absconding and declared bankrupt or whose securities are inadequate are also treated

as bad loan and classified as non-performing loan even if they are within the due dates. Purchased and discounted bills, credit and guarantee not realized within 90 days from the due date are also categorized as loss loan. Bills have only two classifications either Pass or Loss.

Licensed institutions may reschedule or restructure loans only upon submission of a written 'Plan of Action' by the borrower which is resurrecting on the following grounds,

- ) Evidence of existence of adequate loan documentation and securities.
- ) Licensed institutions are assured on possibility of recovery of restructured or rescheduled loan. Restructuring means process of changing the nature or conditions of loan/facility, adding or deleting of conditions and change in time limit. Rescheduling loan means extending repayment period/time of credit taken by the borrower.
- ) In addition of the written 'Plan of Action' for rescheduling or restructuring of loan as per clause (1), at least 25% of accrued interest outstanding on date of rescheduling or restructuring should have been collected. Renewal of loan by collecting all interest can be classified as Pass loan. Loan loss provisioning is 12.5% for restructured or rescheduled loans.

### **Loan Loss Provision**

The loan loss provisioning on the outstanding loan and advances and bills purchases shall be provided on the basis of classification made as per this directive as follows

<b>Classification of Loan</b>	<b>Loan Loss Provision</b>
Pass	1 Percent
Substandard	25 Percent
Doubtful	50 Percent
Bad loans	100 Percent

Adjustment of loan loss provision is prohibited except under the following cases,

- )] The loan has been completely written off.
- )] In the event of repayment of installment or partial payments of loan, the loan loss provision has to be provided as per loan classification and write back the provisions related to amount of repaid loans.
- )] Where the installment of principal and interest of restructured or rescheduled loan is serviced regularly for two consecutive years, the loan loss provisioning may be adjusted. However the amount, adjusted by writing back loan loss provision cannot be used for distribution of dividend or issue bonus shares by showing in the profit.

NBA taken over by the banks should be provisioned for loss as 25%, 50%, 75% & 100% in years 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> respectively till it is sold off.

Actions will be taken in cases on non-compliances of the directives given by NRB under Section 100 of NRB Act, 2058.

### **NRB Directives 3/066**

#### **Single Borrower Obligator Limit**

This directive was imposed by NRB to minimize the risk that can arise due to concentration of loans and advances to one customer.

##### **a) Fixation of Limit on Credit and Facilities**

- (i) For “A”, “B” and “C” class licensed institution

Licensed institutions may extend to a single borrower or group related borrowers the amount of Fund based loan and advances up to 25% of the Core Capital Fund and Non-fund based off balance sheet facilities like L/C, Guarantees, acceptances, commitments up to 50% of its core capital fund. However, from the start of fiscal year 2067/68 the single obligor limit for both fund and non-fund based items is only 25%.

##### **b) Exemption in Limit of Credit and Facilities**

The exposure limits per clause 1 above shall not be applicable in respect of the following: -

- (i) Credits and facilities extended against own fixed deposit receipts, HMG securities, NRB Bonds as well as against unconditional guarantees issued by World Bank, Asian Development Bank and other International Finance Corporation including multilateral institutions and international rated banks.
- (ii) Loan and advances and facilities provided by “A” class licensed institutions to Nepal Oil Corporation and Nepal Food Corporation for the purpose of import of specified merchandise as LP gas, Petrol, Diesel, Kerosene and food items respectively.

**c) Related parties are to be considered as a group**

**d) Submission of Return on Related Customers**

**e) Treatment as Separate Group**

For the purpose of drawing limits in granting loans and advances, lease financing and giving other services, customers with personal relations are categorized in to a single group under the following conditions: -

- (i) In case one company has acquired 25% or more shares of another company then those both companies are considered as a single group.
- (ii) In case a director of a company is a shareholder of another company or his/her relative; spouse, son, daughter in law, unmarried daughter, adopted son, adopted unmarried daughter, parents, step mother and younger dependent siblings residing under the same roof or the companies who's 25% or more share are owned by above mentioned relatives individually or jointly.
- (iii) In case the firms, companies are legally connected in a group or members of such groups;
- (iv) If relatives mentioned in point (b) do not, individually or jointly own 25% or more shares of a company but hold the following positions: -
  - a. Chairperson of BOD
  - b. Managing Director of the company
- (v) In case one customer or company has given cross guarantee to another customer or company.

**f) Provision of Cent Percent to Minimize Concentrated Risk**

In case the company has mobilized funds in loans and advances more than authorized, company has to make provisions of exceeding amount by 100%.

**g) Provision Relating to Sectored Credit**

Under the directive no. 3, using the authority of Nepal Rastra Bank act NRB has given criteria for classifying loan and advances under different sectors and sub-sectors and also determined the amount of loan commercial banks are authorized to disburse under the given sectors and sub-sectors. The main objective of doing this, as specified by NRB, is to minimize the risk and to make sure the distribution of loan and advances into various sectors of economy.

Commercial Banks can sanction loan under following sectors as described in **NRB Directive No. 3**;

1. Hire Purchase Loan
2. Housing Loan
3. Lease Financing
4. Term Loan – Medium and Long Term only
  - 4.1 Agriculture and agro-based business
  - 4.2 Industry
  - 4.3 Business
  - 4.4 Education
  - 4.5 Health
  - 4.6 Tourism
  - 4.7 Hydro-power
  - 4.8 Others

## 5. Fund Based Merchant Banking Activities

5.1 Venture Capital

5.2 Bridge Financing

5.3 Other merchant banking transaction

## 6. Non-Fund Merchant Banking Activities

6.1 Corporate counseling

6.2 Project counseling

6.3 Issue management

6.4 Share underwriting

6.5 Portfolio management

An additional provision has to be made at the end of Poush and Ashad every fiscal year if the limit on sector or sub-sector wise loan amount is violated. Provision should be made of 25 percent of the exceeded loan amount.

### **NRB Directive 12/066**

The major clauses defined in this directive, forwarded as per the NRB Act 2058, Section 88 and NRB Credit Information Regulation 2059 regarding the credit information and blacklisting, are as under;

#### **a) Details regarding Customer/Loanee to be sent to Centre**

Licensed institutions should send the details of loan sanctioned amounting to Rs. 25 Lac or above within 15 days of month past as per Form No. 1 to the center and should send the details as per Form No. 2 on quarterly basis till the loan is not paid.

#### **b) Ask for Credit Information Compulsorily**

Licensed institutions should compulsorily ask for credit information before providing new loan/renew of loan/restructuring or rescheduling the loan amounting to Rs. 10 Lac or above.

**c) Process of Blacklisting**

Licensed Institutions should compulsorily recommend for black listing of related parties to the center if the conditions provisioned in the directives is satisfied. The center might blacklist the party within 15 days after proper verification if licensed institutions recommend for blacklisting.

**d) Licensed Institutions are banned to provide loan to Blacklisted Loanee**

Licensed Institutions are banned to provide any new loan/facility, additional loan/facility, renewal of loan/facility, remaining installments of loan sanctioned on installment basis and even accepting the guarantee to the blacklisted person, firm, companies or organized institutions.

**e) Conditions for Blacklisting**

Loanee having loan of Rs.25 Lac or above from licensed institutions or any individual should be blacklisted if any or all of the following conditions;

- ) If the repayment date of installment of principle or interest of loan crosses one year. But, the BOD of the concerned institution may add the tenure of maximum 3 months considering the situation.
- ) If the mis-utilization of loan and facility is proved.
- ) If it is proved that the material proved as security is mis-utilized.
- ) If the loanee is out of contact.

- )] If the loanee is declared insolvent as per the law.
- )] If the file is cased against loanee in the court.
- )] If deceive of amount by using fraud cheque, draft, foreign currency, credit/debit cards, bills etc. or if the court proves guilty for subject of attempting to deceive.
- )] If any individual, firm, company or organized institutions are proved to be involved in crime of financial transactions.
- )] The condition of not paying off the loan within the time frame mentioned in loan agreement by any individual, firm, company or organized institutions and in condition of punishment for recovery as per section 57 of Financial Institution Act 2063.
- )] In the condition of writing off the loan by the licensed institutions.
- )] Issue of non-cashable cheque or lack of sufficient balance in account.

**f) Provision of Withdrawing Name from Blacklist**

- )] Payment of Principle and Interest of matured loan.
- )] If the Board of Directors of concerned licensed institution prolong the maturity period of loan deeming suitable and rescheduling or restructuring the loan within the realm of directive of this bank.
- )] In condition of approval from BOD of concerned licensed institutions regarding acceptance of credit liability by other person, firm, company or organized institutions and in such condition the accepting person, firm, company or organized institutions is given the tenure of maximum 1 year and is blacklisted if the loan is not repaid or is not made regular within that period, the new person, firm, company or organized institutions should also be blacklisted.

**NRB Directive 15/066**

NRB has stated this directive no 15 regarding the interest rates, with the objective of creating a healthy competition between interests paid on deposits and interest gained form loans.

**a) Fixation of Interest Rates**



“A”, “B” and “C” class institutions are free to fix interest rates for both deposits and lending including the fixation of types of interest and procedures.

**b) Prohibition for Fixing Flat Rate of Interest**

Licensed institutions other than “D” class cannot fix flat interest rates on loans and advances.

**c) Interest Rates to be Approved**

Licensed institutions shall implement the interest rates for deposits and lending, procedure for calculation of interest, penal interest, commission and service charges only after approval. The institutions cannot vary (upward or downward) interest rate for deposits in excess of 0.5 percent over the published.

**d) Submission of Return on Interest Rates**

The licensed institutions shall compulsorily submit particulars of interest rates of deposits and lending to Banks and Financial Institutions Regulation Department Nepal Rastra Bank within 7 days of each quarter ending. Further, the licensed institutions shall submit the whole arrangements and procedures relating to interest rates as per the clause 3 above at the time of initial implementation and changes made there within 7 days.

**e) Interest Rates to be Published**

The national level “A”, “B”, and “C” class financial institutions shall publish the particulars as per clause 4 above at times of each amendment made in the interest rates on deposits and lending on National Daily Newspapers. However, it should be published on quarterly basis whether it is changed or not. Regional/District Level institutions shall publish the particulars in the Regional/ District level Newspapers. “D” class institutions may publish the interest rates putting the information on its notice board.

#### **f) Recognition of Interest Income**

The interest accruals on loan and advances shall be recognized as income on cash basis. Interest accrued shall be recognized in the year of cash realization.

#### **g) Action for Non-Compliance**

If the licensed institutions found not complying with the directives relating to branches/offices action may be initiated under the Nepal Rastra Bank Act, 2058.

### **2.3 Review of Journals and Dissertations**

Under this, various articles and dissertations have been reviewed for the purpose of clarification of lending practices and policies of the company under consideration.

#### **2.3.1 Review of Related Articles**

Bhatta, (47<sup>th</sup> anniversary), In this article "*Financial Policies to Prevent Financial Crisis*", Nepal Rastra Bank Samachar, the author has suggested that the financial markets have become an exciting, challenging and ever changing sector in the recent years. The emergence of global financial institutions as a result of increased economic liberalization has raised a host of questions for financial planners and policy makers. The growth of financial markets has caused complexities in the management and if they are not managed and addressed properly with appropriate policies, then the result is the financial crisis. The financial crisis, which took place in Chile in 1992, Mexico in 1994, South Asian countries 1997, Russian Federation in 1998, Ecuador and Brazil in 1999 and Argentina in the late 2001 were the result of an abrupt growth in the size of financial markets posing serious challenges to their management.

According to the author of the article, the financial crisis in most of the markets, particularly in emerging market, undergo several stages. The, initial stage is deterioration' in financial and non-balance sheets and which promotes the second stage that is currency crisis. Due to the

currency crises the financial institutions lack capacity of investment which will in third stage makes further determination of financial and non-financial balance sheets. This stage is the one that caused the economy to full- fledged financial crisis with its devastating consequences.

Pradhan in his articles, “*The Importance of Loan Information Centre and Its Activities*” published in NRB annual publication says that the loan information centre was established to fulfil the necessity of a company working in relation to information related to loan. He further adds that the negative, trends like delaying the payments of principal and interest, deficient loan approval procedures, lack of constant inspection of project, lack of coordination between bank and finance companies have aided in the increase of non-performing loans ultimately affecting the national economy negatively. The author recommends the banks and finance companies to help the loan information centre by following the directives of Nepal Rastra bank and utilizing the information obtained from the centre so that positive changes can be witnessed.

Shrestha in her articles, “*Lending Operation of Commercial Banks of Nepal and its Impact on GDP*” has presented with the objectives to make an analysis of contribution of commercial banks’ lending to the GDP of Nepal. She has set hypothesis that there has been positive impact of lending of commercial banks to the GDP. In research methodology, she has considered GDP as the dependent variable and various sectors of lending Viz. agriculture, industrial, commercial service and general multiple regression technique has been applied to analyse the contribution.

NRB Economic Report (2007/08)is also reviewed about loan and advances and non- performing loan:

It is stated in 9.10 Loans and advances of commercial banks occupied a major share in the total assets. The share of loans and advances in total assets declined to 76.5 percent in the review year from 81.0 percent in the previous year. Loans and advances of commercial banks increased by 23.5 percent in the review year compared to a growth of 15.9 percent in the previous year on account of an increasing private sector credit off-take in the review year.

In 9.11 it is mentioned that “of the credit aggregates, the credit to the private sector has occupied a major share. Such credit stood at 41.0 percent of GDP and 61.3 percent of total assets and liabilities of commercial banks as at mid-July 2008. Compared to a growth of 17.1 percent in the previous year, private sector credit grew by 26.9 percent in the review year amounting to Rs. 336.8 billion as at mid-July 2008 owing to a higher credit demand in the private sector.”

In 9.12, it is stated that the total holding of government securities by commercial banks reached Rs. 72.1 billion as at mid-July 2008 from Rs. 65.9 billion in mid-July 2007, with a growth of 9.5 percent in the review year compared to a growth of 11.9 percent in the previous year. Similarly, commercial banks' claims on non-financial government enterprises increased by 10.4 percent in the review year compared to a growth of 12.2 percent in the previous year. The claims registered a lower growth on account of a partial loan repayment by Nepal Oil Corporation, National Trading Ltd, Nepal Food Corporation and Nepal Airlines Corporation to the banking sector.

9.13 Claims on financial institutions increased by Rs. 1.3 billion in the review year compared to an increase of Rs. 381.8 million in the previous year on account of substantial growth of claims on non-government financial institutions. An increase of short-investment to development banks and finance companies by commercial banks contributed to the increase in the claims on financial institutions in the review year.

On 9.14 of the report it is mentioned that “Liquid funds of commercial banks soared by 21.7 percent in the review year compared to a growth of 5.0 percent in the previous year. A rise in foreign assets of commercial banks owing to an elevated level of remittance inflows and capital expansion contributed to the higher growth of liquid funds of commercial banks in the review year.”

### **2.3.2 Review of Related Thesis**

Shahi (2000) on *"Investment policy of Commercial Banks of Nepal"*, recommended that commercial banks must mobilize its funds in different sectors such as purchasing of shares and debentures of other financial and non-financial companies. The banks should make continuous efforts to explore new competitive and high yielding investment opportunities to optimize its investment portfolio. Loan default in commercial banks is a

result of various factors i.e. political influence, lack of necessary skills of project appraisal, improper collateral valuation, irregular supervision and lack of entrepreneurship attitude. He suggested enacting loan recovery act to enhance the function of recovery of loan.

The main objective of his study is to compare the investment policy of Nepal Bank Limited with other joint venture banks like NABIL, NGBL and NIBL. The conclusion drawn regarding the investment policy by comparing it with other three joint venture banks is inappropriate as NBL is a semi government which will be different in terms like interference level of government. NBL is unexposed to the global market unlike other joint venture commercial banks.

Tuladhar (2000) in his thesis "*A Study on Investment Policy of Nepal Grindlays Banks Ltd in Comparison to Other Joint Venture Banks of Nepal*" has said that the basic objective of his study is to highlight the various aspects of the investment policy which are - to study the fund mobilization and investment policy with respect to fee based off-balance sheet transaction and fund based on-balance sheet, to evaluate the growth ratio of loan and advances and total investment with respective growth rate of total deposit and net profit, to evaluate the trends of deposit utilization towards total investment and loan & advances and its projection for next five years. He found the profitability position of NGBL is higher than NABIL and HBL. NGBL maintained successful liquidity position than others because of uncertain efficient return depositor may withdraw at high portion and invest in newly opened organization. The NGBL is providing less loan and advances in comparison to its deposits than other two banks and still it has largest profit. Its earning consistency is sound than the other two banks. The volume of growth of loan and advances is highest of HBL. He has concluded that joint venture banks are discouraged at lower level depositor and interested in higher level of clients as paramount customers. He recommended following a liberal lending policy so that more percentage of deposits can be invested in to different profitable sectors as well as loan and advances. Investment and loan & advances are significant factor that affects the bank profitability.

Further to his study, he has focused to invest more percentage of deposit for NGBL, it might not be appropriate because liquidity is given high preference and importance in banking operation. When depositors demand money back, bank must return them to maintain its creditability. Bank

needs to maximize its wealth, goodwill, no. of branches so as to collect more scattered deposit of people and invest in the sectors which will give high return and is more potential for investment.

In the study he has done empirical study of customers view regarding adopted investment policy of concerned joint venture banks and distributed to one hundred customers at the bank to collect primary data for the analysis. He has used secondary data, reports, financial and statistical tools for the data analysis.

Laudari (2001) in his thesis "*A study on Investment policy of Nepal Indosuez Bank Ltd (NIBL) in comparison to Nepal SBI Bank Limited*" has compared the investment policy of Nepal Indosuez Bank Ltd. with Nepal SBI Bank Ltd. the main objective of his study is to examine the liquidity, asset management and profitability position, investment policy, the growth ratio of loans and advances and investment to total deposit and net profit of NIBL in comparison to SBI and to find out the trend of deposit utilization and its projection for next five years. He has found out that SBI's return on loan and advances does not seem satisfactory since the average return is 2.6% whereas NIBL has a better performance of return of 8% from consistency point of view, NIBL's ratio is completely consistent whereas SBI's ratio is highly deviated since CVs are 0 and 53.85% respectively.

In the recommendation part, he has stated that loan and advances to total deposit of NIBL is also lower than that of SBI. And it is in a decreasing trend. Therefore, to improve the situation in future NIBL is recommended to be more liberal in providing the loan and advance and get the better result. It has to pay proper insight towards cash reserve ratio to make it stronger and to mobilize the excessive fund in a profitable sector. It should invest more on profitable sectors rather than focusing its investment on government securities as it yields lesser return. It should synchronize between deposit collection and investment even though they are different activities. NIBL is to be more liberal in providing the loan and advances and gets the better result. As the larger the covered area, the stronger will be the portfolio and bigger the amount of advance will become.

He further recommends NIBL to expand its services in rural areas and provide banking service to the rural dwellers also, as it has limited itself only in the urban areas. It has also to thoroughly implement the NRB directives by providing banking facilities to accelerate the rural areas economic development of the country. In his study he found out that "NIBL has earned high profit because its services are only for well off. It enjoys in paying penalty interest instead of not granting loan in priority sector. So NIBL is recommended to invest in priority and deprived sectors rather than paying penalty.

He has taken secondary data only for the study and has used various financial and statistical tools for the data presentation and analysis. Data which are related to fund mobilization as loan and advance and investment on government securities and other financial institutions are considered. In the study he has studied only a part of the loan under the investment policy finding the relationship between loans and advances with various variables. As his thesis is mainly related to investment policy he has focused mainly on the investment part explaining some of the relations of loans and advances.

Khadka (2002) in her thesis on "*A Comparative Study on Investment policy of Commercial Banks*" in which she has taken NABIL, SCBNL and NIBL banks as commercial banks and taken as average industry to compare with NBL. The specific objective of her study are to evaluate the liquidity, asset management efficiency and profitability position of NBL in comparison to other commercial banks and to find out the relationship between deposits and total investment, deposit and loan & advances and net profit and outside assets. She has found out that there is not much difference between the mean ratio of loan and advances to current assets of NBL and other commercial banks. The mean ratio of NBL is slightly higher than that of other commercial banks. However, NBL's ratios are found to be less uniform in comparison to other banks. It shows that the liquidity position of NBL is comparatively better than that of other banks. In contrast, the ratios of NBL are found to be less consistent than that of other commercial banks.

Shrestha (2002) "*A Comparative Study on Investment Practices of Joint Venture Commercial Banks with special reference to Nabil Bank Ltd, Standard Chartered Bank Nepal Limited and Nepal SBI Bank Limited*", has compared the investment policy adopted by Nabil, SBI and SCBNL

with each other. The specific objective of his study are to evaluate the liquidity management, asset management efficiency, profitability, risk position and investment practices of Nabil, SBI and SCBNL, to project the deposit and investment trends of the sample organization.

He has figured out the problem, conclusion and recommendation as follows:

"Commercial Banks are more emphasized to be making loan on short term basis against movable merchandise. Commercial Banks have a lot of deposits but very little Investment opportunity. They are even discouraging people by very low interest rate and minimum threshold balance.

Commercial Banks invest their funds in limited areas to achieve higher amount of profit. This is regarded as a very risky step, which may lead to lose in profit as well as principle. The credit extended by Commercial Banks to agriculture and industrial sector is not satisfactory to meet the growing need of the principle.

He has concluded that since the liquidity position on Nabil and SCBNL have not found satisfactory, it is, therefore, suggested them to improve cash and bank balance to meet current obligation. SCBNL's loans and advances to total deposit ratio is lower at all, it is recommended to follow liberal Lending policy for enhancement of fund mobilization. It is recommended to NSBI Bank that it has to enhance off balance sheet transactions, diversifying their investments, open new branches, play merchant banking role and invest their risky assets and shareholder's fund to gain higher profit margin.

Nabil and SCBNL are recommended to increase cash and balance to meet current obligations and loan demand.

