## **CHAPTER-I**

#### INTRODUCTION

# 1.1 Background of the Study

Banks are the institutions that provide the funding requirement starting and enlarging the business to those with skill and desire to operate the business collecting from those with the money but no skill or time to operate the business. Bank is a resources mobilizing institution, which accepts deposit from various sources, and invests such accumulated resources in the fields of agriculture, commerce, trade and industry. In other words, banks are the institutions of offering deposits subject to withdrawal on demand and making loans of business nature.

Credit risk involved in exposures to individual borrowers or counterparties as well as at the portfolio level. The credit review assessment of capital adequacy, at a minimum, should cover risk rating systems, portfolio analysis, large exposures and risk concentrations. Internal risk ratings are an important tool in monitoring credit risk. Internal risk ratings should be adequate to support the identification and measurement of risk from all credit exposures, and should be integrated into an institution's overall analysis of credit risk and capital adequacy. The ratings system should provide detailed ratings for all assets, not only for problem assets.

Credit risk is by far the most significant risk faced by banks and the success of their business depends on accurate measurement and efficient management of this risk to a greater extent than any other risk (Gieseche, 2004). It is a risk of financial loss if a borrower or counterparty fails to honor commitments under an agreement and any such failure has an adverse effect on the financial performance of the bank.

Defines credit risk as losses from the refusal or inability of credit customers to pay what is owed in full and on time. It arises mainly from direct lending and certain off-balance sheet products such as guarantees, letters of credits, foreign exchange, forward contracts & derivatives and also from the bank's holding of assets in the form of debt securities. It may take the form of delivery or settlement risk. It is critical to bank

survival or failure because banks traditionally earn their huge profits from interest on their risk exposures. The management of credit risk is a critical component of a comprehensive approach to risk management and is essential to the long-term success of a commercial bank (Coyle, 2000).

Credit risk is one of the most significant risks that banks face, considering that granting credit is one of the main sources of income in commercial banks. Therefore, the management of the risk related to that credit affects the profitability of the banks (Li and Zou, 2014).

The importance of credit risk management in banks is due to its ability in affecting the banks' financial performance, existence and growth.

Credit risk is accessed through analyzing the financial performance of commercial banks in an attempt to mitigate impacts arising from credit defaults. The financial health of the commercial banks depends on the possession of good credit risk management dynamics. Commercial banks may have a keen awareness of the need to identify, measure, monitor and control credit risk as well as to determine that they hold adequate capital against these risks and that they are adequately compensated for risks incurred.

Banks are exposed to different types of risks, which affect the performance and activity of these banks, since the primary goal of the banking management is to maximize the shareholders' wealth, so in achieving this goal banks' managers should assess the cash flows and the assumed risks as a result of directing its financial resources in different areas of utilization.

Nepalese commercial banks have faced difficulties over the years for a multitude of reasons, the major cause of serious banking problems continues to be directly related to the relaxed credit standards for borrowers and counterparties, poor portfolio risk management whereby they fail to determine the best asset combination to invest in, which should have a negative correlation or lack of attention to changes in economic or other circumstances that can lead to a deterioration in the credit standing of a bank's counterparties thus, making them default in honoring their obligations as regards repayment of the loans. However, in recent years, some policies have been reformed to

improve banks performance and some measures have been taken to minimize on the negative effects of lending. They have focused on mergers to increase capital requirement and lessened the competition.

This study will be focus on effect credit risk on the performance of commercial bank one joint venture bank Everest Bank Limited and another Nepal Investment Bank Limited. Which is fully promoted by Nepalese investors only. With the help of financial data of last 5 years from their annual report. Fiscal year 2012/13 to 2016/17.

#### 1.1.1 An Overview of Everest Bank Limited.

Catering to more than 9 lacs customers, Everest Bank Limited (EBL) is a name you can depend on for professionalized & efficient banking services. Everest Bank Ltd. was registered under the Company Act 1964 in 19<sup>th</sup> November 1993 and started banking transaction in 16<sup>th</sup> October 1994. The promoter of the bank decided to join hands with an Indian bank and entered into joint venture agreement in January 1997 AD with Punjab National Bank (PNB), which is one of the leading commercial bank of India, having over 100 years of successful banking experience and known for its strong system and procedure. A team of professionals deputed by PNB under this arrangement. Everest Bank Limited (EBL) provides customer-friendly services through its wide Network connected through ABBS system, which enables customers for operational transactions from any branches. The bank has 80 Branches, 113 ATM Counters, 7 extension counter & 28 Revenue Collection Counters across the country making it a very efficient and accessible bank for its customers, anytime, anywhere.

On equity holding PNB has 20.03% equity participation in its total shareholding and also has undertaken management responsibility under a technical service agreement and other balance is maintain by Nepali investor. Nepalese individual investor holding 66.28% and rest 13.69% held by Nepalese institutions. The main purpose of EBL is to extend professional banking services to various sectors of the society in the kingdom of Nepal and thereby contributing in the economic development of the country.

# 1.1.2 An Overview of Nepal Investment Bank Limited.

Nepal Investment Bank Limited (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one of the largest banking group in the world. Later, in 2002 a group of Nepalese companies comprising of bankers, professionals, industrialists and businessmen acquired the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd., and accordingly the name of the Bank also changed to Nepal Investment Bank Ltd. Now, the bank has 71 branches, 100 ATM counter, 6 Extension counter and 9 Extension counter for Revenue collection across the country making it a very efficient and easily accessible bank for its customers.

Nepal Investment bank Ltd. (NIBL), on equity position holding Licensed institutions 62.35%, Public 31.02% and Promoter individuals 6.63% equity participation on its total shareholding. The main mission of NIBL is to be the leading Nepali bank, delivering world class service through the blending of state-of-the-art technology and visionary management in partnership with competent and committed staff, to achieve sound financial health with sustainable value addition to all our stakeholders. We are committed to do this mission while ensuring the highest levels of ethical standards, professional integrity, corporate governance and regulatory compliance. NIBL has focus customer, quality, honesty and integrity, teamwork and corporate social responsibility.

#### 1.2 Statement of the Problems

The level of competition between commercial bank and financial institutions are increased drastically especially after the mandatory requirement to increase paid up capital to for all of BFIs, following several mergers, rights bonus issue. Banks plays a significant role in the economic development of the country by extending credit to the people. Banks and FIs can be evaluated comparing with Nepal Rastra Bank's regulatory framework, in which banks and FIs are required to maintain a standard set by NRB. The institutions have been established to assist the process of economic development of the country. There are many problems faced by banks. The problems can be separated

in different parts. All the parts of problems are assessed with the help effect of credit risk management. The application of the credit risk management system for evaluating financial strength of commercial banks has been growing both locally and internationally.

The present study try to analyze and examine overall performance of the commercial banks in Nepal. This study specially deals with the following problems.

- 1. What are the indicators of the credit risk management of selected banks?
- 2. What are the relationship of indicators on banks financial performance in term of profitability?
- 3. Does the credit risk management effect on banks financial performance?

## 1.3 Objectives of the Study

The main or general objective of the study is to assess the performance of Nepalese commercial banks is to effect of the credit risk management indicators. The study will be conducted to accomplish the following specific objectives.

- 1. To identify the indicators of the credit risk management of selected banks.
- 2. To examine the relationship of indicators on banks financial performance in term of profitability.
- 3. To analyze the credit risk management effect on banks performance.

## 1.4 Significant of the Study

This study is concerned with the evaluation of banks overall financial performance of Everest Bank and Nepal Investment Bank LTD. It is expected that this study will significantly contribute towards the maintenance in the field of capital adequacy, non-performing loan, cost per loan assets, cash reserve and leverage.

The bank's performance should be managed in such a ways that all the components of banks could be provided effectively and efficiently. The goal of the study is to examine

the efficiency and performance of these two banks management as reflected in the annual financial reports.

The following justify the study;

- 1. The study will help to specify the entire glory of these two banks.
- 2. The study will help to show the performance position of the banks to the investors as well as concerned management.
- 3. The study will help to indicated strengths and weakness of these banks.
- 4. Performance of only on one sector is not enough for an institutions. So, this study will help to the concerned management to improve their efficiency.
- 5. This study will helpful to the depositors, lenders, borrowers, policy makers, shareholders, customers and other stakeholders of the bank under research.

## 1.5 Limitation of the Study

The study has been carried out subject to the following limitations.

- 1. This study was based on the secondary data and accuracy depends upon the data published by the organization. The whole study based on the data of last 5 years ranging from (i.e. from F.Y. 2012/13 to 2016/17).
- 2. This study has only focused on the credit risk on the performance aspects of the banks only. Other performance of the organization are not covered, while providing suggestions.
- 3. This study has been only of two commercial banks as sample i.e. EBL and NIBL.
- 4. Only two commercial banks may not represent the whole 28 commercial banks.