Joshi (2003) on "*A Study on Financial Analysis of NIBL*". The main objectives of her study are to examine the overall financial position of NIBL, to examine liquidity ratio, profitability ratio and ownership ratios of the bank and to analyze the Bankruptcy score of the bank for the period of five Fiscal Years from 1997/98 to 2001/02. She has found that the analysis of the banks shows that the deposit have been increasing gradually during the study period i.e. (2053/054 to 2057/058). However, the rate of increase was comparatively low in the year 1997/98 than in



the year 2001/02. Total loans and advances have been also increasing. The total investment of the bank has been increasing over the years, which is mainly due to banks strategy of safe lending and also as a result of increase in customer deposits and limited opportunities for prudent lending. As the loan and advances from the bank is increasing provision for loan loss has also been increasing. The bank has been holding adequate provision for losses over the years and the general loan loss provision was 4% in average of the total risk assets.

In her study she has recommended that the bank should focus more on non-risky lending opportunities such as mortgages, housing loans and personal loans. It should carefully examine safety of principal as well as sources of repayment, capital structure, requirement and credit worthiness of a borrower for providing credits. In other words, credit manager should evaluate credit risk by considering well-known five C's of credit viz character, capacity, capital, collateral and conditions.

Further, she recommends that the bank should invest more in loan and advances and less in government securities. However, she has not explained the relation of investment in government securities in absolute terms.

The financial analysis of NIBL has been analyzed and interpreted in this thesis. Analysis on terms of loan and advances in simply presented with comparison with the previous year data only. On the loans and advances part also, only simple comparison has been done. Whether the loan classification and provisioning of loans, investment in priority and deprived sector loan, investment regulation of NRB's directive has been followed or not has not been explained.

Shrestha (2003) "*Impact and Implementation of NRB Guidelines (Directives on Commercial Banks*"- *A Study on Nabil Bank Limited and Nepal SBI Bank Limited*" found out that both the Nabil Bank and Nepal SBI Bank have been fully implementing the NRB's directives. The main objectives of her study are to review directives of NRB related to commercial banks. Her study concluded with the broad objective of examining the state of NRB functions in the commercial banks in Nepal. Capital Adequacy Ratio of Nabil and Nepal SBI are 13.40% and 12.86% respectively which are more than 9%. Banks are following the directives but in some cases such like supplementary capital and balance at NRB

there is shortfalls. The excess amount of core capital in supplementary capital and 1% excess amount of total deposits in balance at NRB can compensate this shortfall. The banks have categorized the loan amount into four different categories as per NRBs directives. The increasing loan loss-provisioning amount decreases the profit of the banks. The change in the single borrower limit has brought down the limits of the fund based and non-fund based loans which have resulted to reduce loan exposure to banks.

In her thesis study she has recommended that both Nabil and SBI banks to increase its supplementary capital as it has shortfall in comparison with NRB guidelines and to meet the supplementary capital adequacy ratio even though it can be compensated by the excess amount of core capital. The supplementary capital needs to be increased by Rs.122.74 million in Nabil Bank and Rs.125.57 Million in Nepal SBI Bank. She says liquidity and profitability are like two wheels of one cart so banks cannot run in the absence of any one of them. One can be achieved only at the cost of the others. Only liquid banks can attract lower core deposits, which helps in reducing interest expenses and give loan to good customer at lower rate, which results in requirement of less provision and high net profit. So banks should increase their primary reserve now to maintain the liquidity risk due to scrap out the secondary reserves. On the basis of finding, Nabil Bank has shortfall of Rs.140.74 million thus it has to increase its balance at NRB by such amount for better performance even after adding 1% excess amount of cash of total deposit.

Primary data has been used in order to get the view of bankers on the directives issued by NRB. Questionnaire related to NRB Directives (1-5) are used to collect data for the study and implementation of directives by commercial bank. Secondary data are also used for the analysis. On this study the general directives are taken as guidelines. So all directives are not considered for study- only the directives issued in 2001 and 2002 are considered for the study.

Bist (2004), entitled “*NRB Directives Implementation and Impact on Selected Commercial Bank in Nepal*” analysed whether the sample banks have been<sup>41</sup> following the NRB directives related to commercial banks and its impact on their operation.

The major objectives of the study were:

- )] To examine whether the banks have been following the directives provided by NRB
- )] To analyse the impact to the changes in the NRB Directives on the performance of the commercial banks
- )] To inspect whether NRB has been regularly monitoring the activities of commercial banks.

The study concluded that some directives of NRB should be revised which would help to bring prosperity not only to the shareholders but also to the depositors, the employees and the economy of the country as a whole. It also suggested that commercial banks have to come up with a stronger internal audit department to make sure that the directives are properly implemented. Banks need to give priority in Human Resource Development to monitor and collect already disbursed loans. Also, NRB should be more practical while issuing the directives which should not be issued to meet the international standard only but they need to be applicable in the context of Nepal as well.

Shahi (2005), "*Lending Operation and Practice of Joint Venture Banks in Nepal*", has examined the lending operation and practice of joint venture banks.

The main objectives of the research were:

- )] To determine the liquidity position
- )] To measure the banks' lending strength
- )] To analyse the portfolio behaviour of lending and measuring the ratio and volume of loans and advances made in agriculture, priority and productive sector.

This research has concluded that the high volume of liquidity shows the high degree of lending strength. The situation has been prevailing in all of the banks taken into consideration for the study. The lack of reliable lending opportunities and fear of losing the principal in rural sector has been keeping the sample banks to less orient towards the lending functions. Hence, the government should take appropriate actions to initiate these banks to attract to flow credit in rural economy.

Maharjan (2006) entitled “*Loan Management of Nepalese Commercial Banks*” in which he examined the loan management of the commercial banks in Nepal.

The main objectives of the study were:

- ) To determine how far the banks are investing in the priority sector and the deprived sector.
- ) To determine the trend of the deposit and the loan
- ) To determine the loan loss provision made by banks

The researcher concluded that loan and advances are the profitable assets for the banks and it is very risky too. Due to this reason, the loans and advances should be effectively managed and controlled. The study suggested that the banks should follow the NRB directives strictly for effectiveness and better financial status of the banks.

## **2.4 Research Gap**

There is a certain gap between the present research and past research. Previous research conducted generally on investment policy of commercial banks of two banks. In some cases, there was also found the investment policy of maximum of four banks without any ranking criteria. Those analyses expressed all items in the statement in the form of amount. The previous researchers did not disclose the practical lending policies, which is practiced by the commercial banks. Thus to fulfill this gap the present research is conducted. It covers top four commercial banks. The analysis based on expressing all items in the statement as a percentage. It is modern approach to evaluate the lending practices.

Most important point to remember about lending policy is that every financial measure should be compared across time and across over same line of companies to be meaningful. Prior research has been conducted on the basis of traditional lending practices. The value of the approach was quantitative relations. The world is becoming more dynamic and subject to rapid changes. This research will be based upon the modern approaches to lending practices; which includes comparable group approach and consideration of economic and strategic factors where feasible. Thus, the research will be an interest to a wide range of its stakeholders and other government regulatory interests. This may be the first effort to performance evaluation of top four commercial banks with sufficient time frame in a systematic manner.

## **CHAPTER - III**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The prime objective of this study is to assess the lending practices and policies of selected joint venture banks. This chapter is related to the Research employed in the entire aspect of the study. “Research may be defined as the systematic and objective analysis and recording of controlled observations that may lead to the developments of generalizations principles or theories, resulting in prediction and possibly ultimate controls of events.” Thus, the chapter is to stress on the different method and conditions, which are used while conducting this study. This chapter includes the research design, Data collection techniques, Data collection procedure, population and samples and method of data analysis

#### **3.2 Research Design**

Research Design is a plan for the collection and analysis of data. According to Paul and Tull, a research design is the specification of methods and procedures for acquiring the information needed. It is the overall operational pattern of framework, of the project that stipulates what information is to be collected from which sources by what procedures. If it has a good design, it will ensure that the information obtained is relevant to the research questions and that it was collected by objective and economical procedures.

Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research objectives through analysis of data. The first step of the study is to collect necessary information and data concerning the study. Therefore, research design means the definite procedure and techniques, which guides the study and the ways to do the study. This, in fact, is the specific presentation of the various steps in research process. These steps include the selection of a research problem, presentation of the problem, formulation of hypothesis, methodology, survey of literature and documentation, data collection, interpretation, presentation, report writing and bibliography.

The basic objective of this study is to evaluate the lending structure of four commercial banks under study. The research design of this study is analytical as well as descriptive approaches to evaluate the financial performance of these banks. Basically this study is based on secondary data and the past five years data from 2004/05 to 2008/09 will be used for the finding of objective.

### **3.3 Populations and Sample**

At present there are 26 commercial banks licensed by NRB are operating in Nepal. This whole number of bank is the population. However, while conducting the research four banks out of 26 has been taken are the samples for the study. It means, more than 15 percent of the population has been taken as the sample for the preparation of this research. The sample was collected by random selection of the commercial banks. Due to the easy availability of data and the popularity among the banks, the samples banks are selected.

### **3.4 Sources of Data**

All the data necessary for the accomplishment of the research are collected from secondary sources. Besides, necessary suggestion and ideas are taken from the experts either related to the selected bank or outside the banks as per the requirement. Other sources of data are summarized below:

- ) Annual report of NABIL, EBL, HBL and SBI.
- ) Bulletin and reports of concerned bank.
- ) Related URL.
- ) Materials published in Newspapers and Magazines.
- ) Other related journals, periodicals, books and booklets.

### **3.5 Data Collecting Procedure**

The annual reports of respective commercial banks are collected by going to the share department of respective banks. NRB economic report 2008/09 was brought from my friend Surendra Prasad Gupta who had taken it from Research Department of Nepal Rastra Bank. The internet

also proved to be a very good source of data. Various websites were used for the collection of data which are listed in the bibliography. After the collection of data they have been grouped according to their nature in their tabular and chart to pick up relevant data. These data are then presented and refined for the purpose of the study and analysis.

### **3.6 Methods of Data Analysis**

The data presented in the study will be analyzed by using following tools and techniques for the accomplishment of the research.

#### **3.6.1 Financial Tools**

In this research study, there are various financial tools but only selected ratios are used on the study.

##### **3.6.1.1 Ratio Analysis**

The relationship between two accounting figure, expressed mathematically, is known as financial ratio (or simply as ratio). A ratio is simply one number expressed in terms of another and as such it expresses the quantitative relationship between any two numbers. Ratio can be expressed in terms of percentage, proportion and as a coefficient. “The technique of ratio analysis is a part of the whole process of analysis of financial statement of any business of industrial concern especially to take output and credit decisions – Through this technique, a comparative study can be made between different statistics concerning varied facets of a business unit. Just as blood pressure, pulse and temperatures are the measures of the health of an individual, so does ratio analysis measure the economics of financial health of a business concern. Thus, the technique of ratio analysis is of a considerable significance in studying the financial stability, liquidity, profitability and the quality of the management of the business and industrial concerns” (*Kothari, 1994:1-264*).

As far as we are concerned about the financial ratio, a ratio between two relevant figures, which provide a certain relation, and have negative or positive correlation between them will only be studied. Since comparing two incomparable figures and their ratios give no idea and judgment on analysis and its remains as an absurd figure only. This section has been divided into following sub-sections.

### **3.6.1.2 Assets/Liability Management Ratios**

Asset/Liability Management Ratio measures the proportion of various assets and liabilities in Balance Sheet. The Proper management of assets and liabilities ensures its effective utilization. The banking business converts the liability into assets by way of its lending and Investment functions. Assets and Liabilities management ratio measures its efficiency in multiplying various liabilities in performing assets. The following are the various ratios relating to Assets Liability management, used to determine the Lending Strength of the subjected finance companies.

- i. Investment to Loans and Advances and Investment Ratio
- ii. Loans and Advances and investment to Total Deposit Ratio
- iii. Loans and Advances to Shareholder's Equity Ratio

### **3.6.1.3 Activity Ratio**

Activity ratio measures the performance efficiency of an organization from various angles of its operations. These ratios indicate the efficiency of activity an enterprise to utilize available funds, particularly short-term funds. The following ratios are used in this study to determine the efficiency, quality and the contribution of Loans and Advances in the total profitability.

- i. Loan Loss provision to Total Loan and Advances Ratio.
- ii. Non-Performing Loans to Total Loan and Advances Ratio.
- iii. Interest Income from Loans and Advances to Total Income Ratio.
- iv. Interest Suspense to Total Interest Income from Loans and Advances Ratio.
- v. Loans and Advances to Total Deposit Ratio.
- vi. Interest Income to Interest Expense Ratio.

### **3.6.1.4 Profitability Ratio**



Profit is the difference between the revenues and the expenditures over a period. Profit is the main element that makes an organization to survive. The profit, in other hand, measures the management ability regarding how well they have utilized their funds to generate surplus. The given ratios are used to determine the efficiency of the lending, its quality and contribution on total profitability.

- i. Net Profit to Shareholder's Equity Ratio.
- ii. Earnings Per Share (EPS).

### **3.6.2 Statistical Tools**

Statistical Methods are the mathematical technique used to facilitate the analysis and interpretation of numerical data secured form groups of individuals or groups of observations from a single individual. The figures provide detailed description and tabulate as well as analyze data without subjectivity, but only objectivity. The results can be presented in brief and precise language and complex and complicated problems can be studied in very simple way. It becomes possible to convert abstract problems into, figures and complex data in the form of tables. The various statistical tools used in this study to analyze the collected data are as follows: -

#### **3.6.2.1 Standard Deviation (S.D.)**

The measurement of the scatterness of the mass of figure in a series about an average is known as dispersion. The standard deviation measures the absolute dispersion. The greater the amount of dispersion, greater will be the standard deviation. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series. In this study, standard deviation of different ratio is calculated. It is denoted by 'σ'.

$$\text{S.D.} = \sqrt{\frac{\sum x^2}{n} - \left(\frac{\sum x}{n}\right)^2}$$

#### **3.6.2.2 Coefficient of Variation (C.V.)**

The coefficient of variance measures the ratio of the standard deviation to the mean expressed in percent. It is calculated as under: -

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

Where,

$\sigma$  = Standard Deviation

$\bar{X}$  = Mean Value of Variances

Coefficient of variance is also useful in comparing the amount of variation in data groups with different mean. It is the relative measure of dispersion. A distribution with smaller coefficient is said to be more homogeneous than the other. On other hand, a series with greater coefficient of variance is said to be more variable of heterogeneous than the other (*Gupta, 2000: 416*).

### 3.6.2.3 Correlation of Coefficient

The coefficient of correlation measure the degree of relationship between two sets of sigma. There is various method of finding out coefficient of correlation but Karl Pearson's method is applied in the study. The result of correlation coefficient is always between -1 and +1. It is indicated by r. When r is +1, it means there is perfect relationship between two variables and vice-versa. When r = 0, it means there is no relationship between two variables. The compute formula is mentioned below:

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

### 3.6.2.4. Coefficient of Determination

It is simply the zooming of correlation coefficient. It also measures the degree of relationship between the two variables. When the correlation coefficient comes in very small denomination then coefficient of determination helps to understand it more precisely by zooming it. It is denoted by  $r^2$ .

### 3.6.2.5 Probable Error

Probable error of the correlation coefficient is denoted by P.E. It is used for the testing the reliability of the calculated value of r. P.E. is defined by: -

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

Where,

$$\begin{aligned} \text{P.E. (r)} &= \text{Probable error of correlation coefficient} \\ r &= \text{Correlation coefficient} \\ n &= \text{Number of observation.} \end{aligned}$$

### 3.6.2.6 Trend Line/ Regression

The literal meaning of the word "regression" is stepping or returning back to the average value. The term was first developed by Francis Galton in 1877. Regression is the statistical tool with the help of which we can estimate or predict the unknown value of one variable from the known value of any other variable. Assuming that the two variables are closely related, we can estimate the value of one variable from the value of another. The variable whose value is given is called "independent variable" and the variable whose value is to be predicted is called "dependent variable".

The regression equation of y on x is expressed as;

$$Y_c = a + B_x$$

Where,

$Y_c$  = Value of y computed from the relationship for a given X.

“a” and “b” are constants and also known as the parameters of the line. The parameter “a” determines the distance of the line directly above or below the origin, while parameter “b” determines the slope of the line i.e. the change in y with per unit change in x. X is an independent variable and Y is dependent variable.

## **CHAPTER - IV**

### **DATA PRESENTATION AND ANALYSIS**

The basic objective of analyzing the financial performance and interpretation is to highlight the lending strength of the commercial banks. Lending Strength is that important aspect of any banks, which, if not kept in track while performing the functions, can lead to very critical situation. This, in fact, shows the situation of commercial banks in terms of investments in loans and advances. Whether the company is lending in accordance with the deposits it is collecting and the investments made by the shareholders or not should be analyzed regularly. Any idle deposit is loss to the company. Here, under this topic, an attempt is made to analyze the lending strength of the commercial banks under study in relative terms as well as absolute terms.

#### **4.1 Measuring the Lending Strength in Relative Terms**

The lending strength of commercial banks under study is measured in relative terms in this section. The relationship between various assets and liabilities of the balance sheet has been established to show the relative strength of lending strength of each commercial bank comparatively.

##### **4.1.1 Investment to Loans and Advances Ratio**

This ratio measures the contribution made by investment in total amount of Loans and Advances and Investments. The proportion between investment and loans and advances depicts the management attitude towards risky assets and safety assets. This also measures the risk that the company is taking in its investment. The high ratio indicates the mobilization of funds in safe area and vice versa. However, safety does not provide with satisfactory return, as is said, “No risk no gain”. Thus, a compromising ratio between risk and profit should be maintained.

**Table 4.1**  
**Investment to Loans & Advances**

F/Y	Nabil	EBL	HBL	NSBI	Total	Mean	S.D.	C.V.
2004/05	0.3898	0.2695	0.8692	0.3869	1.9154	0.4789	0.2305	0.4814
2005/06	0.4653	0.4144	0.6908	0.4561	2.0266	0.5067	0.1080	0.2132
2006/07	0.5625	0.3539	0.6644	0.2642	1.8450	0.4613	0.1596	0.3460
2007/08	0.4568	0.2686	0.6610	0.2423	1.6287	0.4072	0.1683	0.4133
2008/09	0.3867	0.2431	0.3413	0.8510	1.8221	0.4555	0.2342	0.5140
Total	2.2611	1.5495	3.2267	2.2005				
Mean	0.3867	0.2431	0.3413	0.8510				
S.D.	0.0641	0.0643	0.1704	0.2200				
C.V.	0.1658	0.2644	0.4993	0.2585				

*(Source: Annexure I)*

**Figure 4.1**  
**Investment to Loans & Advances**

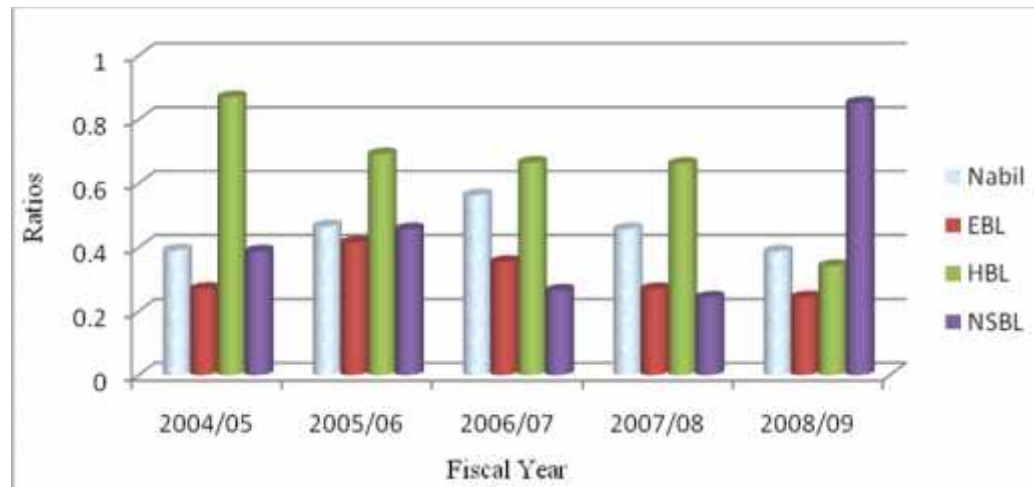


Table and figure 4.1 shows the ratios of investment to Loans and Advances. The ratios are ranged from 0.24 of NSBI and EBL to 0.86 of HBL in different fiscal years. On the contrary, EBL has the least ratio throughout the study period keeping aside the least ratio 0.24 in the fiscal year 2008/09. Analyzing the 5-year data of all the five commercial banks, it is noted that no single bank has a steady increase in the ratio throughout the period. Despite being highest, the ratios of HBL are in decreasing trend. It is 0.87 in the initial period which slumped down to 0.34 in F/y 2008/09 whereas the trend of ratios of other banks is increasing in the beginning and declined thereafter. The ratio of NABIL is equal at 0.39 in 2004/05 and 2008/09 while for NSBI it is more than double between the very periods.

The combined mean ratio of all four commercial bank is 0.4. Similarly, the mean ratios of NABIL, EBL, HBL and NSBI are 0.39, 0.24, 0.34 and 0.85 respectively. Only the NSBI have registered the higher mean ratio than that of Combined Mean. This infers that NSBI have the lowest degree of investment in risky assets. And similarly, EBL has the lowest ratio meaning that it has high amount of investment in risky assets.

The C.V. of HBL is highest of all sample banks figuring at 0.4993 i.e. 49.93% which reveal that there is high variability in the ratios of HBL. Similarly, NABIL has the lowest C.V. of 0.1658 i.e. 16.58% whereas the C.V. of EBL and NSBI are 26.44% and 25.85% respectively. Furthermore, when we look at the C.V. of the years, the highest C.V. of 51.40% was marked in the year 2008/09 and lowest i.e. 21.32% in the year 2005/06. Therefore, in the year 2008/09, there is high variability in the ratios of Investment to Loan and Advances.