# 1.6 Chapter Plan

The study is structured into five chapters:

# **Chapter I: Introduction**

This chapter includes the background information of the subject matter of research undertaking to provide a general idea of its history. Likewise it also includes statement of problem, objectives of study, significance of the study, limitation and organization of study.

## **Chapter II: Literature Review**

This chapter comprises the reviews of relevant previous writing and studies to find out the existing gaps. It includes conceptual framework regarding banks and performance analysis of financial institutions, and review of related studies. Review of journal, books, thesis and newspaper is also included in this chapter.

# **Chapter III: Methodology**

This Chapter describe about the methodology used in the study. This includes the population and sample procedures and source of data. It also comprises the research design employed along with the various financial and statistical tools used in the study.

## **Chapter IV: Results**

Chapter four is the main parts if the study; it presents the data and information collected from primary as well as secondary sources. This chapter dals with the presentation and analysis of data and major findings. The data collected after processing have been presented using figures and tables and results of statistical analysis are interpreted in this chapter.

#### **Chapter V: Conclusion**

This chapter deals with summary, conclusion and recommendations drawn by the researcher. Finally references and appendices have also been included at the end of the study.

## **CHAPTER-II**

#### LITERATURE REVIEW

Review of literature is basically a stock taking of available literature in the field of research. Its supports the research to explore the relevant and time facts for the reporting propose in the field of study. In the course of research view of the existing literature would help to check the chances of duplication in the present study. Thus one can find what studies have been made conducted and what remains to go with. In the part of literature review, the researcher has reviewed the available theoretical literature and previous empirical review research on matters concerning effect of credit risk on the performance of banks. This chapter includes the following sections: conceptual review, theoretical framework, empirical review and critiques of existing literature, of summary and the research gaps.

# 2.1 Conceptual Review

Basically, conceptual review presents the theoretical aspects of the study. It includes Concept of Supervision, Objective of Supervision, Process of Bank Supervision, Supervision and Monitory system of Nepal Rastra Bank, Financial Performance Analysis, Types of Financial Analysis, Theoretical Prescription of Credit Risk Management Framework, and Review of Previous Studies.

## 2.1.1 Supervision and Monitory system of Nepal Rastra Bank

In Nepal, Nepal Rastra Bank being central bank has those rights. NRB has been discharging such serious and sensitive tasks. Before NRB, the supervision and regulation functions were being carried out by auditor general of them His Majesty's Government. After the enactment of Commercial Bank Act, 2020 B.S., this task is given to NRB. This right for NRB was more strengthened after the enactment of Commercial Bank Act, 2031 B.S. The NRB has been doing this task of inspection since the fiscal year 2025/26 B.S. (Rai, 2010). NRB also has to follow a certain standard norms to inspect the BFIs. In this connection, NRB has been following Credit Rating system, formulated by Simplified Standardized Approach (SSA), has been prescribed in the initial phase, (Unified Directives 2074, NRB). Like others, The Central banks are established to

maintain the health of national financial system as well as economic system. For this, they are given unlimited rights through the law. Central bank is the apex body of supervising, regulating and controlling of BFIs (Shreshtha, et al, 2070).

## 2.1.2 Financial Performance Analysis

In this section, approach of financial performance analysis is presented. By the help of financial performance analysis, we can identify strength and weakness of financial institutions. Under this section types of financial analysis, concept of financial performance analysis in the framework of Credit Risk and objective of financial performance is discussed.

A commercial bank is simply a business corporation organized for maximizing the value of shareholders wealth invested in the firm at an acceptable level of risk. Profit is one of the basic indicators of sound financial performance. It is usually the result of sound business management, cost control, credit risk management and general efficiency of operation. Profit is essential for a firm for its survival, growth and to maintain capital adequacy through profit retention. As the recent increase in bank failures around the globe clearly suggests that the objective of maximizing profit a level of risk acceptable to the bank's stockholders is not easy to achieve. Under the free economics system like USA or liberal economic system of Nepal, the interest of the nation as well as those of the individual stockholder's are supposed to be best served by strongly seeking profit.

Although the profit is important for any business motives firm, it cannot be the sole objective of an enterprise or financial institution and a financial enterprise should not be evaluated just on the ground of the profit it has earned. Neither the bank nor the community will be best served if the banker unreasonably sacrifices the safety of his funds or liquidity of his bank in an effort to increase income.