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

Loans and Advances and Investments are the major area of fund mobilization. This is the major area where the funds collected as deposits are channelized. The first part, Loans and Advances is more crucial and also bears more risk than Investments but also gives the higher return. Whereas, the second half, Investments has lesser risk and gives lower return in compare to Loans and Advances. Loans and Advances and Investment to Total Deposits ratio indicate the firm's fund mobilizing power in gross. Total deposits collected, against giving interest to the customers, is the total amount available for investments. Loans and Advances and Investment are the major areas where the companies can mobilize the funds with some returns. Any idle deposits mean loss to the company. Thus, this ratio measures how well the deposits have been

mobilized. In other words, we can say that this ratio measures what part of deposits are generating income for the company to give out interest to the deposits and also make profit.



**Table 4.2**  
**Investment and Loans & Advance to Total Deposit**

F/Y	Banks				Total	Mean	S.D	C.V.
	Nabil	EBL	HBL	NSBI				
2004/05	1.043	0.993	1.013	1.08	4.1289	1.0322	0.0328	0.0318
2005/06	1.006	1.039	1.006	1.091	4.1417	1.0354	0.0346	0.0335
2006/07	1.065	1.048	0.986	1.112	4.2107	1.0527	0.0450	0.0428
2007/08	0.993	0.997	1.053	1.155	4.1975	1.0494	0.0652	0.0621
2008/09	1.04	0.913	0.987	1.034	3.9736	0.9934	0.0507	0.0511
Total	5.1470	4.9900	5.0450	5.4704				
Mean	1.0400	0.9130	0.9870	1.0336				
S.D. (□□)	0.0262	0.0478	0.0244	0.0396				
C.V.	0.0252	0.0524	0.0247	0.0383				

(Source: Annexure I)

**Figure 4.2**  
**Investment and Loans & Advance to Total Deposit**

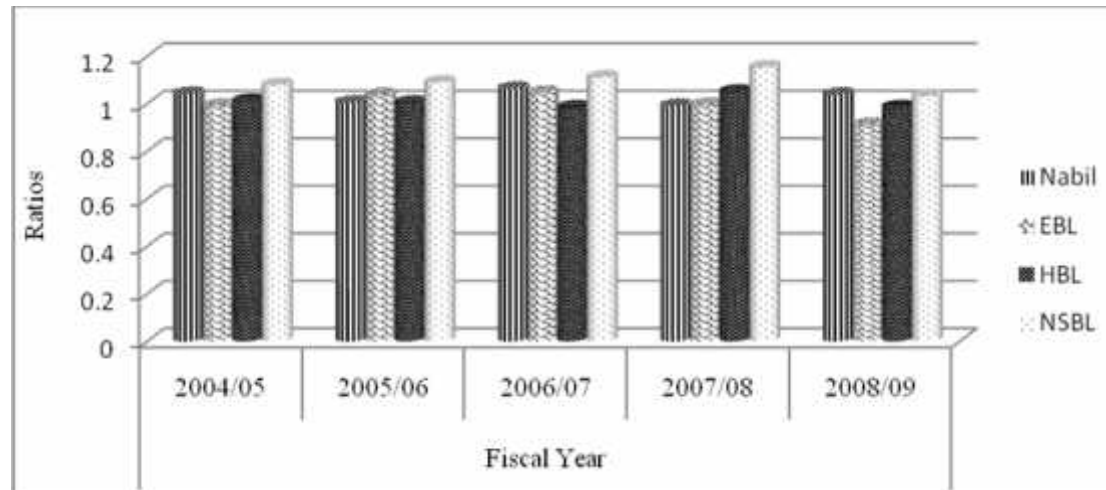


Table and figure 4.2 above shows the ratio of Loans and Advances and Investments to Total Deposits. This means the portion of deposit being mobilized to generate income. The ratios range from 0.91 of EBL in 2008/09 to 1.16 of NSBI in 2007/08. NSBI has the highest ratios throughout the period followed by NABIL, HBL and EBL.

NABIL and EBL has highest ratio of 1.07 and 1.05 in 2006/07, whereas HBL and NSBI has highest ratio of 1.05 and 1.15 in the year 2007/08. EBL has the lowest ratio throughout the study period. The ratios of NSBI inclined gradually from 1.08 in 2004/05 to 1.16 in 2007/08 which in the final year has declined to 1.03. None of the companies showed a steady increasing trend of the ratios. All the banks have a slight ups and down in the ratios in across the period of five years.

The Combined Mean ratio of all the four commercial bank is 0.99. The mean ratios of NABIL, EBL, HBL and NSBI are 1.04, 0.91, 0.98 and 1.03 respectively. Taking combined mean as standard measurement, NABIL has the highest mean ratio. This shows that NABIL has been doing best in mobilizing the funds collected in an income-generating sector. And since the ratio is above 1, it refers that none of the deposit is idle meaning that the accumulated funds are well utilized.

The C.V. of EBL is highest with 5.24% which reveal that there is high variability in the ratios of EBL. Similarly, the lowest value of C.V. is of NSBI at 3.83% which indicates that NSBI has more consistent performance in fund mobilization. In addition, having looked at the C.V. on yearly basis, highest C.V. was realized in the year 2007/08 which stood at 6.21%. It means, taking all the sample banks, consistent fund mobilization was realized in fiscal year 2007/08.

#### **4.1.3 Loans and Advances to Shareholder's Equity Ratio**

Shareholders equity consist of Share capital, Share premium, Reserves fund, Retained earnings etc. The ratio between Loans and Advances to Shareholders Equity shows how far the Shareholder's Equity has been able to generate assets to multiply its wealth. Shareholder's Equity is the investment made by shareholders in the company and Loans and Advances mean mobilization of that invested funds in profit generating sector. Thus, this ratio measures size of the business and their success in converting liability into assets

**Table 4.3**  
**Loans and Advance to SHE**

F/Y	Banks				Total	Mean	S.D	C.V.
	Nabil	EBL	HBL	NSBI				
2004/05	6.604	10.264	8.725	9.781	35.3740	8.8435	1.4077	0.1592
2005/06	7.082	10.527	8.924	8.389	34.9220	8.7305	1.2348	0.1414
2006/07	7.731	12.942	8.29	8.652	37.6150	9.4038	2.0690	0.2200
2007/08	8.928	9.8043	8.032	9.01	35.7743	8.9436	0.6278	0.0702
2008/09	8.945	11.104	8.18	9.116	37.3450	9.3363	1.0798	0.1157
Total	39.29	54.64	42.15	44.95				
Mean	8.9450	11.1040	8.1800	9.1160				
S.D	0.9505	1.0910	0.3381	0.4727				
C.V.	0.1063	0.0983	0.0413	0.0519				

(Source: Annexure I)

**Figure 4.3**  
**Loans and Advance to SHE**

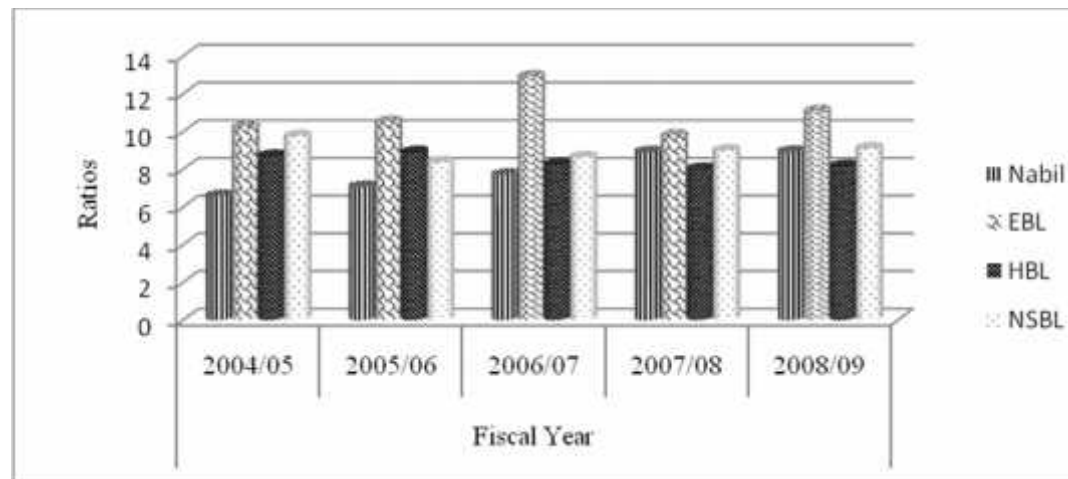


Table 4.3 shows the ratios of Loans and Advances to Shareholder's Equity. The ratios range from 6.6 of Nabil in 2004/05 to 12.94 of EBL in 2006/07. The ratio of merely the NABIL is in increasing trend whereas the ratios of rest three banks are fluctuating. This fluctuation is probably due to increase in the shareholder's equity of the companies in different years.

The Combined Mean ratio of all the commercial bank is 9.05. The mean ratios of NABIL, EBL, HBL and NSBI are 8.95, 11.10, 8.18 & 9.12 respectively. EBL has the highest mean ratio whereas HBL has the lowest. Since the ratios of NABIL and HBL lying below the Combined Mean, it can be concluded that they have not succeeded in increasing Loans and Advances in proportion to the size of their capital.

The C.V. of NABIL is highest of 10.63% which reveal that there is high variability in the ratios of NABIL. Similarly, the lowest value of C.V. is of HBL whose value is 4.13%. Similarly, when we look at the C.V. of the years, in the year 2006/07 is of the highest C.V. of 22% and lowest in the year 2007/08 of 7.02%. Therefore, in the year 2006/07, there is high variability in the ratios of Loan and Advances to Shareholder's equity.

## **4.2 Measuring the Lending Strength in Absolute Terms**

In this topic, the various variables in their absolute values are measured individually. The value of individual variables enables to measure the gross contribution of respective commercial bank in those aspects. The ratio analysis merely describes the ratio between the two variables but does not tell about the absolute value of those variables. Thus, in this section, some of the important individual variables in their absolute value of Mean and Standard Deviation are examined. Simultaneously, to measure the relative measure of variability of data, the Coefficient of Variation is also measured.

### **4.2.1 Loans and Advances**

One of the dominant functions of commercial bank is to create credit from its borrowed fund. By doing so it is converting its liability into assets. The high volume of Loans and Advances is indicator of good performance in credit sector. In other words, the volume of Loans and Advances is taken as one crucial element for measuring the performance of any commercial banks.

**Table 4.4**  
**Loans & Advances**

(In Millions)

F/Y	Banks				Total	Mean	S.D	C.V.
	Nabil	EBL	HBL	NSBI				
2004/05	10946.7	7900.09	13451.2	6739.35	39037.34	9759.34	2627.58	0.2692
2005/06	13278.8	10136.3	15762	8241.46	47418.56	11854.64	2885.46	0.2434
2006/07	15903	14082.7	17793.7	10065.1	57844.50	14461.13	2857.15	0.1976
2007/08	21759.5	18836.4	20179.6	12746.2	73521.70	18380.43	3413.49	0.1857
2008/09	27999	24469.6	25519.5	15612.1	93600.20	23400.05	4675.43	0.1998
Total	89887.00	75425.09	92706.00	53404.21				
Mean	27999.00	24469.60	25519.50	15612.10				
S.D	6173.29	5987.67	4136.95	3176.42				
C.V.	0.2205	0.2447	0.1621	0.2035				

(Source: Annexure I)

Table 4.4 shows Mean, Standard Deviation and Coefficient of Variance of all commercial banks under study. The mean Loans and Advances of NABIL is highest of all at Rs.27999 million and NSBI has the least mean loan & advance of Rs.15612.10 million. The Standard Deviation of NSBI is lowest i.e. 3176.42. Thus, the performance of NSBI is more consistent with regards to providing loans and advances in comparison to other commercial banks. Whereas coefficient of variance is highest of EBL i.e. 24.47% and the lowest is of HBL which is 16.21%.

**Figure 4.4**  
**Loans & Advances**

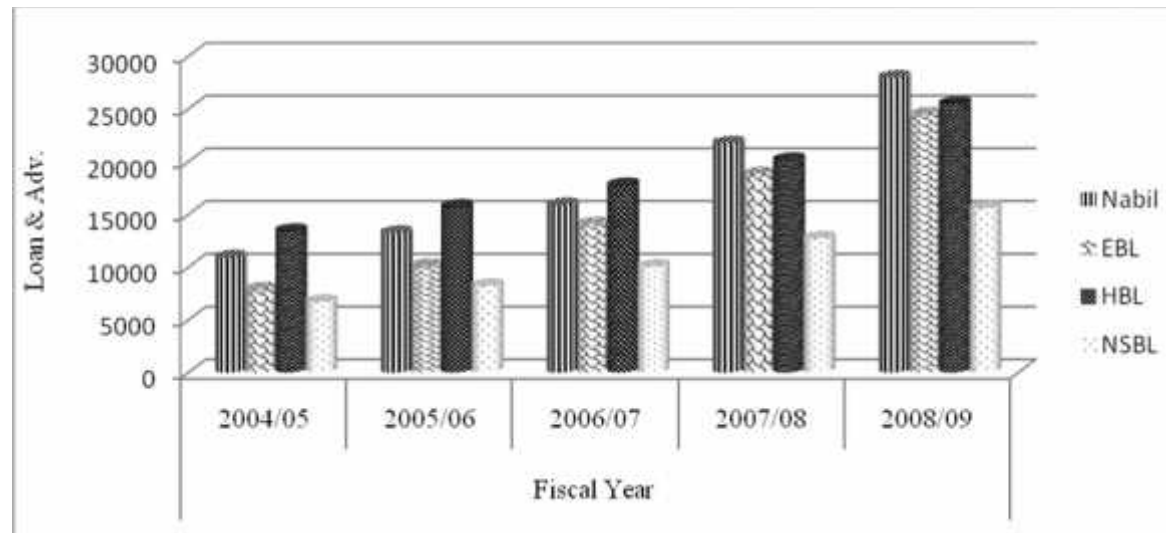


Figure 4.4 graphically presents the Loans and Advances of all four commercial banks throughout the study period. As shown in the graph all banks have increasing trend of loan and advance with 27999 million as the highest amount registered of NABIL in the fiscal year 2008/09. The least Loans and Advances disbursed is 6739.35 million by NSBI in 2004/05. However, there is an overall increasing trend in loans and advances. Starting from the year 2004/05, when the companies have come to end of the year 2008/09 they all have made high growth in their loans and advances. The loan & advance of NABIL, HBL, EBL & NSBI was grow by 155.78%, 209.74%, 89.72% and 131.66% respectively in between the period of five fiscal years. It is seen that the highest growth is shown by EBL.

The C.V. of EBL is highest of 24.47% which reveal that there is high variability in the ratios of EBL. Similarly, the lowest value of C.V. is of HBL whose value is 16.21%. Similarly, having looked at the C.V. on the yearly basis, in the year 2004/05 is of the highest C.V. of 26.92% and lowest in the year 2007/08 of 18.57%. Therefore, in the year 2004/05, there is high variability in the ratios of Loan and Advances.

#### 4.2.2 Non- Performing Loan



Non-performing loan is one of the growing problems of the loan granting institution in Nepal. Due to unfair intention of the borrower and the frequently arising political and economic crises, non-performing loan has become major drawback of financial sector since a couple of years.

Non-Performing Loan consists of Loans and Advances except for good loans. It is that part of Loans and Advances that should be looked upon carefully for the timely recollection of the repayments. According to NRB directive no. 2, Sub-standard, doubtful and bad loans are categorized under Non- performing Loans are, in fact, very crucial problem to commercial banks. NRB has directed all commercial banks to make provisioning of 25%, 50% and 100% respectively for substandard, doubtful and bad loan. They not only require extra effort for collection of repayments but as according to the NRB directions for Loan Loss Provision, they also create large amount of Loan Loss Provision cutting down the profits and making the amount idle.

**Table 4.5**  
**Non-Performing Loans**

(In Millions)

F/Y	Banks				Total	Mean	S.D	C.V.
	Nabil	EBL	HBL	NSBI				
2004/05	144.50	128.81	128.81	441.00	843.12	210.78	133.07	0.6313
2005/06	182.60	129.23	1040.80	505.30	1857.93	464.48	362.51	0.7805
2006/07	178.30	113.18	641.62	458.80	1391.90	347.98	213.56	0.6137
2007/08	161.10	127.31	477.23	488.40	1254.04	313.51	169.77	0.5415
2008/09	224.80	117.99	551.31	316.00	1210.10	302.53	159.82	0.5283
Total	891.30	616.52	2839.77	2209.50				
Mean	224.80	117.99	551.31	316.00				
S.D	26.90	6.51	293.38	66.81				
C.V.	0.1197	0.0552	0.5322	0.2114				

(Source: Annexure I)

Table and figure 4.5 shows the Non-Performing Loan situation of all four commercial banks under study. Mean, Standard Deviation and Coefficient of Variance of all sample commercial banks are depicted in Table 4.5. The Mean Non-Performing Loan of HBL is highest of all and the lowest of that is of EBL. The highest Standard Deviation of Non-Performing Loan is that of HBL at 293.38 and lowest is that of EBL at 6.51. This means EBL is performing well regarding the management of Non-Performing Loans. Standard deviation of HBL is very high; this might call for problems in future if not controlled in time.

The highest Coefficient of Variation is of HBL with 53.22% which reveal that there is high variability in the ratios of HBL and the lowest is that of EBL with 5.52%. Similarly, when we look at the C.V. of the years, in the year 2005/06 is of the highest C.V. of 78.05% and lowest in the year 2008/09 of 52.83%. Therefore, in the year 2005/06, there is high variability in the ratios of Non-Performing Loans.



**Figure 4.5**  
**Non-Performing Loans**

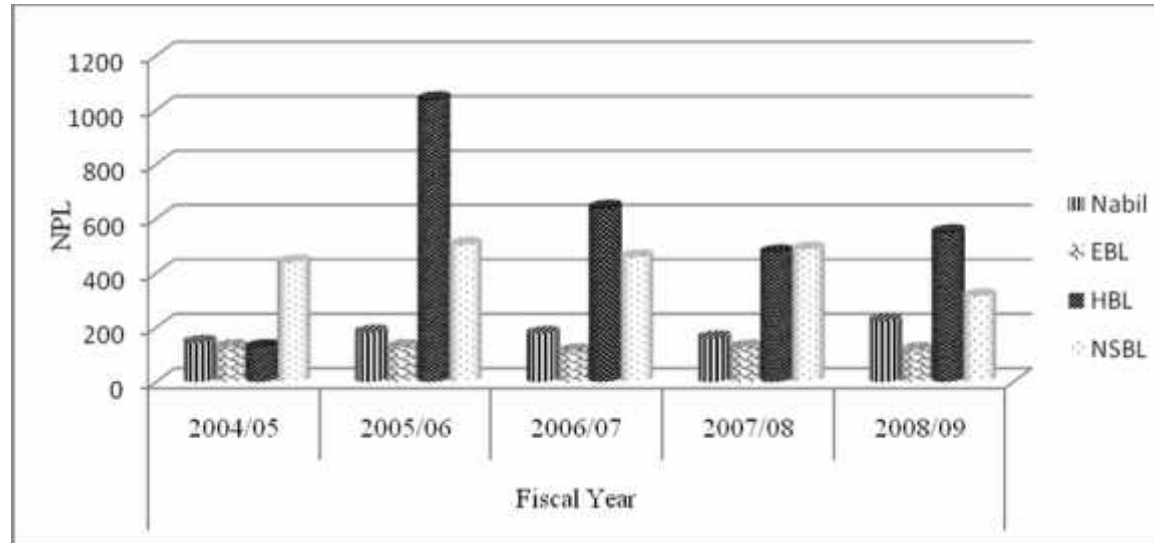


Table and Figure 4.5 above reveals at a glance the Non-Performing Loans of all four commercial banks in the period of 5 years in million rupees. The maximum Non-Performing Loan registered is of HBL in 2005/06 with more than 1000 million, the second highest is that of again HBL in the following year 2006/07 which marked around 600 million. However, HBL have managed to cut down its Non-Performing Loan in the following year 2007/08 and make it almost equal with NPL of NSBI but couldn't continue curbing it in the final year 2008/09. The NPL of NABIL and EBL is consistent. By contrast, Both NABIL and EBL have been able to control the non-performing loan throughout the period which is a positive sign. The fluctuation trend may not be much of a problem now, but can lead to a serious situation in the future. The final year values of HBL and NABIL are slightly higher than the previous year so they need to make their effort to minimize it. On the other hand, final year amount of Non-performing loan of EBL and NSBI are declined than that of previous year showing bright side in collection of non-performing loans.

### 4.2.3 Interest Income from Loans and Advances

Interest Income from Loans and Advances is one of the main sources of income of commercial banks. This is only a sub sectional part of Profit and Loss Account but is the most voluminous thus very crucial. This presents the pure income from the funds mobilized for Loans and Advances only.

**Table 4.6**  
**Interest Income from Loans and Advances**

(In Million)

F/Y	Banks				Total	Mean	S.D	C.V.
	Nabil	EBL	HBL	NSBI				
2004/05	831.83	633.62	1122.4	520.43	3108.28	777.07	228.41	0.2939
2005/06	986.23	770.83	1140.7	608.32	3506.08	876.52	203.06	0.2317
2006/07	1167.3	967.18	1242.9	705.63	4083.01	1020.75	207.97	0.2037
2007/08	1496.2	1329.7	1444.2	860.19	5130.29	1282.57	251.19	0.1958
2008/09	2182.7	1852.1	1861	1179.6	7075.40	1768.85	365.35	0.2065
Total	6664.26	5553.43	6811.20	3874.17				
Mean	1332.85	1110.69	1362.24	774.83				
S.D	479.06	438.49	274.34	231.67				
C.V.	0.3594	0.3948	0.2014	0.2990				

(Source: Annexure I)

Table 4.6 shows the Mean, Standard Deviation and Coefficient of Variance of Interest Income from Loans and Advances of all commercial banks under study. The highest Mean register of Interest Income from Loans and Advances is 1362.24 of HBL and the lowest is that of NSBI at 774.83. At a glance, it can be said that HBL is the most income making Bank among the four. But while considering the Standard Deviation, which is registered highest of NABIL at 479.06, it can be said that the interest income from loan and advance of NABIL is not steady. It means, NABIL does not have a regular collection of Interest Income form Loans and Advances. NSBI has the least Mean. HBL has the least Standard

Deviation, which means the least deviation from mean, result of much steady and regular collection of interest from Loan and Advances. The Mean of Nabil, EBL, HBL & NSBI are 1332.85, 1110.69, 1362.24 and 774.83 respectively and their respective Standard Deviations are 479.06, 438.49, 274.34 and 231.67. HBL has pretty much large volume of Mean 1362.24. Similarly, much lesser Standard Deviation is of NSBI at 231.67. The highest Coefficient of Variance 39.48% of EBL and the least is that of HBL with 20.14%.

**Figure 4.6**  
**Interest Income from Loans and Advances**

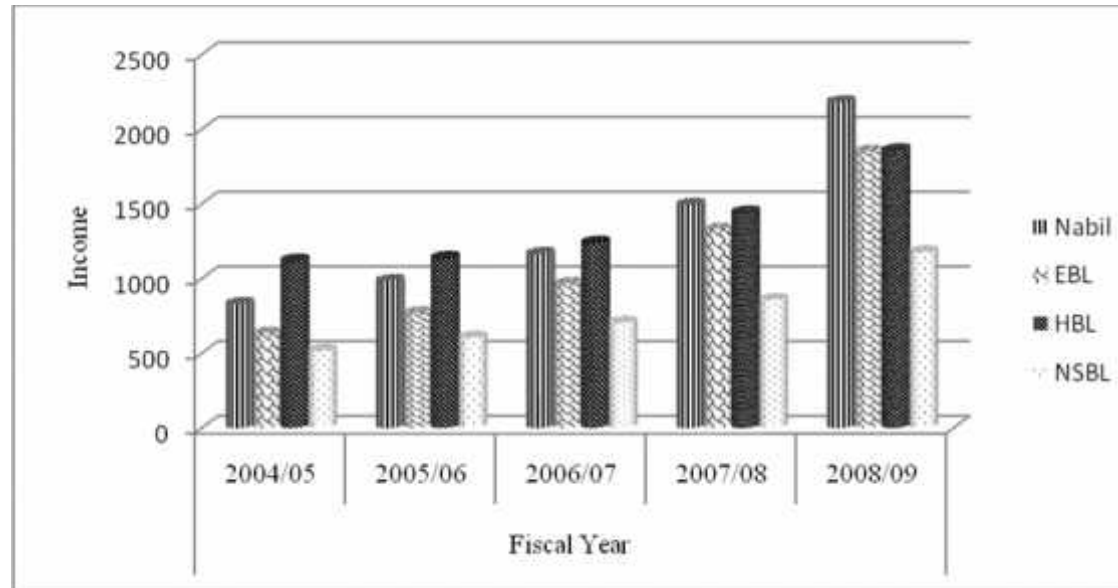


Figure 4.6 has the graphical presentation of Interest Income from Loans and Advances. The highest interest income of the study period is that of NABIL amounting around 2200 million in the last year 2008/09. The interest income of the NABIL & EBL is climbing in increasing trend throughout the study period. Similarly, the interest income of HBL is almost the same in first three year and then goes up gradually. On the other hand, interest income of NSBI is inclined nominally in the first two year which remained almost the same in 2006/07 and then gradually rises up and crosses 1000 million in the final fiscal year.

#### **4.2.4 Loan Loss Provision**

Loan Loss Provision shows the figure that is the summation of provision made against all types of loans as per the NRB directives. The NRB directives directs to make the provision of 1%, 25%, 50% and 100% for Pass loans, sub-standard loans, doubtful loans, and loss loans provision

presented in the Profit & Loss Account and definitely, decreases the profit of the company. The more the Loan Loss Provision, it suggests two definite things, more of total loan and or more of loss loan. Since, according to the NRB directives, 1% provision is to be provided for all good loans too, it does acquire a huge portion of the total Loan Loss Provision. Thus, just by looking at mere Loan Loss Provision it cannot be said if the company has all good loans or voluminous bad loans.

**Table 4.7**  
**Loan Loss Provision**

F/Y	Banks				Total	Mean	S.D	C.V.
	Nabil	EBL	HBL	NSBI				
2004/05	360.57	281.42	1026.7	525.47	2194.11	548.53	289.74	0.5282
2005/06	356.24	334.95	1119.4	614.72	2425.33	606.33	316.04	0.5212
2006/07	357.25	418.6	795.73	604.6	2176.18	544.05	171.49	0.3152
2007/08	394.41	497.35	682.09	632.52	2206.37	551.59	113.17	0.2052
2008/09	409.08	584.88	726.36	480.3	2200.62	550.16	119.41	0.2170
Total	1877.55	2117.20	4350.25	2857.61				
Mean	375.51	423.44	870.05	571.52				
S.D.	21.96	109.13	172.17	58.52				
C.V.	0.0585	0.2577	0.1979	0.1024				

(Source: Annexure I)

Table 4.7 presents the Loan Loss Provision of the four commercial banks under study. The above table shows that HBL has the highest Mean of 870.05, meaning it has allocated the highest amount in provision for Loan Loss in comparison to other commercial bank under study. Similarly, NABIL has the least of Mean of 375.51 and at the same time it also has the least Standard Deviation of 21.96 whereas HBL has highest SD of 172.17. Thus, HBL is most likely to have highest volume to risky assets and NABIL the lowest.

**Figure 4.7**  
**Loan Loss Provision**



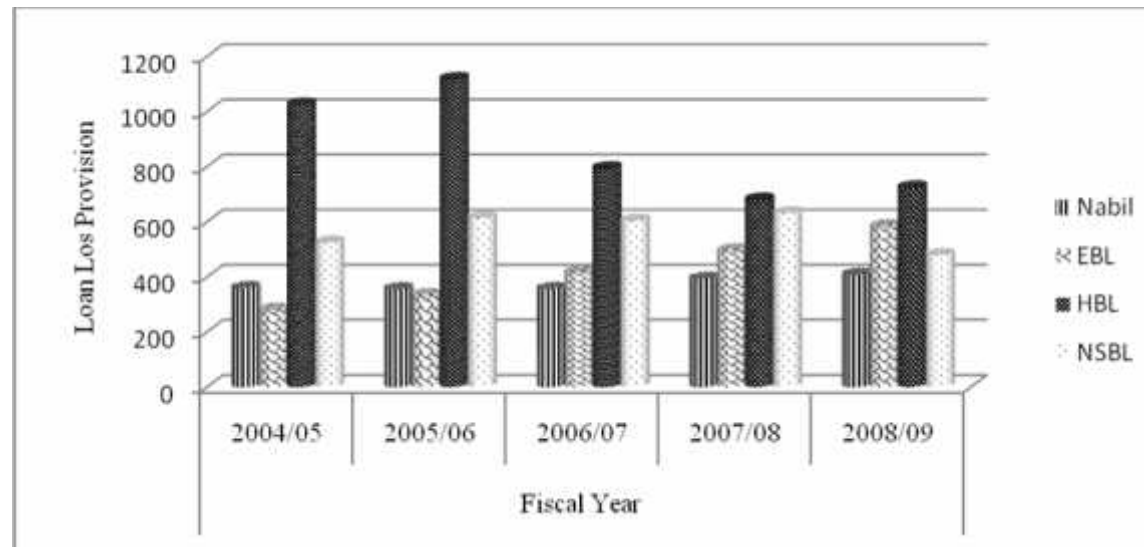


Figure 4.4 shows the graphical presentation of Loan Loss Provision of the four commercial banks under study. EBL has the least Loan Loss Provision in the first year of study period of Rs.221.42 million but from the third year NABIL has the least provision till the final year of the study period than others. Loan loss provision of HBL is highest of all other banks throughout the five years. The graph clearly shows that the loan loss provision is highest of all of HBL in the fiscal year 2005/06 figuring at 1119.4 million. This might be because the non-performing loan of HBL in this period was also in a huge amount. NABIL has maintained almost the consistent loan loss provisioning throughout the five years whereas provisioning of NSBI was slightly inclined in first two years then after it remained almost the same for three years and is declined in the final year.

#### 4.2.5 Net Profit

This Net Profit is the Net profit before Appropriation. Bonus for employees and taxes are deducted and retained earnings of previous year is also adjusted in the Net Profit for the study. Besides all the elements that count and questioned, the volume of Net Profit is the main factor that measures the success of the firm in every aspect.

**Table 4.8**

### Net Profit

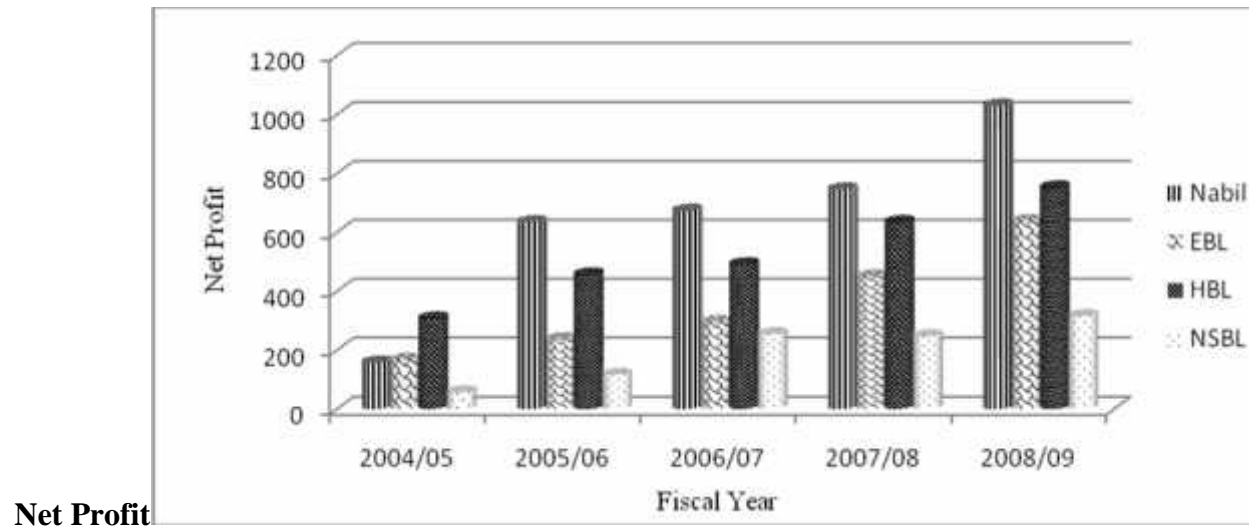
F/Y	Banks				Total	Mean	S.D	C.V.
	Nabil	EBL	HBL	NSBI				
2004/05	158.64	168.21	308.28	57.39	692.52	173.13	89.30	0.5158
2005/06	635.26	237.29	457.46	117	1447.01	361.75	199.60	0.5518
2006/07	673.96	296.41	491.82	254.91	1717.10	429.28	167.21	0.3895
2007/08	746.47	451.22	635.87	247.77	2081.33	520.33	189.44	0.3641
2008/09	1031.05	638.73	752.83	316.37	2738.98	684.75	256.12	0.3740
Total	3245.38	1791.86	2646.26	993.44				
Mean	649.08	358.37	529.25	198.69				
S.D.	281.68	168.45	152.80	95.98				
C.V.	0.4340	0.4701	0.2887	0.4830				

(Source: Annexure I)

Table 4.8 shows that NSBI has the lowest Mean during the study period. It has the Mean of 198.69 with variability of 48.30%, whereas NABIL has the highest Mean of 649.08 with variability of 43.40%. The Mean Net Profits of EBL, HBL are 358.37 and 529.25 respectively and their respective Standard Deviation is 168.45 and 152.80. Under this analysis it can be said that NABIL has the best performance.

The C.V. of NSBI is highest of 48.30% which reveal that there is high variability in the ratios of NSBI. Similarly, the lowest value of C.V. is of HBL whose value is 28.87%. Similarly, when we look at the C.V. of the years, in the year 2005/06 is of the highest C.V. of 55.18% and lowest in the year 2007/08 of 36.41%. Therefore, in the year 2005/06, there is high variability in the ratios of Net Profit.

**Figure 4.8**



The graphical presentation of Net Profits of all four commercial bank is shown in Figure 4.5. This figure shows that all the banks are able to increase their net profit throughout the year. In the fiscal year 2004/05 HBL has highest Net Profit than other banks however from the year 2005/06 till final year of 2008/09 NABIL has achieved the highest Net profit than other bank. NSBI being the bank to have low Net Profit than other bank in the five years period, has very low Net Profit in the year 2004/05 however it has increased its net profit then after. None of the bank had bear loss. The net profit of all four banks is in increasing trend it indicated that all the banks are maximizing their shareholders wealth.

### 4.3 Analyzing the Lending Efficiency and its contribution in Total Profitability

In this section, the lending efficiency in terms of its quality and turnover is measured. For this purpose, the relationship of different variables of Balance Sheet and Profit & Loss Account is established.

#### 4.3.1 Loan Loss Provision to Total Loans and Advances Ratio

The ratio of Loan Loss Provision to Total Loans and Advances describes the quality of assets that the commercial banks need to categorize its Loans and Advances into pass, substandard, doubtful and loss loans and to make the provisions of 1%, 25%, 50% and 100% respectively as Loan Loss Provision, in fact, is the cushion against future contingency created by the default of the borrowers. The lower ratio signifies the good

quality of assets in the total volume of Loans and Advances. Similarly, the higher ratio signifies relatively more risky assets in the volume of Loans and Advances and also shows possibility of increment of Non-Performing Loans in future.

**Table 4.9**  
**Loan Loss Provision to Total Loans and Advance**

Fiscal Year				
	Nabil	EBL	HBL	NSBI
2004/05	0.033	0.036	0.076	0.078
2005/06	0.027	0.033	0.071	0.075
2006/07	0.023	0.03	0.045	0.06
2007/08	0.018	0.026	0.034	0.05
2008/09	0.015	0.024	0.029	0.031
Total	0.12	0.15	0.26	0.29
Mean	0.02	0.03	0.05	0.06
Combined Mean	<b>0.041</b>			

(Source:

Annexure I)

The tabulated figures of Table 4.9 Total Loans and Advances ratio of specified study period. The least ratio 2008/09 which is only 0.02. has the highest amongst all,

show the Loan Loss Provision to all four commercial banks during the registered is that of EBL in the years Comparing their mean ratios, NSBI calculated as 0.06. The combined

mean ratio of all four commercial bank is 0.041 and the mean ratio of HBL and NSBI is higher than the combined mean. NSBI has always been provisioning higher than the combined mean except in the final year 2008/09. Provision of NABIL and EBL has never crossed the combined mean. Except for the last two years ratios of HBL is higher than the combined mean. The overall trend of ratio of all banks has been decreasing continuously. From the year 2004/05 to 2008/09, the ratio of NABIL has decreased by 54.54%, the ratio of EBL has decreased by 33.33% and similarly the ratios of HBL and NSBI have increased by 61.84%, and 60.25% respectively. Generally, decrease in this ratio suggests the decrease in the Non-Performing Loans, which is a positive sign of effectiveness in the credit policy of the company.

**4.3.2 Non-Performing Loans to Total Loan and Advances Ratio**

As the directives given to the commercial banks, substandard, doubtful and bad loans are categorized under Non-Performing loans. Increase in Non-Performing Loans increases Loan Loss Provision and Interest Suspense too, which ultimately results in profit deduction. The banking sector

is severely affected by the NPL (Non-Performing Loans) problem. It is estimated that the NPL of the Nepalese banking system is around 16 percent. Therefore, there is no doubt that it has a serious implication on economic performance of the country.

**Table 4.10**

**NPL to Total Loans & Advance**

*(Source: Annexure I)*

Fiscal Year	Banks			
	Nabil	EBL	HBL	NSBI
2004/05	0.013	0.016	0.0096	0.0654
2005/06	0.014	0.013	0.0660	0.0613
2006/07	0.011	0.008	0.0361	0.0456
2007/08	0.007	0.007	0.0236	0.0383
2008/09	0.008	0.005	0.0216	0.0202
Total	0.053	0.049	0.172	0.178
Mean	0.0106	0.0098	0.0344	0.0356
Combined Mean	<b>0.0226</b>			

Table 4.10 exhibits that the Performing Loans to Total commercial banks under study total volume of Loans and Loans represents 2.26%. have their NPL to Loan and 0.98% respectively.

have their Non-Performing

respectively. This shows that HBL and NSBI have their Non-Performing Loans higher than that of industrial average of the banks which shows inefficiency of HBL and NSBI in loan lending and recovery. NABIL and EBL has ratio lower than the combined mean ratio. EBL has lowest ratio of 0.98% which shows the efficiency of credit polity of the bank. However, there is no similarity in the ratio of NPL between four banks.

combined mean of Non-Loans and Advances of four is 0.0226. That is to say, in the Advances the Non-Performing Similarly, NABIL and EBL Advance ratio of 1.06% and Furthermore, HBL and NSBI Loans as 3.44% and 3.56%

**4.3.3 Interest Income from Loans and Advances to Total Income Ratio**

Needless to say, income is the most vital part of any business. Besides, in the companies dealing in lending business interest income occupies a greater portion of the Total income. This ratio, interest income from loans and advances to Total Income, measures the volume of interest from Loan and Advances in Total Income. This ratio also helps to measure performance of the commercial banks on the grounds of its lending policy. The high ratio indicates the high contribution in profits is made by the lending practices than in other risk free investments and vice versa.

**Table 4.11**

**Interest Income from Loans and Advance to Total Income**

Fiscal Year	Banks			
	Nabil	EBL	HBL	NSBI
2004/05	0.243	0.738	0.637	0.724
2005/06	0.396	0.723	0.527	0.761
2006/07	0.561	0.702	0.608	0.746
2007/08	0.858	0.719	0.594	0.787
2008/09	1.445	0.722	0.636	0.712
Total	3.503	3.604	3.002	3.73
Mean	0.7006	0.7208	0.6004	0.746
Combined Mean	<b>0.69195</b>			

*(Source: Annexure I)*

In above table 4.11, the combined mean ratio of all four commercial bank is 0.69195. This is indicative of the fact that interest income from Loans and Advances contributes 69.20% in the total income. These ratios of all sample banks except HBL have their ratios higher than the combined mean ratio. This clears the fact that, except for HBL, interest income form Loans and Advances have much higher contribution in the Total Income and thus profit of the bank. This also clarifies that the banks are pretty much aggressive in investment and have invested their funds comparatively much less in risk free investments which bear much lesser return than risky investments.

**4.3.4 Interest Suspense to Total Interest Income from Loans and Advances Ratio**

Interest Suspense refers to that portion of interest, which is due but not collected. NRB directives do not allow commercial banks to book three months due unpaid interest as income. Thus, increase in the Interest Suspense decreases the profit of the company. Such interest is shown in liability side of Balance Sheet under the heading “Other Liabilities and Provisions.” This ratio of Interest Suspense to Total Interest Income form

Loans and Advances measures the composition of due but uncollected interest in the total interest income from Loans and Advances. The high degree of this ratio refers to the poor interest turnover and vice versa. Thus, this ratio also helps to analyze the capability of the company in collecting the repayments of the Loans and Advances.

**Table 4.12**  
**Interest Suspense to Interest Income**

Fiscal Year	Banks			
	Nabil	EBL	HBL	NSBI
2004/05	NIL	0.0075	NIL	NIL
2005/06	0.0083	0.0079	0.031	NIL
2006/07	0.0071	0.0059	0.019	0.046
2007/08	0.0059	0.0049	0.017	0.04
2008/09	0.0054	0.0034	0.015	0.019
Total	0.0267	0.0296	0.0874	0.0722
Mean	0.00534	0.00592	0.01748	0.01444
Combined Mean	<b>0.010795</b>			

*(Source: Annexure I)*

Table 4.12 shows the ratio of Interest Suspense to the Interest Income from Loans and Advances. The combined mean ratio is 0.01078. The mean ratio of NABIL is lowest of all at 0.53%. And that of EBL is slightly higher than that of NABIL i.e. 0.59%, whereas HBL has the maximum ratio throughout the study period. The mean ratio of HBL is 0.01748, that is to say, HBL has to maintain Interest Suspense of almost 1.75%% of Interest Income from Loans and Advances is canceled out by Interest Suspense and its profit is decreased. NSBI has the second highest ratio amongst all. Thus, these banks have to put on some extra efforts on collection of repayments of loans to secure their position from futures hazards.

#### **4.3.5 Loans and Advances to Total Deposit Ratio**

Deposits are those funds that the commercial banks collect from different individuals, institutions and investors that has to be given back after certain time period with some interest. Whereas, Loans and Advances is that mobilized part of deposit amount that brings back additional income as interest from the borrowers. Thus, Deposits are liabilities which when converted to assets are called Loans and Advances. Deposits which remain idle in company, is loss to the company. Company can make profits only when deposits, which take away interest of certain rate, are mobilized by giving away loans and advances, which bring back interest at higher rates.

**Table 4.13**  
**Loans and Advance to Total Deposit**

Fiscal Year	Banks			
	Nabil	EBL	HBL	NSBI
2004/05	0.7505	0.7824	0.5421	0.7787
2005/06	0.6863	0.7344	0.5950	0.7491
2006/07	0.6813	0.7744	0.5922	0.8794
2007/08	0.6818	0.7856	0.6337	0.9293
2008/09	0.7497	0.7343	0.7358	0.5584
Total	3.5496	3.8111	2.9623	3.8949
Mean	0.70992	0.76222	0.59246	0.77898
Combined Mean	<b>0.7109</b>			

*(Source: Annexure I)*

Table 4.13 shows the ratios of Loans and Advances to Total Deposits of all four commercial banks under study. The combined mean is 0.7818. The minimum ratio is of HBL, NABIL and EBL as 59.25%, 70.99%, and 76.22% respectively. Whereas NSBI seems to be doing the best according to this ratio of 1.0626, meaning its investment in Loans and Advances are more than the total deposits collected. Commercial banks can afford to invest in Loans and Advances more than they collect Deposits because they also have Shareholder's Equity to be invested apart from the deposits alone. HBL has the lowest of this ratio of 59.25%. The cause behind its lowest ratio is that this bank has divided its funds from deposits to investment in larger ratio than other banks use to do.



#### 4.3.6 Interest Income to Interest Expenses Ratio

The ratio of interest income to Interest Expenses measured the gap between interest rates offered and interest rate charged. The spread between the interest income and interest expenses is the main foundation for the profit of the bank. NRB had restrictions on the interest rate spread of the commercial banks. The interest offered and the interest charged should not be more than 5 percent. The commercial banks are free to fix interest rate on deposit and loans. Interest rate on all types of deposit and loans should be published in the local newspapers and communicated to NRB quarterly and immediately when revised. Deviation of 0.5 percent from the published rate is allowed on all types of loans and deposit. However with the new Financial Ordinance 2061 it has again empowered NRB to intervene in rate fixation but it does not specify the conditions that would oblige NRB to do so.

**Table 4.14**

#### **Interest income to interest expenses**

Fiscal Year	Banks			
	Nabil	EBL	HBL	NSBI
2004/05	3.4156	2.1151	1.9973	2.0138
2005/06	2.7613	0.8532	1.758	1.8171
2006/07	2.1005	1.8701	1.6195	1.7116
2007/08	1.9728	2.1019	1.7533	1.8909
2008/09	1.8926	1.8286	1.9909	1.4303
Total	12.1428	8.7689	9.119	8.8637
Mean	2.42856	1.75378	1.8238	1.77274
Combined Mean	1.94472			

*(Source: Annexure I)*

Table 4.14 above, shows the ratio of Interest Income to Interest Expenses of commercial banks under study with the combined mean 1.945, which indicates that a rupee of expense in deposits generates 1.945 rupees of interest income and interest expenses. NABIL has the highest ratio of 3.41 in the year 2004/05 and it is the year NABIL had succeeded to increase profits. EBL has the least mean ratio. The least ratio of EBL is result of its heavy investment in risk free assets than in Loans and Advances, which generates lower interest income.

#### 4.3.7 Net Profit to Shareholder's Equity Ratio

This Net Profit to Shareholder's Equity ratio measures the amount of profit that a rupee of shareholders' fund has received. The Net Profit here is the Net Profit before Appropriation. The high ratio is the high return to shareholders and vice versa.

**Table 4.15**  
**Net Profit to SHE**

Fiscal Year	Banks			
	Nabil	EBL	HBL	NSBI
2004/05	0.0957	0.2186	0.2	0.0833
2005/06	0.3388	0.2465	0.259	0.1191
2006/07	0.3276	0.2724	0.2291	0.2191
2007/08	0.3063	0.2349	0.2531	0.1751
2008/09	0.3294	0.2899	0.2413	0.1847
Total	1.3978	1.2623	1.1825	0.7813
Mean	0.27956	0.25246	0.2365	0.15626
Combined Mean	<b>0.231195</b>			

*(Source: Annexure I)*

The above table 4.15 shows the ratio of Net Profit to the Shareholder's Equity of all the sample commercial bank. NABIL has the highest mean ratio of 0.2795. EBL is second with mean ratio 0.25246 and just behind HBL with 0.2365. NSBI has the least mean ratio of 0.1562 which is also

less than the combined mean. Therefore, the shareholders of NABIL have earned more from their invested fund followed by EBL, HBL and NSBI.

#### 4.3.8 Earning Per Share (EPS)

EPS refers to Net Profit divided by the total number of shares outstanding. The amount of EPS measures the efficiency of a firm in relative terms. This figure is the indicative of the overall good or bad performance of an organization. How far an organization is able to use its resources to generate profit is determined by the profit it has earned. Thus, EPS determines the market value of a share, determine the attitude of outsiders.

**Table 4.16**  
**Earnings per Share**

Fiscal Year	Banks			
	Nabil	EBL	HBL	NSBI
2004/05	105.4879	534.0364	47.906	13.2881
2005/06	129.2091	62.7754	59.2408	18.2748
2006/07	137.08	78.4152	60.6582	39.3501
2007/08	108.3069	91.8231	62.7391	28.3319
2008/09	106.7622	99.9862	61.8998	36.1765
Total	586.8461	867.0363	292.4439	135.4214
Mean	117.36922	173.40726	58.48878	27.08428
Combined Mean	<b>94.087385</b>			

*(Source: Annexure I)*

Table 4.16 shows that EPS of NABIL is the highest throughout the years except in first year of study. In the first year EBL has the highest EPS of 534.03 which was slumped down dramatically to 62.77 in the next year and raises gradually then after. EBL has the highest mean of 173.40, while the combined mean is 94.08. The lowest EPS mean is that of NSBI at 27.08. HBL has the second highest EPS mean with 58.49. EPS of NABIL seems good as it do not have high variation over the years though the EPS is declining in last two years. NABIL and EBL have EPS

higher than the industrial average (combined mean) of 94.08 whereas HBL and NSBI have lower EPS than that of industrial average. It precisely reflects that the shareholders of NABIL and EBL are earning more from their investment than that of HBL and NSBI.

#### 4.4 Correlation Analysis

In this section of presentation and analysis, relation between variables of Balance Sheet and Profit & Loss Account are analyzed. For this, Correlation Coefficient (r) and Probable Error (P.Er) are calculated. And for the purpose of analyzing the significance and reliability of Correlation Coefficient, 6 times of Probable Error is also calculated. If the value of Correlation Coefficient is greater than 6 times the value of Probable Error, the Correlation Coefficient is deemed as significant and reliable.

##### 4.4.1 Correlation between Deposits and Loans and Advances

The correlation between Deposits and Loans and Advances describes the degree of relationship between these two items. Deposit is independent variable and loans and advance is dependent variable. The main objectives of computing between two variables are to find out whether deposits are significantly used as loan and advances in a proper manner or not. What is the impact on Loans and Advances with a unit increase in Deposit is measured here.

**Table 4.17**

**r, P.Er. And 6 x P.Er. between Deposits and Loans and Advances**

<b>Banks</b>	<b>r</b>	<b>r<sup>2</sup></b>	<b>P. Er.</b>	<b>6 x P. Er.</b>	<b>Remarks</b>
NABIL	0.99	0.98	0.0089	0.0537	Significant
EBL	0.997	0.994	0.0027	0.0161	Significant
HBL	0.97	0.94	0.0268	0.1610	Significant
NSBI	0.99	0.98	0.0603	0.3619	Significant

*(Source: Annex II)*

The above table 4.17 shows the relation between Deposits and Loans and Advances, which seem to have high degree of positive relation. All the commercial banks have almost 1 Correlation Coefficient. The value of 'r' is highest in NABIL and EBL and NSBI i.e. 0.99. The relation of Deposits and Loans and Advances is lowest in HBL as compared to other commercial banks under study which is 0.97, depicting that it does not have investments in Loans and Advances as according to the increment in Deposits than others. Whereas, in case of NABIL, EBL and NSBI, a percentage increase in Deposit is likely to bring the same percentage of change in the value of Loans and Advances. To be more specific, there is highest probability of this happening in NABIL and EBL. Besides, the value of 'r' in all banks is more than six times the P.E., which concludes that the correlation between Deposits and Loans and Advances is certain and significant in all four commercial banks.

Since the calculated value of 'r' of the entire bank is greater than 6 x P.E., the relationship between Deposits and Loan and Advances is significant.

#### 4.4.2 Correlation between Shareholder's Equity and Loans and Advances

The correlation between Shareholder's Equity and Loans and Advances shows the degree of impact of increase in Loans and Advances by change in Shareholder's Equity. Here, loans & advance is independent variable and shareholders' equity is dependent variable.

**Table 4.18**

**r, P.Er. And 6 x P.Er. between SHE and Loans and Advances**

<b>Banks</b>	<b>r</b>	<b>r<sup>2</sup></b>	<b>P. Er.</b>	<b>6 x P. Er.</b>	<b>Remarks</b>
NABIL	0.986	0.97	0.0042	0.0253	Significant
EBL	0.97	0.94	0.009	0.0543	Significant
HBL	0.99	0.98	0.00603	0.0362	Significant
NSBI	0.99	0.98	0.00603	0.03619	Significant

*(Source: Annex II)*

Table 4.18 explains the degree of correlation between Shareholder's Equity and Loans and Advances in different banks under study. All the banks have positive high degree of correlation depicting every increase in Shareholder's Equity increased Loans and Advances, which also showed well mobilization of funds collected. The analysis of 6 times P.E<sub>r</sub> says that the correlation of all banks is significant.

#### 4.4.3 Correlation between Investments and Loans and Advances

This correlation measures the degree of relationship between investments and Loans and Advances. This measure of correlation explains whether the banks have a rigid policy to maintain a consistent relationship between two assets or other factors such as seasonal opportunities, economic demand, NRB directives etc. have impact on the volume of these two variables. The volume of investment does not have any impact on Loans and Advances as most of the bank has first priority on Loans and Advances to Investments. Theoretically, increase or decrease in the volume of Loans and Advances directly reduces or increases the level of idle funds and this idleness of funds increases the investments. Thus, it is expected to have negative correlation in between these two variables.

**Table 4.19**  
**r, P.Er. And 6 x P.Er. between Investment and Loans and Advances**

<b>Banks</b>	<b>r</b>	<b>r<sup>2</sup></b>	<b>P. Er.</b>	<b>6 x P. Er.</b>	<b>Remarks</b>
NABIL	0.94	0.88	0.0362	0.2172	Significant
EBL	0.87	0.76	0.0724	0.4344	Significant
HBL	-0.51	0.2601	0.2232	1.34	Insignificant
NSBI	0.78	0.61	0.1176	0.7059	Significant

*(Source: Annex II)*

Table 4.19 shows the Correlation Coefficient between investments and Loans and Advances of all four commercial banks under study. NABIL and EBL have a high degree of positive correlation of 0.94 and 0.87 respectively. Similarly, NSBI also have positive correlation of 0.78. This means these three banks have maintained a steady ratio between investments and loans and advances. As shown in table HBL has negative correlation of 0.51. This clearly shows that HBL invest in Loans and Advances by cutting down its volume in the investments, depicting that probably they do not have idle fund. They do not keep idle fund but invest in risk free assets which can be realized immediately as and when

required for investing in Loans and Advances. Besides analyzing the correlation, glancing upon the 6 times of P.Er it can be said that except for HBL correlations registered in above Table 4.19 are much reliable and significant.

The calculated value of 'r' of only HBL is less than 6 x P.E. So it reveals that the relationship between Investment and Loan and Advances is insignificant. On the contrary, the calculated value or 'r' of NABIL, EBL and NSBI is higher than 6 x P.E. therefore relationship between Investment and Loan and Advances is significant.

#### 4.4.4 Correlation between Total Income and Loans and Advances

The degree of relation of Total Income and Loans and Advances is measured by the correlation of these two variables. The value of 'r', here shows whether change in Loans and Advances changes the volume of Total income i.e. is to say whether Loans and Advances contribute to increase the income of the company or not.

**Table 4.20**

**r, P.Er. And 6 x P.Er. between Total Income and Loans and Advances**

Banks	r	r <sup>2</sup>	P. Er.	6 x P. Er.	Remarks
NABIL	-0.91	0.83	0.0513	0.3077	Significant
EBL	0.995	0.99	0.0030	0.0181	Significant
HBL	0.97	0.94	0.0121	0.0724	Significant
NSBI	0.96	0.92	0.0241	0.1448	Significant

*(Source: Annex II)*

Table 4.20 shows the correlation between Total Income and Loans and Advances of the commercial banks taken as sample. EBL has the highest degree of positive relation with 0.995 as the value of 'r'. After EBL, NSBI and HBL have the high degree positive correlation. On the other hand, NABIL has negative correlation of 0.91, between Total Income and Loans and Advances. However, ignoring the negative sign "r" is

greater than 6\*P.Er. which probably shows that it is able to generate all income from the loans and Advances it had invested. In case of other three commercial banks, Total Income is increasing in almost more than half or equal percentage with Loans and Advances. The deviation of percentage change is due to unpaid installments of Loans and Advances. Except for NABIL the value of 'r' is very reliable and significant since it is greater than 6 times of P.Er.

The calculated value of 'r' of NABIL is lower than 6 x P.E. So it reveals that the relationship between Total Income and Loan and Advances is insignificant. On the contrary, the calculated value or 'r' of EBL, HBL and NSBI is higher than 6 x P.E. so the relationship between Total Income and Loan and Advances is significant.

#### 4.4.5 Correlation between Interest Suspense and Interest Income

Interest Suspense is earned but uncollected interest. This correlation measures the relationship between interest suspense and interest income. Interest income which is due and uncollected for 3 months is transferred to interest Suspense and thus, interest income is reduced.

**Table 4.21**

**r, P.Er. And 6 x P.Er. between Interest Suspense and Loans and Advances**

Banks	r	r <sup>2</sup>	P. Er.	6 x P. Er.	Remarks
NABIL	0.80	0.64	0.1086	0.6516	Significant
EBL	0.68	0.46	0.1629	0.9773	Insignificant
HBL	0.47	0.22	0.2353	1.4117	Insignificant
NSBI	0.65	0.42	0.1750	1.0497	Insignificant

*(Source: Annex II)*

Table 4.21 shows that for all the sample commercial banks there's positive relation between Interest Suspense and Interest Income. NABIL has the highest degree of correlation whereas HBL has the least correlation. The value of 'r' of NABIL is greater than that of is 6 times P.Er, the relation is significant. And since EBL, HBL and NSBI have lowest value than 6 times of P.Er. their correlations are not significant and reliable.



The calculated value of 'r' of only NABIL is greater than 6 x P.E. so it reveals that the relationship between Interest Suspense and Interest Income is significant. On the contrary, the calculated value or 'r' of other three banks is less than 6 x P.E. so the relationship between Interest Suspense and Interest Income is insignificant.

#### 4.4.6 Correlation between Loan Loss Provision and Loans & Advances

The correlation between Loan Loss Provision and Loans and Advances measures the relation between Loan Loss Provision and Loans and Advances. In fact, Loan Loss Provision is the product of Loans and Advances, these variables are co-related. Increase in Loans and Advances is likely to increase the volume of Loan Loss Provision.

**Table 4.22**  
**r, P.Er. And 6 x P.Er. between LLP and Loans and Advances**

Banks	r	r <sup>2</sup>	P. Er.	6 x P. Er.	Remarks
NABIL	0.92	0.85	0.0452	0.1810	Significant
EBL	0.996	0.992	0.0024	0.0145	Significant
HBL	-0.77	0.5929	0.1227	0.7368	Moderate
NSBI	-0.28	0.0784	0.278	1.67	Insignificant

*(Source: Annex II)*

Table 4.22 shows that except for NSBI all the other commercial banks have high degree positive correlation between Loan Loss Provision and Loans and Advances. They are all significant for their values of 'r' are greater than that of 6 times P.Er. The negative 'r' of HBL and NSBI can be explained as its Loans and Advances did not increase in last two years but its Non-Performing Loans did. This resulted in increase in Loans and Advances. Moreover since correlation of both HBL and NSBI is lower than 6 times of P.Er. the value cannot be considered as significant and reliable.

The calculated value of 'r' of NABIL and EBL is greater than 6 x P.E. so it reveals that the relationship between Loan Loss Provision and Loans and Advances is significant. On the contrary, the calculated value or 'r' of HBL and NSBI is less than 6 x P.E. the relationship between Loan Loss Provision and Loan and Advances is insignificant.

#### 4.4.7 Correlation between Interest Income and Net Profit

Interest income contributes the major portion of Total Income and thus Net Profit of any finance companies. This correlation between interest income and Net Profit measures the degree of relation of these two variables. It is most likely to have that Net Profit increases with the increase in interest income.

**Table 4.23**  
**r, P.Er. And 6 x P.Er. between Interest Income and Net Profit**

Banks	r	r <sup>2</sup>	P. Er.	6 x P. Er.	Remarks
NABIL	0.87	0.76	0.0724	0.4344	Significant
EBL	0.999	0.998	0.0006	0.0036	Significant
HBL	0.92	0.85	0.0452	0.2715	Significant
NSBI	0.88	0.77	0.0694	0.4163	Significant

*(Source: Annex II)*

Above table 4.23, shows the correlation of Interest Income and Net Profit. The highest degree of correlation recorded is that of EBL with 0.999. Besides other three banks also have high degree of correlation. Least correlation recorded is 0.87 of NABIL. All of the banks have significant correlations because their 6 times P.Er are greater than the value of 'r'.

The calculated value of 'r' of all the banks is greater than 6 x P.E. so it reveals that the relationship between Interest Income and Net Profit is significant.

## **4.5. Regression (Trend) Analysis**

### **4.5.1 Trend Analysis and Propensity of Growth of Loans and Advances**

Trend analysis shows the linear equation with respect to their loans and advances. Using the linear equation  $Y = a + bX$ .

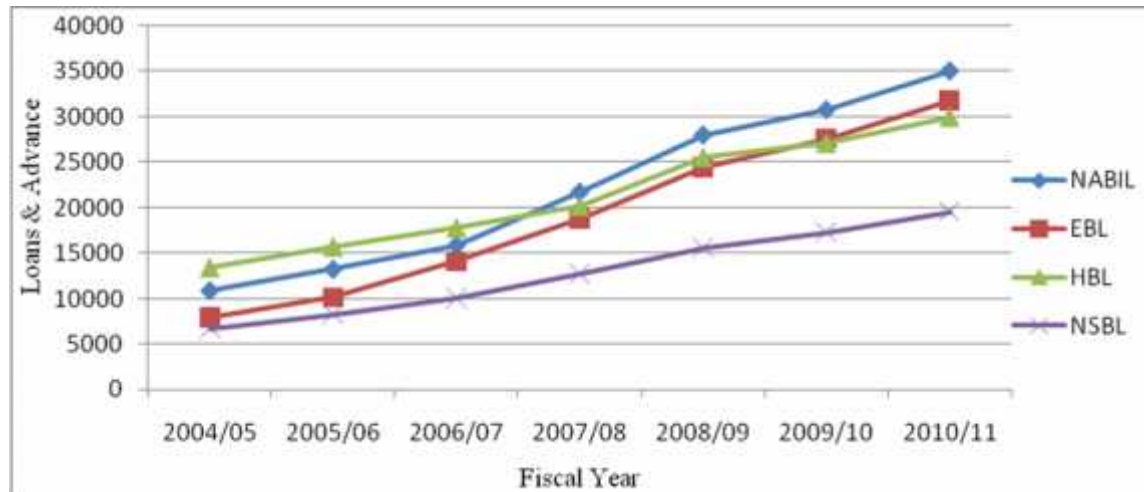
**Table 4.24**  
**Trend Forecast of Loans and Advance**

(Amt. in million)

Years	NABIL	EBL	HBL	NSBI
2004/05	10946.7	7900.09	13451.2	6739.35
2005/06	13278.8	10136.3	15762	8241.46
2006/07	15903	14082.7	17793.7	10065.1
2007/08	21759.5	18836.4	20179.6	12746.2
2008/09	27999	24469.6	25519.5	15612.1
2009/10	30752.9	27636.63	27107.4	17355.66
2010/11	35011.40	31820.50	29962.8	19580.60

(Source: - Appendix III)

**Figure 4.9**  
**Trend Line of Loans & Advance**



From the Table 4.24 and the trend line in chart 4.9 above, shows the trend line of loans and advance based on linear equation  $Y = a + bX$  of respective commercial banks with respect to their Loans and Advances.

It can be seen that NABIL has the highest Propensity to Growth in Loans and Advances. The above trend line reveals that in the year 2004/05 HBL has highest loans and advance followed by NABIL EBL and NSBI which rises gradually each year and after year 2006/07 NABIL has the highest loans and advance than other banks whereas NSBI has the least. In first two year of study EBL and NSBI has almost same loans & advance whereas after 2007/08 loans & advance of EBL is near to that of HBL.

The forested trend line predict that in the year 2009/10 and 2010/11 NABIL will have the high volume of loans and advance followed by EBL, HBL and NSBI respectively.

#### 4.5.2 Trend Analysis and Propensity of Growth of EPS

Trend analysis shows the linear equation with respect to their loans and advances. Using the linear equation  $Y = a + bX$ .

**Table 4.25**

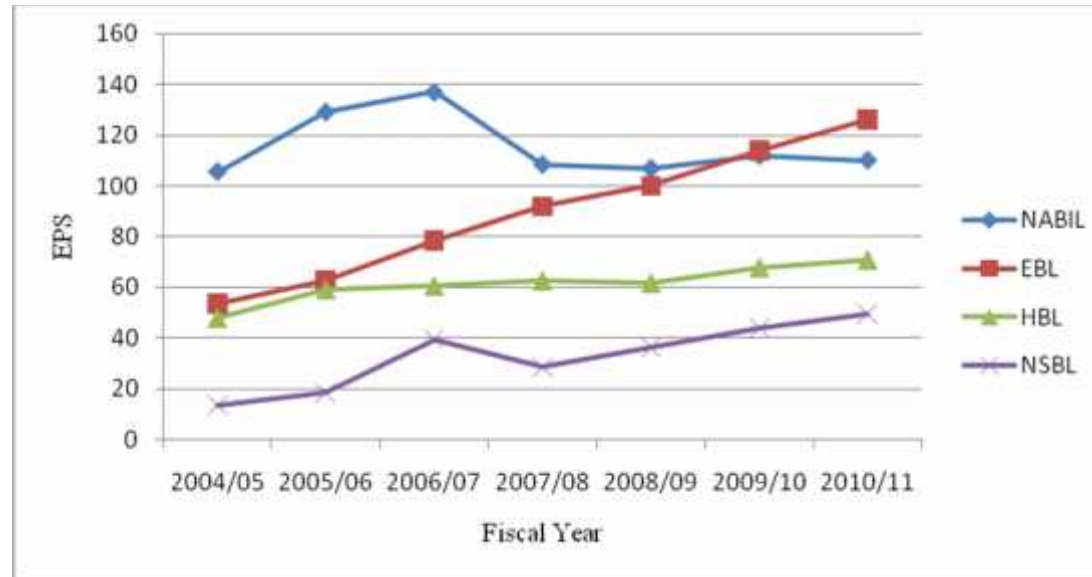
#### **Trend Analysis of EPS**

(Amt. in million)

Years	NABIL	EBL	HBL	NSBI
2004/05	105.488	53.4	47.906	13.2881
2005/06	129.209	62.78	59.241	18.2748
2006/07	137.08	78.42	60.658	39.3501
2007/08	108.307	91.82	62.739	28.3319
2008/09	106.762	99.99	61.9	36.1765
2009/10	111.87	113.94	67.938	43.83
2010/11	110.052	126.16	71.08	49.41

(Source: - Appendix III)

**Figure 4.10**  
**Trend Line of EPS**



The Table 4.25 and the chart 4.10 above, shows the forecasted trend line for the future by using linear equation based on  $Y = a + bX$  of respective commercial banks with respect to their EPS.

From the above trend line we can see that the EPS of NABIL was very high than other banks whereas NSBI has lowest EPS. Similarly, the EPS of EBL and HBL are almost equal at the first two year of study; however, the EPS of EBL climbed up gradually but that of HBL is almost constant. The EPS of NABIL starts declining from the year 2006/07 and become almost 100 in the year 2008/09.

As forecasted by the trend line, in future EBL will have the best EPS than other banks reaching at 126.16 followed by NABIL at 110. On the other hand, in the year 2010/11, NSBI will have the lowest EPS of 49.41 as predicted by the trend line.

## 4.6 Major Findings of the Study

From the Analysis of data, following findings can be made: -

- J The average Investment to Loan & Advance and Investment ratio of all four commercial bank is 0.4. The mean ratios of NABIL, EBL, HBL and NSBI are 0.3867, 0.2431, 0.3413 and 0.8510 respectively. Only NSBI has registered the higher ratio than the Combined Mean. This infers that NSBI has the lowest degree of investment in risky assets. And similarly, NABIL, EBL and HBL have the lowest ratio meaning that they have high degree of investment in risky assets.
- J The average of Loan & Advances and Investment to Total Deposit ratio of all five commercial bank is 1.03. The mean ratios of NABIL, EBL, HBL and NSBI are 1.04, 0.913, 0.987 and 1.03 respectively. NABIL has the highest mean ratio whereas NSBI has the mean ratio equal to the combined mean. This shows that NABIL has been doing best in mobilizing the funds collected in an income-generating sector. So does NSBI. Since for both the banks, the ratio is above 1, it refers that none of the deposit is idle. There is maximum utilization of the collected funds of NABIL and NSBI. On the other hand, the mean ratio of EBL and HBL is 0.91 and 0.98 which is less than the industry average. This indicates that the EBL and HBL are somehow poor in utilization of the collected funds.
- J The average Loans and Advances to Shareholder' Equity ratio of all the banks is 9.05. The mean ratios of NABIL, EBL, HBL and NSBI are 8.945, 11.10, 8.18 and 9.12 respectively. NSBI has the highest mean ratio whereas HBL has the lowest. Since the ratios of NABIL, EBL and HBL are lying below the Combined Mean, it can be concluded that they have not succeeded in increasing Loans and Advances in proportion to the size of their capital.
- J When measuring the lending strength in absolute terms, the mean Loans and Advances of NABIL is highest of all as 27999 and NSBI has the least of 15612.10. The coefficient of variation of HBL is lowest as 16.21 percent. Thus, the performance of HBL is more consistence regarding giving out loans and advances in comparison of other commercial banks. Whereas coefficient of variance is highest of EBL i.e. 24.47%.

- ) The Mean Non-Performing Loan of HBL is highest of all and the lowest of that is of EBL. The highest coefficient of variation of Non-Performing Loan is that of HBL i.e.53.22 and lowest is that of EBL, 5.52. This means EBL is performing well regarding the management of Non-Performing Loans. Deviation of HBL is very high; this might call for problems in future if not controlled in time. Similarly, the highest Coefficient of Variation is of EBL with 25.77% and the lowest is that of NABIL with 5.85%.
- ) While analyzing the Net profit of four commercial banks, the NSBI has the lowest Mean net profit during the study period. It has the Mean of 198.69 (million) with variability of 48.30%, whereas NABIL has the highest Mean of 649.08 with variability of 43.40%. The Mean Net Profits of EBL and HBL are 358.37 and 529.25 respectively and their respective Standard Deviation is 168.45 and 152.8 respectively. Under this analysis it can be said that NABIL has the best performance.
- ) While analyzing the Lending Efficiency and its contribution in Total profitability of Loan Loss Provision to Total Loan and Advances, NSBI has the highest amongst all, calculated as 0.29. The combined mean ratio of all four commercial bank is 0.041 and the mean ratio of NSBI is 0.06 which is higher than the combined mean. The highest ratio of NSBI clearly depicts the portion of Non-Performing Loans in the Total Loans is higher than in other commercial banks.
- ) While analyzing Interest Income from Loan and Advances to Total Income, the ratios of NABIL, EBL, HBL and NSBI, all the banks have their ratios higher than the combined mean ratio. This clears the fact that, interest income form Loans and Advances have much higher contribution in the Total Income and thus profit of the banks. This also clarifies that the banks are pretty much aggressive in investment and have invested their funds comparatively much less in risk free investments which bear much lesser return than risky investments.
- ) While analyzing Earning per Share, EPS of EBL is the highest in total however looking at the EPS of 5 years period; EBL is not doing so well. EBL has the highest mean of 173.40 this is due to the very high EPS in the fiscal year 2004/05 which was drastically declined in the



following year. The combined mean is 94.087. NABIL has the second highest EPS mean with 117.36 however looking at the overall period this bank has maintained an EPS higher than the combined mean throughout the period. The lowest EPS mean is that of NSBI at 27.08. EPS of NSBI is below the combined mean all the time. EPS of HBL is rising slightly every fiscal year though it is below the combined mean. So, looking at the EPS although EBL has the highest mean EPS, NABIL is seemed well in maintaining the stakeholders' wealth throughout the study period.

) The Correlation between Deposits and Loan and Advances of the entire sample bank is significant. The correlation between Shareholder's equity and Loans & Advance is also significant for all the banks. The correlation between Investment and Loan and Advances of only HBL is insignificant, rest all are significant. Similarly, the correlation between total income and Loans & advance of NABIL is insignificant and other three banks have significant. Looking at the relation between interest suspense and loans & advance, NABIL has positive relation whereas other banks have opposite relation. Furthermore, correlation between loan loss provision and loan and advance of NABIL and EBL is significant whereas HBL and NSBI are insignificant. In addition, there is significant correlation between interest income and net profit of all four commercial banks under study.

## **CHAPTER - V**

### **SUMMARY, CONCLUSION & RECOMMENDATION**

#### **5.1 Summary**

Commercial banks play very important role in this up growing economy. Regardless the various services they provide today, in general, commercial banks can be defined as an organization that lends money to people and institution who promise to repay the loan with interest over a specified period of time. Nepal Rastra Bank is the father figure of commercial banks. NRB created them and it guides them all the ways as how to work. More than that, NRB has full control over the functions of commercial banks established all over the country. It has provided guidelines to the commercial banks, which is more or less like a boundary drawn by the NRB for the functions of the commercial banks which basically is for the security of depositors, who deposit their savings in the banks.

An attempt of studying the lending practices of the commercial banks of Nepal is made in the thesis report. Four reputed commercial banks were taken as the sample for the study and the study is made around those four commercial banks namely NABIL bank, Everest Bank Ltd, Himalayan Bank Ltd and Nepal SBI Bank Ltd. The quantitative analysis, for the findings and conclusion, were made of the data collected from these commercial banks.

The findings were drawn analysis the five years data of above mentioned commercial banks. Different ratios were calculated to get the results for conclusions. Since the topic of the study revolves around the lending practices, the distribution of loans and advances, their recovery, and the ratios of those items that are related to the distribution and recovery of loans and advances are calculated.

#### **5.2 Conclusion**

The measurement of Lending strength in relative terms has revealed that NSBI has the highest Investment to Loans and Advances and Investment ratio. This ratio gives the portion of risk free investment out of total Loans and Advances and Investment. NABIL has the highest Loans and Advances and Investment to Total Deposit ratio referring that it has the maximum mobilization of deposits than others.

The absolute measure of lending strength reveals that NABIL has the highest mean of 27999 in Loans and Advances with a fluctuating trend but similarly it also has the highest standard deviation of 6173.29 million. Considering the most years' data of all the four commercial banks under the study are all in the line with the directives provided. In case of term loan, NRB directives have set the standard of 75% but the punishment of providing Loan Loss Provision is the same. None of the commercial banks have ever exceeded this limit; none of them have ever reached even 60% till date.

The measurement of efficiency in Lending has revealed that Loan Loss Provision to Total Loan & Advances Ratio is pretty satisfactory since according to NRB directives Loan Loss Provision indicates provision against both Performing and Non-Performing Loans. Thus, even the increase in good loan increases the Loan Loss Provision.

The ratio of Interest Income from Loans and Advances to Total Income explains the contribution of interest income from loans and advances in the Total Income. The ratio of Interest Suspense to Interest income from loans and advances among these banks is of varying nature. The greater the ratio the greater is the chance of the failure of the banks in realizing its loan interest in cash. The ratio of interest income to interest expenses is pretty interesting. According to analysis, the one rupee of interest expense has been able to earn Rs. 1.94 in an average. But interest suspense, interest due but not collected, is problem for HBL which shows the ineffectiveness of recovery mechanism. NABIL significantly has been decreasing interest suspense ratio.

The measurement of ratio of Loans and Advances to Total Deposits shows the high capability of commercial banks under study towards investment in risky assets. The high degree positive correlation between Deposits and Loans and Advances of all banks shows that mobilization of Loans and Advances is in high degree in respect to the Deposits collected. This is indicative of availability of good lending opportunities.

There is no uniformity in correlation of two variables in different commercial banks. High degree of positive correlation indicates good performance. One of the banks has negative correlation between investments and Loans and Advances probably because unavailability of good lending opportunities results in increase in Investment and vice versa.

The trend analysis of Loans and Advances has revealed that, NABIL has the highest trend line and thus is the best amongst the four commercial banks in accordance to giving out loans and Advances. The trend analysis of EPS, that checks the financial health of an organization, shows that all of the commercial banks under study have a decreasing trend of the EPS. Along with the average line, all the banks have a decreasing trend of EPS.

Qualitative analysis of Recovery of Loan has revealed the practical problems in collection of mobilized loans and Advances. Once the loan is given, it's more like the company has to, literally chase the borrower to recover its investment. It's probably is the lack of government support, from the regulations it makes, that the borrower normally dominates the bank, provided that the borrower is a known of the regulations such that he can manipulate it to his benefit. Liquidation of collateral, as regarded as security against the loan advanced, is one very tedious job. Realization of default loan via the liquidation of collateral does not turn out to be as simple as it sounds. The most distributing part is that there is no such directive regarding recovery of loans. It was said that the directives regarding recovery of loans were made but is not circulated till date.

### **5.3 Recommendation**

Based on the conclusions, the following recommendations have been forwarded: -

1. Investment to Loans and Advances mean ratio of NABIL, EBL and HBL are below the combined mean. Investment in risk-free assets is also important. Though flows of loans in riskier assets are quite profit some default of those loans will make the company hard to sustain for a longer period of time. Investment in risk-free and riskier asset should go hand in hand. Thus, NABIL, EBL and HBL should increase in their risk free assets at least to the combined mean.
2. In overall, Loans and Advances of sample banks are increasing and so are Non-Performing Loans and Loan Loss Provision. Extra efforts should be enforced to control over NPL, especially in the case of HBL. EBL however is working over this but it still is not sufficient. Similarly, NABIL and NSBI also need to control these variables.
3. All the commercial banks have increasing Loan Loss Provision; it may be because there is provision of maintaining 1% Loan loss provision for the “Pass” loan too. According to NRB Directives the loans which exceed the due period of more than three months is considered as non-performing loan. The new loans are likely to be categorized as non-performing loans in short span of time of mere three months. All the banks should take extra care for not increasing the non-performing loans. They should be in high alert and should be well known about the due period of the loans so they can inform their clients through different medium (letters, phone calls, personal meeting etc.) in advance. This helps a lot in maintaining the sound position of the institution. Moreover, every bank should try to collect its new as well as old loans. Collection of more of the non-performing loans helps the institution to reduce the amount of loan loss provision.
4. NABIL has the highest loans and advances and investment to Total Deposit referring that it has the highest mobilization of deposits whereas EBL has the least ratio. Every bank is required to maintain certain percentage of liquidity as per the directives given by the NRB. They should not forget the level of liquidity required to be maintained before flowing of loans. There is punishment by NRB for violating the rules directed by NRB.
5. The banks are suggested that they keep track of their authorized quota to invest in specific loan category else there’s provision of punishment according to the NRB Directives. According to the directives of NRB, bank can invest only 40% of total loan in hire purchase

else they have to make provision of 25% of the excess volume. Considering the most years' data of all the selected banks all are in line with the directives provided. Commercial banks have been mending the over investment but still in previous years.

6. The ratio of Interest Suspense to Total Interest Income from loans and Advances mean ratio is highest of HBL. It has to maintain almost 1.7% of interest income from Loans and Advances as Interest Suspense. Similarly, it is 1.4%, 0.59% and 0.55% for NSBI, EBL and NABIL respectively. So, this figure is not so bad however, all banks especially HBL should try to control it. High Interest Suspense decreases the profits of the company. All four banks are also recommended on concentrating in collecting their installment payments timely.

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## ANNEXURE

### ANNEX-I

#### Calculation of Ratios:

##### 1. Total Investment to Loan & Advance Ratios:

[Rs. In Million]

F/Y	NABIL BANK			EBL			HBL			NSBL		
	Total Investment	Loan & Advances	Ratios	Total Investment	Loan & Advances	Ratios	Total Investment	Loan & Advances	Ratios	Total Investment	Loan & Advances	Ratios
2004/05	4267.23	10946.74	0.3898	2128.93	7900.09	0.2695	11692.34	13451.17	0.8692	2607.68	6739.35	0.3869
2005/06	6178.53	13278.78	0.4653	4200.52	10136.25	0.4144	10889.03	15761.98	0.6908	3758.98	8241.46	0.4561
2006/07	8945.31	15903.02	0.5625	4984.31	14082.69	0.3539	11822.98	17793.72	0.6644	2659.45	10065.05	0.2642
2007/08	9939.77	21759.46	0.4568	5059.56	18836.43	0.2686	13340.18	20179.61	0.661	3088.89	12746.22	0.2423
2008/09	10826.38	27999.01	0.3867	5948.48	24469.55	0.2431	8710.69	25519.52	0.3413	13286.18	15612.05	0.851

##### 2. Loans & Advance and Investment to Total Deposit Ratio:

[Rs. In Million]

F/Y	NABIL BANK				EBL				HBL				NSBL			
	Total Investment	Loan & Advances	Total Deposits	Ratios	Total Investment	Loan & Advances	Total Deposits	Ratios	Total Investment	Loan & Advances	Total Deposits	Ratios	Total Investment	Loan & Advances	Total Deposits	Ratios
2004/05	4267.23	10946.7	14586.6	1.043	2128.93	7900.09	10097.7	0.993	11692.34	13451.2	24814	1.013	2607.68	6739.35	8654.77	1.0799
2005/06	6178.53	13278.8	19347.4	1.006	4200.52	10136.3	13802.4	1.039	10889.03	15762	26490.9	1.006	3758.98	8241.46	11002	1.0907
2006/07	8945.31	15903	23342.3	1.065	4984.31	14082.7	18186.3	1.048	11822.98	17793.7	30048.4	0.986	2659.45	10065.1	11445.3	1.1117

2007/08	9939.77	21759.5	31915.1	0.993	5059.56	18836.4	23976.3	0.997	13340.18	20179.6	31842.8	1.053	3088.89	12746.2	13715.4	1.1545
2008/09	10826.38	27999	37348.3	1.04	5948.48	24469.6	33323	0.913	8710.69	25519.5	34681.4	0.987	13286.18	15612.1	27957.2	1.0336

### 3. Loans & Advance to Shareholders' equity Ratio:

[Rs. In Million]

F/Y	NABIL BANK			EBL			HBL			NSBL		
	Loan & Advances	Shareholders' Equity	Ratios	Loan & Advances	Shareholders' Equity	Ratios	Loan & Advances	Shareholders' Equity	Ratios	Loan & Advances	Shareholders' Equity	Ratios
2004/05	10946.7	1657.6	6.604	7900.09	769.62	10.264	13451.2	1541.75	8.725	6739.35	689.01	9.781
2005/06	13278.8	1874.99	7.082	10136.25	962.81	10.527	15762	1766.18	8.924	8241.46	982.37	8.389
2006/07	15903	2057.05	7.731	14082.69	1088.12	12.942	17793.7	2146.5	8.29	10065.1	1163.29	8.652
2007/08	21759.5	2437.2	8.928	18836.43	1921.24	9.8043	20179.6	2512.5	8.032	12746.2	1414.64	9.01
2008/09	27999	3130.24	8.945	24469.55	2203.63	11.104	25519.5	3119.88	8.18	15612.1	1712.61	9.116

### 4. Loan Loss Provision to Total Loan and Advance Ratio:

F/Y	NABIL BANK			EBL			HBL			NSBL		
	Loan Loss Provision	Loans & Advance	Ratios	Loan Loss Provision	Loan & Advances	Ratios	Loan Loss Provision	Loans & Advance	Ratios	Loan Loss Provision	Loan & Advances	Ratios
2004/05	360.57	10946.74	0.033	281.42	7900.09	0.036	1026.65	13451.17	0.076	525.47	6739.35	0.078
2005/06	356.24	13278.78	0.027	334.95	10136.3	0.033	1119.42	15761.98	0.071	614.72	8241.46	0.075
2006/07	357.25	15903.02	0.023	418.6	14082.7	0.03	795.73	17793.72	0.045	604.6	10065.1	0.06
2007/08	394.41	21759.46	0.018	497.35	18836.4	0.026	682.09	20179.61	0.034	632.52	12746.2	0.05
2008/09	409.08	27999.01	0.015	584.88	24469.6	0.024	726.36	25519.52	0.029	480.3	15612.1	0.031

## 5. Non-performing Loan to Total Loans and Advance

F/Y	NABIL BANK			EBL			HBL			NSBL		
	NPL	Loans & Advance	Ratios	NPL	Loan & Advances	Ratios	NPL	Loans & Advance	Ratios	NPL	Loan & Advances	Ratios
2004/05	144.5	10946.74	0.013	128.8	7900.09	0.016	128.81	13451.17	0.0096	441	6739.35	0.0654
2005/06	182.6	13278.78	0.014	129.2	10136.3	0.013	1040.8	15761.98	0.0660	505.3	8241.46	0.0613
2006/07	178.3	15903.02	0.011	113.2	14082.7	0.008	641.62	17793.72	0.0361	458.8	10065.1	0.0456
2007/08	161.1	21759.46	0.007	127.3	18836.4	0.007	477.23	20179.61	0.0236	488.4	12746.2	0.0383
2008/09	224.8	27999.01	0.008	118	24469.6	0.005	551.31	25519.52	0.0216	316	15612.1	0.0202

## 6. Interest Income from loans & advance to Total Income

F/Y	NABIL BANK			EBL			HBL			NSBL		
	Interest Income	Total Income	Ratios	Interest Income	Total Income	Ratios	Interest Income	Total Income	Ratios	Interest Income	Total Income	Ratios
2004/05	831.83	3420	0.243	633.62	858.96	0.738	1122.4	1760.7	0.637	520.43	718.98	0.724
2005/06	986.23	2492.9	0.396	770.83	1066.5	0.723	1140.7	2164.3	0.527	608.32	799.67	0.761
2006/07	1167.3	2081.9	0.561	967.18	1378.7	0.702	1242.9	2044.3	0.608	705.63	945.77	0.746
2007/08	1496.2	1743.5	0.858	1329.7	1848.2	0.719	1444.2	2430.9	0.594	860.19	1093	0.787
2008/09	2182.7	1510.7	1.445	1852.1	2565.3	0.722	1861	2926.6	0.636	1179.6	1655.9	0.712

**7. Interest Income to Interest Expenses ratio:**

F/Y	NABIL BANK			EBL			HBL			NSBL		
	Interest Income	Interest Exp.	Ratios	Interest Income	Interest Exp.	Ratios	Interest Income	Interest Exp.	Ratios	Interest Income	Interest Exp.	Ratios
2004/05	831.83	243.54	3.4156	633.62	299.57	2.1151	1122.39	561.96	1.9973	520.43	258.43	2.0138
2005/06	986.23	357.16	2.7613	770.83	903.41	0.8532	1140.69	648.84	1.7580	608.32	334.77	1.8171
2006/07	1167.26	555.71	2.1005	967.18	517.17	1.8701	1242.85	767.41	1.6195	705.63	412.26	1.7116
2007/08	1496.24	758.44	1.9728	1329.7	632.61	2.1019	1444.24	823.74	1.7533	860.19	454.92	1.8909
2008/09	2182.65	1153.28	1.8926	1852.1	1012.9	1.8286	1861.04	934.78	1.9909	1179.6	824.70	1.4303

**8. Interest income to Loans & Advance ratio:**

F/Y	NABIL BANK			EBL			HBL			NSBL		
	Interest Income	Loans & Advance	Ratios	Interest Income	Loans & Advance	Ratios	Interest Income	Loans & Advance	Ratios	Interest Income	Loans & Advance	Ratios

2004/05	831.83	10946.74	0.076	633.62	7900.09	0.08	1122.4	13451.17	0.0834	520.43	6739.35	0.0659
2005/06	986.23	13278.78	0.0743	770.83	10136.3	0.076	1140.7	15761.98	0.0724	608.32	8241.46	0.0600
2006/07	1167.26	15903.02	0.0734	967.18	14082.7	0.069	1242.9	17793.72	0.0698	705.63	10065.1	0.0501
2007/08	1496.24	21759.46	0.0688	1329.7	18836.4	0.071	1444.2	20179.61	0.0716	860.19	12746.2	0.0457
2008/09	2182.65	27999.01	0.078	1852.1	24469.6	0.076	1861	25519.52	0.0729	1179.6	15612.1	0.0482

### 9. Loans and Advance to Total Deposit Ratios:

F/Y	NABIL BANK			EBL			HBL			NSBL		
	Loans & Advance	Total Deposits	Ratios	Loans & Advance	Total Deposits	Ratios	Loans & Advance	Total Deposits	Ratios	Loans & Advance	Total Deposits	Ratios
2004/05	10946.74	14586.6	0.7505	7900.09	10097.7	0.782	13451.2	24814	0.5421	6739.35	8654.77	0.7787
2005/06	13278.78	19347.4	0.6863	10136.3	13802.4	0.734	15762	26490.9	0.5950	8241.46	11002	0.7491
2006/07	15903.02	23342.3	0.6813	14082.7	18186.3	0.774	17793.7	30048.4	0.5922	10065.1	11445.3	0.8794
2007/08	21759.46	31915.1	0.6818	18836.4	23976.3	0.786	20179.6	31842.8	0.6337	12746.2	13715.4	0.9293
2008/09	27999.01	37348.3	0.7497	24469.6	33323	0.734	25519.5	34681.4	0.7358	15612.1	27957.2	0.5584

### 10. Interest Suspense to Total Income from Loans and Advance Ratios:

F/Y	NABIL BANK	EBL	HBL	NSBL
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	Interest Suspense	Loans & Advance	Ratios	Interest Suspense	Loans & Advance	Ratios	Interest Suspense	Loans & Advance	Ratios	Interest Suspense	Loans & Advance	Ratios
2004/05	0	10946.74	0	59.61	7900.09	0.008	0	13451.17	0	0	6739.35	0
2005/06	109.67	13278.78	0.0083	79.92	10136.3	0.008	487.95	15761.98	0.031	0	8241.46	0
2006/07	112.19	15903.02	0.0071	83.37	14082.7	0.006	336.71	17793.72	0.019	464.57	10065.1	0.046
2007/08	128.04	21759.46	0.0059	92.22	18836.4	0.005	347.63	20179.61	0.017	509.5	12746.2	0.04
2008/09	151.57	27999.01	0.0054	83.34	24469.6	0.003	377.64	25519.52	0.015	297.88	15612.1	0.019

### 11. Net Profit to Shareholders' Equity Ratio:

F/Y	NABIL BANK			EBL			HBL			NSBL		
	Net Profit	Shareholders' Equity	Ratios	Net Profit	Shareholders' Equity	Ratios	Net Profit	Shareholders' Equity	Ratios	Net Profit	Shareholders' Equity	Ratios
2004/05	158.64	1657.6	0.0957	168.21	769.62	0.2186	308.28	1541.75	0.2000	57.39	689.01	0.0833
2005/06	635.26	1874.99	0.3388	237.29	962.81	0.2465	457.46	1766.18	0.2590	117.00	982.37	0.1191
2006/07	673.96	2057.05	0.3276	296.41	1088.12	0.2724	491.82	2146.5	0.2291	254.91	1163.29	0.2191
2007/08	746.47	2437.2	0.3063	451.22	1921.24	0.2349	635.87	2512.5	0.2531	247.77	1414.64	0.1751
2008/09	1031.05	3130.24	0.3294	638.73	2203.63	0.2899	752.83	3119.88	0.2413	316.37	1712.61	0.1847

**12. Earnings Per Share [EPS]:**

F/Y	NABIL BANK			EBL			HBL			NSBL		
	Total Earnings	No. Of Shares	EPS	Total Earnings	No. Of Shares	EPS	Total Earnings	No. Of Shares	EPS	Total Earnings	No. Of Shares	EPS
2004/05	518635749	4,916,544	105.4879	1682214611	3150000	534.0364	308275171	6435000	47.9060	57386634	4,318,656	13.2881
2005/06	635262349	4,916,544	129.2091	237290936	3780000	62.7754	457457696	7722000	59.2408	117002000	6,402,361	18.2748
2006/07	673959698	4,916,544	137.0800	296409281	3780000	78.4152	491822905	8108100	60.6582	254909000	6,477,984	39.3501
2007/08	746468394	6,892,160	108.3069	451218613	4914000	91.8231	635868519	10135125	62.7391	247770758	8,745,278	28.3319
2008/09	1031053098	9,657,470	106.7622	638732757	6388210	99.9862	752834735	12162150	61.8998	316373495	8,745,278	36.1765





## ANNEX-II

### Calculation of Correlation

#### 1. Correlation between Deposit and Loans & Advance of NABIL:

Fiscal Year	Deposit (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	14586.6	10946.74	212768900	119831117	159675718
2005/06	19347.4	13278.78	374321887	176325998	256909868
2006/07	23342.3	15903.02	544862969	252906045	371213064
2007/08	31915.1	21759.46	1018573608	473474099	694455342
2008/09	37348.3	27999.01	1394895513	783944561	1045715425
Total	126539.7	89887.01	3545422877	1806481821	2527969417

Now, we have

$$n = 5 \quad X = 126539.7$$

$$Y = 89887.01 \quad X^2 = 3545422877$$

$$Y^2 = 1806481821 \quad XY = 2527969417$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.99

Coefficient of determination (r<sup>2</sup>) = 0.98

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

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

$$= 0.0089$$

Now,

$$6 P.Er = 6 \times 0.0089$$

$$= 0.0537$$

## 2. Correlation between Deposit and Loans & Advance of EBL:

Fiscal Year	Deposit (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	10097.7	7900.09	101963545	62411422	79772738.8
2005/06	13802.4	10136.3	190506246	102744578	139905267
2006/07	18186.3	14082.7	330741508	198322439	256112207
2007/08	23976.3	18836.4	574862962	354809965	451627177
2008/09	33323	24469.6	1110422329	598761324	815400481
Total	99385.7	75425.09	2308496589	1317049728	1742817871

Now, we have

$$n = 5 \quad X = 99385.7$$

$$Y = 75425.09 \quad X^2 = 2308496589$$

$$Y^2 = 1317049728 \quad XY = 1742817871$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.997

Coefficient of determination (r<sup>2</sup>) = 0.994

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

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

$$= 0.0027$$

Now,

$$6 \text{ P.Er} = 6 \times 0.0027$$

$$= 0.0161$$

### 3. Correlation between Deposit and Loans & Advance of HBL:

Fiscal Year	Deposit (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	24814	13451.2	615734596	180933974	333777332
2005/06	26491	15762	701767783	248440014	417549036
2006/07	30048	17793.7	902906343	316616471	534672816
2007/08	31843	20179.6	1013963912	407216660	642575285
2008/09	34681	25519.5	1202799506	651245901	885052681
Total	147878	92706	4437172139	1804453020	2813627151

Now, we have

$$n = 5 \quad X = 147877.5$$

$$Y = 89887.01$$

$$X^2 = 4437172139$$

$$Y^2 = 1806481821$$

$$XY = 2765186544$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.97

Coefficient of determination (r<sup>2</sup>) = 0.94

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

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

$$= 0.0268$$

Now,

$$6 P.E.r = 6 \times 0.0268$$

$$= 0.1610$$

#### 4. Correlation between Deposit and Loans & Advance of NSBL:

Fiscal Year	Deposit (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	24814	6739.35	615734596	45418838.4	167230231
2005/06	26491	8241.46	701767783	67921662.9	218323693
2006/07	30048	10065.1	902906343	101306238	302440151
2007/08	31843	12746.2	1013963912	162465614	405874697
2008/09	34681	15612.1	1202799506	243737666	541449485
Total	147878	53404.2	4437172139	620850020	1635318257

Now, we have

$$n = 5 \quad \Sigma X = 72774.67$$

$$\Sigma Y = 75425.09 \quad \Sigma X^2 = 1296661169$$

$$\Sigma Y^2 = 1317049728 \quad \Sigma XY = 1283524023$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.99

Coefficient of determination (r<sup>2</sup>) = 0.98

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

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

$$= 0.0603$$

Now,

$$6 P.E_r = 6 \times 0.0603$$

$$= 0.3619$$

### 5. Correlation between Loan & Advance and SHE of NABIL:

Fiscal Year	SHE (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	1657.6	7900.09	2747637.76	62411422	13095189.2
2005/06	1874.99	10136.3	3515587.5	102744578	19005461.1
2006/07	2057.05	14082.7	4231454.7	198322439	28968818
2007/08	2437.2	18836.4	5939943.84	354809965	45908074.1
2008/09	3130.24	24469.6	9798402.46	598761324	76595720.7
Total	11157.08	75425.09	26233026.3	1317049728	183573263

Now, we have

$$n = 5 \quad X = 11157.08$$

$$Y = 75425.09 \quad X^2 = 262330263$$

$$Y^2 = 1317049728 \quad XY = 183573263$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.986

Coefficient of determination (r<sup>2</sup>) = 0.97

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned} \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.0042 \end{aligned}$$

Now,

$$\begin{aligned} 6 \text{ P.E.}_r &= 6 \times 0.0042 \\ &= 0.0253 \end{aligned}$$

**6. Correlation between Loan & Advance and SHE of EBL:**

Fiscal Year	SHE (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	769.62	7900.09	592314.944	62411422	6080067.27
2005/06	962.81	10136.3	927003.096	102744578	9759331
2006/07	1088.12	14082.7	1184005.13	198322439	15323667.5
2007/08	1921.24	18836.4	3691163.14	354809965	36189245.1
2008/09	2203.63	24469.6	4855985.18	598761324	53921944.6
Total	6945.42	75425.09	11250471.5	1317049728	121274256

Now, we have

$$n = 5 \quad X = 6945.42$$

$$Y = 75425.09 \quad X^2 = 11250471.5$$

$$Y^2 = 1317049728 \quad XY = 121274256$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.97

Coefficient of determination (r<sup>2</sup>) = 0.94

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned} \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{n}} \\ &= 0.0090 \end{aligned}$$

Now,

$$6 P.E_r = 6 \times 0.0090$$

$$= 0.0543$$

### 7. Correlation between Loan & Advance and SHE of HBL:

Fiscal Year	SHE (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	1541.8	13451.2	2376993.06	180933974	20738341.3
2005/06	1766.2	15762	3119391.79	248440014	27838493.8
2006/07	2146.5	17793.7	4607462.25	316616471	38194220
2007/08	2512.5	20179.6	6312656.25	407216660	50701270.1
2008/09	3119.9	25519.5	9733651.21	651245901	79617840.1
Total	11086.8	92706	26150154.6	1804453020	217090165

Now, we have

$$n = 5 \quad X = 11086.8$$

$$Y = 92706$$

$$Y^2 = 1804453020$$

$$X^2 = 26150154.6$$

$$XY = 217090165$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.99

Coefficient of determination (r<sup>2</sup>) = 0.98

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned} \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.00603 \end{aligned}$$

Now,

$$\begin{aligned} 6 \text{ P.E}_r &= 6 \times 0.00603 \\ &= 0.03619 \end{aligned}$$

### 8. Correlation between Loan & Advance and SHE of NSBL:

Fiscal Year	SHE (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	689.01	6739.35	474734.78	45418838.4	4643479.54
2005/06	982.37	8241.46	965050.817	67921662.9	8096163.06
2006/07	1163.3	10065.1	1353243.62	101306238	11708630.2
2007/08	1414.6	12746.2	2001206.33	162465614	18031284.4
2008/09	1712.6	15612.1	2933033.01	243737666	26737438.6
Total	147878	53404.2	7727268.56	620850020	69216995.7

Now, we have

$$n = 5 \quad X = 147878$$

$$Y = 53404.2$$

$$Y^2 = 620850020$$

$$X^2 = 7727268.56$$

$$XY = 69216995.7$$

Coefficient of correlation can be calculated by using following formula:

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



Correlation of coefficient (r) = 0.99

Coefficient of determination ( $r^2$ ) = 0.98

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned} \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.00603 \end{aligned}$$

Now,

$$\begin{aligned} 6 \text{ P.E}_r &= 6 \times 0.00603 \\ &= 0.03619 \end{aligned}$$

**9. Correlation between Investment and Loans & Advance of NABIL:**

Fiscal Year	Investment (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	4267.23	7900.09	18209251.9	62411422	33711501.1
2005/06	6178.53	10136.3	38174233	102744578	62627433.6
2006/07	8945.31	14082.7	80018571	198322439	125974117
2007/08	9939.77	18836.4	98799027.7	354809965	187229484
2008/09	10826.38	24469.6	117210504	598761324	264917188
Total	40157.22	75425.09	352411587	1317049728	674459724

Now, we have

$$n = 5 \quad X = 40157.22$$

$$Y = 75425.09 \quad X^2 = 352411587$$

$$Y^2 = 1317049728$$

$$XY = 674459724$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.94

Coefficient of determination ( $r^2$ ) = 0.88

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned} \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.0362 \end{aligned}$$

Now,

$$\begin{aligned} 6 \text{ P.E.}_r &= 6 \times 0.0362 \\ &= 0.2172 \end{aligned}$$

#### 10. Correlation between Investment and Loans & Advance of EBL:

Fiscal Year	Investment (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	2128.93	7900.09	4532342.94	62411422	16818738.6
2005/06	4200.52	10136.3	17644368.3	102744578	42577730.9
2006/07	4984.31	14082.7	24843346.2	198322439	70192542.4

2007/08	5059.56	18836.4	25599147.4	354809965	95303896
2008/09	5948.48	24469.6	35384414.3	598761324	145556926
Total	22321.8	75425.09	108003619	1317049728	370449834

Now, we have

$$n = 5 \quad X = 22321.8$$

$$Y = 75425.09 \quad X^2 = 108003619$$

$$Y^2 = 1317049728 \quad XY = 370449834$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.87

Coefficient of determination (r<sup>2</sup>) = 0.76

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned} \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.0724 \end{aligned}$$

Now,

$$\begin{aligned} 6 \text{ P.E.}_r &= 6 \times 0.0724 \\ &= 0.4344 \end{aligned}$$

## 11. Correlation between Investment and Loan & Advance of HBL:

Fiscal Year	Investment (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	11692.3	13451.2	136710815	180933974	157275653
2005/06	10889	15762	118570974	248440014	171632673
2006/07	11823	17793.7	139782856	316616471	210374796
2007/08	13340.2	20179.6	177960402	407216660	269199630
2008/09	8710.69	25519.5	75876120.3	651245901	222292628
Total	56455.2	92706	648901168	1804453020	1030775379

Now, we have

$$\begin{aligned}
 n &= 5 & X &= 56455.22 \\
 Y &= 92706 & X^2 &= 648901168 \\
 Y^2 &= 1804453020 & XY &= 1030775379
 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = -0.51

Coefficient of determination (r<sup>2</sup>) = 0.2601

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}
 \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\
 &= 0.2232
 \end{aligned}$$

Now,

$$\begin{aligned}
 6 \text{ P.E.}_r &= 6 \times 0.2232 \\
 &= 1.34
 \end{aligned}$$

**12. Correlation between Investment and Loan & Advance of NSBL:**

Fiscal Year	Investment (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	2607.68	6739.35	6799994.98	45418838.4	17574068.2
2005/06	3758.98	8241.46	14129930.6	67921662.9	30979483.3
2006/07	2659.45	10065.1	7072674.3	101306238	26767630.2
2007/08	3088.89	12746.2	9541241.43	162465614	39371609.7
2008/09	13286.2	15612.1	176522579	243737666	207425171
Total	25401.2	53404.2	214066420	620850020	322117962

Now, we have

$$\begin{aligned}
 n &= 5 & X &= 25401.18 \\
 Y &= 53404.2 & X^2 &= 214066420 \\
 Y^2 &= 620850020 & XY &= 322117962
 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.78

Coefficient of determination (r<sup>2</sup>) = 0.61

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}
 P.E. (r) &= 0.6745 \frac{1-r^2}{\sqrt{n}} \\
 &= 0.1176
 \end{aligned}$$

Now,

$$\begin{aligned}
 6 P.E_r &= 6 \times 0.1176 \\
 &= 0.7059
 \end{aligned}$$

**13. Correlation between Total Income and Loans & Advance of NABIL:**

Fiscal Year	Total Income (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	3420	7900.09	11696400	62411422	27018307.8
2005/06	2492.9	10136.3	6214550.41	102744578	25268782.3
2006/07	2081.9	14082.7	4334307.61	198322439	29318773.1
2007/08	1743.5	18836.4	3039792.25	354809965	32841263.4
2008/09	1510.7	24469.6	2282214.49	598761324	36966224.7
Total	11249	75425.09	27567264.8	1317049728	151413351

Now, we have

$$\begin{aligned}
 n &= 5 & X &= 11249 \\
 Y &= 75425.09 & X^2 &= 27567264.8 \\
 Y^2 &= 1317049728 & XY &= 151413351
 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = -0.91

Coefficient of determination (r<sup>2</sup>) = 0.83

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}
 \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\
 &= 0.0513
 \end{aligned}$$

Now,

$$\begin{aligned}
 6 \text{ P.E}_r &= 6 \times 0.0513 \\
 &= 0.3077
 \end{aligned}$$

**14. Calculation of Correlation between Total Income and Loans & Advance of EBL:**

Fiscal Year	Total Income (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	858.96	7900.09	737812.282	62411422	6785861.31
2005/06	1066.5	10136.3	1137422.25	102744578	10810364
2006/07	1378.7	14082.7	1900813.69	198322439	19415818.5
2007/08	1848.2	18836.4	3415843.24	354809965	34813434.5
2008/09	2565.3	24469.6	6580764.09	598761324	62771864.9
Total	7717.66	75425.09	13772655.6	1317049728	134597343

Now, we have

$$n = 5$$

$$Y = 75425.09$$

$$Y^2 = 1317049728$$

$$X = 7717.66$$

$$X^2 = 13772655.6$$

$$XY = 134597343$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.995

Coefficient of determination (r<sup>2</sup>) = 0.99

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned} \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.0030 \end{aligned}$$

Now,

$$\begin{aligned} 6 \text{ P.E}_r &= 6 \times 0.0030 \\ &= 0.0181 \end{aligned}$$

**15. Calculation of Correlation between Total Income and Loans & Advance of HBL:**

Fiscal Year	Total Income (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	1760.7	13451.2	3100064.49	180933974	23683475
2005/06	2164.3	15762	4684194.49	248440014	34113653.3
2006/07	2044.3	17793.7	4179162.49	316616471	36375701.8
2007/08	2430.9	20179.6	5909274.81	407216660	49054613.9
2008/09	2926.6	25519.5	8564987.56	651245901	74685427.2
Total	11326.8	92706	26437683.8	1804453020	217912871

Now, we have

$$\begin{aligned} n &= 5 & X &= 11326.8 \\ Y &= 92706 & X^2 &= 26437683.8 \\ Y^2 &= 1804453020 & XY &= 217912871 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

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



Correlation of coefficient (r) = 0.97

Coefficient of determination (r<sup>2</sup>) = 0.94

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned} \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.0121 \end{aligned}$$

Now,

$$\begin{aligned} 6 \text{ P.E}_r &= 6 \times 0.0121 \\ &= 0.0724 \end{aligned}$$

**16. Calculation of Correlation between Total Income and Loans & Advance of NSBL:**

Fiscal Year	Total Income (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	718.98	6739.35	516932.24	45418838.4	4845457.86
2005/06	799.67	8241.46	639472.109	67921662.9	6590448.32
2006/07	945.77	10065.1	894480.893	101306238	9519269.63
2007/08	1093	12746.2	1194649	162465614	13931596.6
2008/09	1655.9	15612.1	2742004.81	243737666	25852076.4
Total	5213.32	53404.2	5987539.05	620850020	60738848.8

Now, we have

$$\begin{aligned} n &= 5 & X &= 5213.32 \\ Y &= 53404.2 & X^2 &= 5987539.05 \\ Y^2 &= 620850020 & XY &= 60738848.8 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.96

Coefficient of determination (r<sup>2</sup>) = 0.92

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

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

$$= 0.0241$$

Now,

$$6 \text{ P.E}_r = 6 \times 0.0241$$

$$= 0.1448$$

**17. Calculation of Correlation between Interest Suspense and Loans & Advance of NABIL:**

Fiscal Year	Total Income (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	0	7900.09	0	62411422	0
2005/06	109.67	10136.3	12027.5089	102744578	1111648.02
2006/07	112.19	14082.7	12586.5961	198322439	1579938.11
2007/08	128.04	18836.4	16394.2416	354809965	2411812.66
2008/09	151.57	24469.6	22973.4649	598761324	3708857.27

Total	501.47	75425.09	63981.8115	1317049728	8812256.06
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Now, we have

$$\begin{aligned}
 n &= 5 & X &= 501.47 \\
 Y &= 75425.09 & X^2 &= 63981.81 \\
 Y^2 &= 1317049728 & XY &= 8812256.06
 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.80

Coefficient of determination (r<sup>2</sup>) = 0.64

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}
 \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\
 &= 0.1086
 \end{aligned}$$

Now,

$$\begin{aligned}
 6 \text{ P.E}_r &= 6 \times 0.1086 \\
 &= 0.6516
 \end{aligned}$$

**18. Calculation of correlation between interest suspense and loans & advance of EBL:**

Fiscal Year	Int.Suspense (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	59.61	7900.09	3553.3521	62411422	470924.365
2005/06	79.92	10136.3	6387.2064	102744578	810093.096
2006/07	83.37	14082.7	6950.5569	198322439	1174074.7
2007/08	92.22	18836.4	8504.5284	354809965	1737092.81
2008/09	83.34	24469.6	6945.5556	598761324	2039296.46
Total	398.46	75425.09	32341.1994	1317049728	6231481.43

Now, we have

$$n = 5$$

$$Y = 75425.09$$

$$Y^2 = 1317049728$$

$$X = 398.46$$

$$X^2 = 32341.19$$

$$XY = 6231481.43$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.68

Coefficient of determination (r<sup>2</sup>) = 0.46

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned} \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.1629 \end{aligned}$$

Now,

$$\begin{aligned} 6 \text{ P.E}_r &= 6 \times 0.1629 \\ &= 0.9773 \end{aligned}$$

**19. Calculation of Correlation between Interest Suspense and Loans & Advance of HBL:**

Fiscal Year	Int.Suspense (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	0	13451.2	0	180933974	0
2005/06	487.95	15762	238095.203	248440014	7691058.14
2006/07	336.71	17793.7	113373.624	316616471	5991323.46
2007/08	347.63	20179.6	120846.617	407216660	7015037.82
2008/09	377.64	25519.5	142611.97	651245901	9637191.53
Total	1549.93	92706	614927.413	1804453020	30334611

Now, we have

$$\begin{aligned}
 n &= 5 & X &= 1549.93 \\
 Y &= 92706 & X^2 &= 614927.413 \\
 Y^2 &= 1804453020 & XY &= 30334611
 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.47

Coefficient of determination (r<sup>2</sup>) = 0.22

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}
 P.E. (r) &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\
 &= 0.2353
 \end{aligned}$$

Now,

$$\begin{aligned}
 6 P.E_r &= 6 \times 0.2353 \\
 &= 1.4117
 \end{aligned}$$

**20. Calculation of Correlation between Interest Suspense and Loans & Advance of NSBL**

Fiscal Year	Int.Suspense (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	0	6739.35	0	45418838.4	0
2005/06	0	8241.46	0	67921662.9	0
2006/07	464.57	10065.1	215825.285	101306238	4675943.51
2007/08	509.5	12746.2	259590.25	162465614	6494188.9
2008/09	297.88	15612.1	88732.4944	243737666	4650532.35
Total	1271.95	53404.2	564148.029	620850020	15820664.8

Now, we have

$$n = 5$$

$$Y = 53404.2$$

$$Y^2 = 620850020$$

$$X = 1271.95$$

$$X^2 = 564148.029$$

$$XY = 15820664.8$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.65

Coefficient of determination (r<sup>2</sup>) = 0.42

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned} \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.1750 \end{aligned}$$

Now,

$$\begin{aligned} 6 \text{ P.E.}_r &= 6 \times 0.1750 \\ &= 1.0497 \end{aligned}$$

**21. Calculation of Correlation between Loan Loss Provision and Loans & Advance of NABIL**

Fiscal Year	LLP (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	360.57	7900.09	130010.725	62411422	2848535.45
2005/06	356.24	10136.3	126906.938	102744578	3610955.51
2006/07	357.25	14082.7	127627.563	198322439	5031044.58
2007/08	394.41	18836.4	155559.248	354809965	7429264.52
2008/09	409.08	24469.6	167346.446	598761324	10010024
Total	1877.55	75425.09	707450.92	1317049728	28929824

Now, we have

$$\begin{aligned}
 n &= 5 & X &= 1877.55 \\
 Y &= 75425.09 & X^2 &= 707450.92 \\
 Y^2 &= 1317049728 & XY &= 28929824
 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.92

Coefficient of determination (r<sup>2</sup>) = 0.85

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}
 \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\
 &= 0.0452
 \end{aligned}$$

Now,

$$6 P.E_r = 6 \times 0.0452$$

$$= 0.1810$$

**22. Calculation of Correlation between Loan Loss Provision and Loans & Advance of EBL:**

Fiscal Year	LLP (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	281.42	7900.09	79197.2164	62411422	2223243.33
2005/06	334.95	10136.3	112191.503	102744578	3395153.69
2006/07	418.6	14082.7	175225.96	198322439	5895018.22
2007/08	497.35	18836.4	247357.023	354809965	9368283.54
2008/09	584.88	24469.6	342084.614	598761324	14311779.6
Total	2117.2	75425.09	956056.316	1317049728	35193478.4

Now, we have

$$n = 5 \qquad X = 2117.2$$

$$Y = 75425.09 \qquad X^2 = 956056316$$

$$Y^2 = 1317049728 \qquad XY = 35193478.4$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.996

Coefficient of determination (r<sup>2</sup>) = 0.992



Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned} \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.0024 \end{aligned}$$

Now,

$$\begin{aligned} 6 \text{ P.E}_r &= 6 \times 0.0024 \\ &= 0.0145 \end{aligned}$$

**23. Calculation of Correlation between Loan Loss Provision and Loans & Advance of HBL:**

Fiscal Year	LLP (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	1026.65	13451.2	1054010.22	180933974	13809643.7
2005/06	1119.42	15762	1253101.14	248440014	17644275.7
2006/07	795.73	17793.7	633186.233	316616471	14158996.8
2007/08	682.09	20179.6	465246.768	407216660	13764310.2
2008/09	726.36	25519.5	527598.85	651245901	18536358.5
Total	4350.25	92706	3933143.21	1804453020	77913584.9

Now, we have

$$\begin{aligned} n &= 5 & X &= 4350.25 \\ Y &= 92706 & X^2 &= 3933143.21 \\ Y^2 &= 1804453020 & XY &= 77913584.9 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = -0.77

Coefficient of determination (r<sup>2</sup>) = 0.5929

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned} \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\ &= 0.1227 \end{aligned}$$

Now,

$$\begin{aligned} 6 \text{ P.E.}_r &= 6 \times 0.1227 \\ &= 0.7368 \end{aligned}$$

#### 24. Calculation of Correlation between Loan Loss Provision and Loans & Advance of NSBL

Fiscal Year	LLP (X)	Loan & Advance (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	525.47	6739.35	276118.721	45418838.4	3541326.24
2005/06	614.72	8241.46	377880.678	67921662.9	5066190.29
2006/07	604.6	10065.1	365541.16	101306238	6085359.46
2007/08	632.52	12746.2	400081.55	162465614	8062226.42
2008/09	480.3	15612.1	230688.09	243737666	7498491.63
Total	2857.61	53404.2	1650310.2	620850020	30253594

Now, we have

$$\begin{aligned}
 n &= 5 & X &= 2857.61 \\
 Y &= 53404.2 & X^2 &= 1650310.2 \\
 Y^2 &= 620850020 & XY &= 30253594
 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = -0.28

Coefficient of determination (r<sup>2</sup>) = 0.0784

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}
 \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\
 &= 0.278
 \end{aligned}$$

Now,

$$\begin{aligned}
 6 \text{ P.E.}_r &= 6 \times 0.278 \\
 &= 1.67
 \end{aligned}$$

## 25. Calculation of Correlation between Interest Income and Net Profit of NABIL

Fiscal Year	Interest Income (X)	Net Profit (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	831.83	158.64	691941.149	25166.6496	131961.511
2005/06	986.23	635.26	972649.613	403555.268	626512.47
2006/07	1167.3	673.96	1362589.29	454222.082	786713.508

2007/08	1496.2	746.47	2238614.44	557217.461	1116868.41
2008/09	2182.7	1031.05	4764179.29	1063064.1	2250472.84
Total	6664.26	3245.38	10029973.8	2503225.56	4912528.74

Now, we have

$$\begin{aligned}
 n &= 5 & X &= 6664.26 \\
 Y &= 75425.09 & X^2 &= 10029973.8 \\
 Y^2 &= 1317049728 & XY &= 4912528.74
 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.87

Coefficient of determination (r<sup>2</sup>) = 0.76

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}
 \text{P.E. (r)} &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\
 &= 0.0724
 \end{aligned}$$

Now,

$$\begin{aligned}
 6 \text{ P.E.}_r &= 6 \times 0.0724 \\
 &= 0.4344
 \end{aligned}$$

## 26. Calculation of Correlation between Interest Income and Net Profit of

EBL:

Fiscal Year	Interest Income (X)	Net Profit (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	633.62	168.21	401474.304	28294.6041	106581.22
2005/06	770.83	237.29	594178.889	56306.5441	182910.251
2006/07	967.18	296.41	935437.152	87858.8881	286681.824
2007/08	1329.7	451.22	1768102.09	203599.488	599987.234
2008/09	1852.1	638.73	3430274.41	407976.013	1182991.83
Total	5553.43	1791.86	7129466.85	784035.538	2359152.36

Now, we have

$$n = 5$$

$$\Sigma X = 5553.43$$

$$\Sigma Y = 75425.09$$

$$\Sigma X^2 = 7129466.85$$

$$\Sigma Y^2 = 1317049728$$

$$\Sigma XY = 235915236$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.999

Coefficient of determination (r<sup>2</sup>) = 0.998

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

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

$$= 0.0006$$

Now,

$$6 P.E_r = 6 \times 0.0006$$

$$= 0.0036$$

**27. Calculation of Correlation between Interest Income and Net Profit of**

**HBL:**

Fiscal Year	Interest Income (X)	Net Profit (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	1122.4	308.28	1259781.76	95036.5584	346013.472
2005/06	1140.7	457.46	1301196.49	209269.652	521824.622
2006/07	1242.9	491.82	1544800.41	241886.912	611283.078
2007/08	1444.2	635.87	2085713.64	404330.657	918323.454
2008/09	1861	752.83	3463321	566753.009	1401016.63
Total	6811.2	2646.26	9654813.3	1517276.79	3798461.26

Now, we have

$$\begin{aligned}
 n &= 5 & X &= 6811.2 \\
 Y &= 75425.09 & X^2 &= 9654813.3 \\
 Y^2 &= 1317049728 & XY &= 379846126
 \end{aligned}$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.92

Coefficient of determination (r<sup>2</sup>) = 0.85

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

$$\begin{aligned}
 P.E. (r) &= 0.6745 \frac{1-r^2}{\sqrt{N}} \\
 &= 0.0452
 \end{aligned}$$

Now,

$$\begin{aligned}
 6 P.E_r &= 6 \times 0.0452 \\
 &= 0.2715
 \end{aligned}$$

**28. Calculation of Correlation between Interest Income and Net Profit of NSBL:**

Fiscal Year	Interest Income (X)	Net Profit (Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	520.43	57.39	270847.385	3293.6121	29867.4777
2005/06	608.32	117	370053.222	13689	71173.44
2006/07	705.63	254.91	497913.697	64979.1081	179872.143
2007/08	860.19	247.77	739926.836	61389.9729	213129.276
2008/09	1179.6	316.37	1391456.16	100089.977	373190.052
Total	3874.17	993.44	3270197.3	243441.67	867232.389

Now, we have

$$n = 5$$

$$X = 3874.17$$

$$Y = 75425.09$$

$$X^2 = 3270197.3$$

$$Y^2 = 1317049728$$

$$XY = 867232389$$

Coefficient of correlation can be calculated by using following formula:

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

Correlation of coefficient (r) = 0.88

Coefficient of determination (r<sup>2</sup>) = 0.77

Calculation of Probable Error

PE of coefficient of correlation can be calculated by following formula

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

$$= 0.0694$$

Now,

$$\begin{aligned}6 \text{ P.E}_r &= 6 \times 0.0694 \\ &= 0.4163\end{aligned}$$



### ANNEX- III

#### 1. Trend Equation of Loan and Advances

**FOR NABIL:**

Year(T)	X	Loan & Adv.(Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	1	10946.7	1	119830241	10946.7
2005/06	2	13278.8	4	176326529	26557.6
2006/07	3	15903	9	252905409	47709
2007/08	4	21759.5	16	473475840	87038
2008/09	5	27999	25	783944001	139995
<b>Total</b>	<b>15</b>	<b>89887</b>	<b>55</b>	<b>1022538020</b>	<b>312246</b>

Where,

$$\begin{aligned}
 N &= 5 \text{ years.} & X^2 &= 55 \\
 x &= 15 & y^2 &= 1022537260 \\
 y &= 89887 & xy &= 312246
 \end{aligned}$$

Here,

$$b = \frac{N \sum xy - \sum x \sum y}{N \sum x^2 - (\sum x)^2} = \frac{5 \times 312246 - 15 \times 89887}{5 \times 55 - 15^2} = 4258.50$$

$$\text{Now, } a = \frac{\sum y - b \sum x}{N} = \frac{89887 - 4258.50 \times 15}{5} = 5201.90$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$\begin{aligned}
 y &= a + bx \\
 y &= 5201.90 + 4258.50X
 \end{aligned}$$

**Calculation of trend values:**

$$2009/10 = 5201.90 + 4258.50 * 6 = 30752.9$$

$$2010/11 = 5201.90 + 4258.50 * 7 = 35011.40$$

**FOR EBL:**

Year(T)	X	Loan & Adv.(Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	1	7900.09	1	62411422	7900.09
2005/06	2	10136.3	4	102744578	20272.6
2006/07	3	14082.7	9	198322439	42248.1
2007/08	4	18836.4	16	354809965	75345.6
2008/09	5	24469.6	25	598761324	122348
<b>Total</b>	<b>15</b>	<b>75425.1</b>	<b>55</b>	<b>718288404</b>	<b>268114</b>

Where,

$$\begin{aligned}
 N &= 5 \text{ years.} & X^2 &= 55 \\
 x &= 15 & y^2 &= 718288404 \\
 y &= 75425.1 & xy &= 268114
 \end{aligned}$$

Here,

$$b = \frac{N \sum xy - \sum x \sum y}{N \sum x^2 - (\sum x)^2} = \frac{5 \times 268114 - 15 \times 75425.1}{5 \times 55 - 15^2} = 4183.87$$

$$\text{Now, } a = \frac{\sum y - b \sum x}{N} = \frac{75425.1 - 4183.87 \times 15}{5} = 2533.41$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$\begin{aligned}
 y &= a + bx \\
 y &= 2533.41 + 4183.87X
 \end{aligned}$$

**Calculation of trend values:**

$$2009/10 = 2533.41 + 4183.87 \times 6 = 27636.63$$

$$2010/11 = 2533.41 + 4183.87 \times 7 = 31820.50$$

**FOR HBL:**

Year(T)	X	Loan & Adv.(Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	1	13451.2	1	180934781	13451.2
2005/06	2	15762	4	248440644	31524
2006/07	3	17793.7	9	316615760	53381.1
2007/08	4	20179.6	16	407216256	80718.4
2008/09	5	25519.5	25	651244880	127598
<b>Total</b>	<b>15</b>	<b>92706</b>	<b>55</b>	<b>1153207441</b>	<b>306672</b>

Where,

$$\begin{aligned}
 N &= 5 \text{ years.} & X^2 &= 55 \\
 x &= 15 & y^2 &= 1153207119 \\
 y &= 92706 & xy &= 306672
 \end{aligned}$$

Here,

$$b = \frac{N \sum xy - \sum x \sum y}{N \sum x^2 - (\sum x)^2} = \frac{5 \times 306672 - 15 \times 92706}{5 \times 55 - 15^2} = 2855.40$$

$$\text{Now, } a = \frac{\sum y - b \sum x}{N} = \frac{92706 - 2855.40 \times 15}{5} = 9975.0$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$\begin{aligned}
 y &= a + bx \\
 y &= 9975 + 2855.40X
 \end{aligned}$$

**Calculation of trend values:**

$$2009/10 = 9975 + 2855.40 \times 6 = 27107.40$$

$$2010/11 = 9975 + 2855.40 \times 7 = 29962.80$$

**FOR NSBL:**

Year(T)	X	Loan & Adv.(Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	1	6739.35	1	45418838.4	6739.35
2005/06	2	8241.46	4	67921662.9	16482.9
2006/07	3	10065.1	9	101306238	30195.3
2007/08	4	12746.2	16	162465614	50984.8
2008/09	5	15612.1	25	243737666	78060.5
<b>Total</b>	<b>15</b>	<b>53404.2</b>	<b>55</b>	<b>377112354</b>	<b>182463</b>

Where,

$$\begin{aligned}
 N &= 5 \text{ years.} & X^2 &= 55 \\
 x &= 15 & y^2 &= 377111857 \\
 y &= 53404.2 & xy &= 104402
 \end{aligned}$$

Here,

$$b = \frac{N \sum xy - \sum x \sum y}{N \sum x^2 - (\sum x)^2} = \frac{5 | 182462 - 15 | 53404.2}{5 | 55 - 15^2} = 2224.94$$

$$\text{Now, } a = \frac{\sum y - b \sum x}{N} = \frac{53404.2 - 2224.94 | 15}{5} = 4006.02$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$\begin{aligned}
 y &= a + bx \\
 y &= 4006.02 + 2224.94x
 \end{aligned}$$

**Calculation of trend values:**

$$2009/10 = 4006.02 + 2224.94 * 6 = 17355.66$$

$$2010/11 = 4006.02 + 2224.94 * 7 = 19580.60$$

## 2. Trend equation of EPS:

### FOR NABIL

Year(T)	X	EPS(Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	1	105.488	1	11127.7181	105.488
2005/06	2	129.209	4	16694.9657	258.418
2006/07	3	137.08	9	18790.9264	411.24
2007/08	4	108.307	16	11730.4062	433.228
2008/09	5	106.762	25	11398.1246	533.81
<b>Total</b>	<b>15</b>	<b>586.846</b>	<b>55</b>	<b>58344.0165</b>	<b>1742.18</b>

Where,

$$\begin{aligned}
 N &= 5 \text{ years.} & X^2 &= 55 \\
 x &= 15 & y^2 &= 58344.02 \\
 y &= 586.846 & xy &= 1742.18
 \end{aligned}$$

Here,

$$b = \frac{N \sum xy - \sum x \sum y}{N \sum x^2 - (\sum x)^2} = \frac{5 | 1742.18 - 15 | 586.84}{5 | 55 - 15^2} = -1.834$$

$$\text{Now, } a = \frac{\sum y - b \sum x}{N} = \frac{586.84 - 1.834 | 15}{5} = 122.87$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$\begin{aligned}
 y &= a + bx \\
 y &= 122.87 - 1.834 * X
 \end{aligned}$$

**Calculation of trend values:**

$$2009/10 = 122.87 - 1.834 * 6 = 111.87$$

$$2010/11 = 122.87 - 1.834 * 7 = 110.032$$

**For EBL:**

<b>Year(T)</b>	<b>X</b>	<b>EPS(Y)</b>	<b>X<sup>2</sup></b>	<b>Y<sup>2</sup></b>	<b>XY</b>
2004/05	1	53.4	1	2851.56	53.4
2005/06	2	62.78	4	3941.3284	125.56
2006/07	3	78.42	9	6149.6964	235.26
2007/08	4	91.82	16	8430.9124	367.28
2008/09	5	99.99	25	9998.0001	499.95
<b>Total</b>	<b>15</b>	<b>386.41</b>	<b>55</b>	<b>21373.4972</b>	<b>1281.45</b>

Where,

$$\begin{aligned}
 N &= 5 \text{ years.} & X^2 &= 55 \\
 x &= 15 & y^2 &= 21373.49 \\
 y &= 386.41 & xy &= 1281.45
 \end{aligned}$$

Here,

$$b = \frac{N \sum xy - \sum x \sum y}{N \sum x^2 - (\sum x)^2} = \frac{5 \times 1281.45 - 15 \times 386.41}{5 \times 55 - 15^2} = 12.22$$

$$\text{Now, } a = \frac{\sum y - b \sum x}{N} = \frac{386.41 - 12.22 \times 15}{5} = 40.62$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$\begin{aligned}
 y &= a + bx \\
 y &= 40.62 + 12.22X
 \end{aligned}$$

**Calculation of trend values:**

$$\begin{aligned}
 2009/10 &= 40.62 + 12.22 \times 6 &= 113.94 \\
 2010/11 &= 40.62 + 12.22 \times 7 &= 126.16
 \end{aligned}$$

**For HBL:**

Year(T)	X	EPS(Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	1	47.906	1	2294.98484	47.906
2005/06	2	59.241	4	3509.49608	118.482
2006/07	3	60.658	9	3679.39296	181.974
2007/08	4	62.739	16	3936.18212	250.956
2008/09	5	61.9	25	3831.61	309.5
<b>Total</b>	<b>15</b>	<b>292.444</b>	<b>55</b>	<b>13420.056</b>	<b>908.818</b>

Where,

$$\begin{aligned}
 N &= 5 \text{ years.} & X^2 &= 55 \\
 x &= 15 & y^2 &= 13420.056 \\
 y &= 292.44 & xy &= 908.82
 \end{aligned}$$

Here,

$$b = \frac{N \sum xy - \sum x \sum y}{N \sum x^2 - (\sum x)^2} = \frac{5 | 908.82 - 15 | 292.44}{5 | 55 - 15^2} = 3.15$$

$$\text{Now, } a = \frac{\sum y - b \sum x}{N} = \frac{292.44 - 3.15 | 15}{5} = 49.038$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$\begin{aligned}
 y &= a + bx \\
 y &= 49.038 + 3.15X
 \end{aligned}$$

**Calculation of trend values:**

$$2009/10 = 49.038 + 3.15 * 6 = 67.938$$

$$2010/11 = 49.038 + 3.15 * 7 = 71.08$$



**For NSBL:**

Year(T)	X	EPS(Y)	X <sup>2</sup>	Y <sup>2</sup>	XY
2004/05	1	13.2881	1	176.573602	13.2881
2005/06	2	18.2748	4	333.968315	36.5496
2006/07	3	39.3501	9	1548.43037	118.05
2007/08	4	28.3319	16	802.696558	113.328
2008/09	5	36.1765	25	1308.73915	180.883
<b>Total</b>	<b>15</b>	<b>135.421</b>	55	2861.66884	462.098

Where,

$$\begin{aligned}
 N &= 5 \text{ years.} & X^2 &= 55 \\
 x &= 15 & y^2 &= 2861.67 \\
 y &= 135.42 & xy &= 462.098
 \end{aligned}$$

Here,

$$b = \frac{N \sum xy - \sum x \sum y}{N \sum x^2 - (\sum x)^2} = \frac{5 \times 462.098 - 15 \times 135.42}{5 \times 55 - 15^2} = 5.5838$$

$$\text{Now, } a = \frac{\sum y - b \sum x}{N} = \frac{135.42 - 5.5838 \times 15}{5} = 10.33$$

Substituting the values of 'a' and 'b', the equation of the trend line is

$$\begin{aligned}
 y &= a + bx \\
 y &= 5.5838 + 10.33X
 \end{aligned}$$

**Calculation of trend values:**

$$2009/10 = 10.33 + 5.5838 * 6 = 43.83$$

$$2010/11 = 10.33 + 5.5838 * 7 = 49.41$$