A fair evaluation of bank's performance should start by evaluating whether it has been able to achieve the objective its management and stockholders have set. The fundamental analysis in term if financial analysis is different from market message reflected in technical analysis guided by the investor's psychology based in speculators'

manipulation of information. These are very different from industry and overall economic analysis (Shreshtha, & Bhandari, 2004). Financial decisions cannot be made in vacuum. They are to be based on proper financial analysis by using financial tools such as financial ratios to maximize the financial performance of a company. The assessment of the company's past, present and anticipated future financial conditions is important to identify the overall financial health of such company. Annual report contains financial statements as well as management opinion of the past years' performance and firm's future prospects.

Effective planning and financial management are the help in measuring the overall financial performance of companies. We can point out the following use of financial performance analysis.

- 1. Versatility and Usefulness
- 2. Common size comparison
- 3. Cash and Liquidity
- 4. Setting the standard
- 5. Efficiency Control
- 6. Showing the change

The roots of major management decisions revolve around financial information. A careful scrutiny of alternatives based on projected information depicting the relationship of each is needed to arrive at the selection of most favorable decisions for eventual implementation. This brings us to the question what constitute financial information. The basics source covering financial information about a form's affairs is its annual final reports i.e. Profit & Loss Statement for the last operating period, and Balance Sheet as at the business activities of the firm. These sources are the summary report of any business organization so they reveal only part of the necessary and required information and leave a considerable gap. It is therefore necessary to further examine and breakdown the information in these statements with a much greater elaboration and detail to interpret the comparatives strengths and weaknesses of the firm. In Nepal, NRB has made

mandatory to the banks to breakdown the balance sheet and profit & loss accounts in different schedules for the clearance of those statements. (Unified Directives-2074, NRB). We can employ certain analytical tools to analyze those data from the balance sheet and profit &loss account statements, which make us to interpret the financial statements.

Financial analysis serves the following purposes to the concerned authorities/bodies:

- Banks and financial institutions who are interested with project appraisal and conducting feasibility and viability studies to ascertain the credit worthiness of the organization;
- 2. Credit Rating Agencies, Stock exchange authorities who study the risk-factor affecting the small investors who have parked their life savings in the firm by way of equity, debt (bonds) or deposits;
- 3. The government for compiling national statistics relating to the status and growth of each organization;
- 4. Shareholders, as well as perspective investors desirous to know the present and anticipated trend of the business;
- 5. Business conditions are often unpredictable and can lend to change in the borrower's financial position thus affecting their ability the repay the loans;

Financial data is to be analyzed with reference to the particular objectives of the person concerned either external or internal as regards the firm. Before commencing analysis the type of analysis and the type of information needed are to be ascertained, as well as identification of the source-data, and the analytical tools to be employed. Analysis may be done with reference to a particular financial year in respect of different firms of a particular group or industry to assess their comparative status and performance or it may be restricted to a particular firm for a stretched period of 5 to 10 years to interpret its strengths & weaknesses and to analyze how it is progressing indifferent directions over this period.

Basically, a financial analysis consists of a three-step process as under:

- 1. Identify the source information relevant to the decision to be made from the total pool of data provided by the annual financial statements;
- Study the analyzed information critically and draw pertinent conclusions there form.
- 3. Re-arrange the particular data selected to highlight significant relationship.

## 2.1.3 Types of Financial Analysis

Financial analysis involves determining the level of risk and expected return of individual financial assets as well as groups of financial assets (Thapa, 2065). It may be categorized as external or internal analysis based to whom it is intended. Internal analysis for management information and decisions thereon are generally more detailed and external analysis intended for trade creditors, investors, term lending institutions and bankers supplying working capital.

The analysis may be classified as Horizontal or Vertical analysis. Horizontal analysis is conducted to compare the annual financial statement of the current year with that of the previous year to ascertain the comparative trends of the progress if the business, while vertical analysis is restricted to an in-depth study of the current year's financial statements. It converts each element of the information into a percentage of relationship with other components of the same statement.

The analysis can also categorized as technical and fundamental analysis. Technical analysis covers the external forces which determine the trends of variables. It assumes that everything is changeable in a routine basis. The change is in a cycle. The analysts use the charts, bar, points etc. to study and get conclusion. The fundamental analysis is about the study of internal factors i.e. analysis; (i) Top down vs. Buttom up Forecasting (ii) probalistic forecasting (iii) Econometric Forecasting . Trend analysis is comparative analysis of a company's financial ratios over time.

Ratio Analysis: An arithmetic ratio explains the relationship between two numbers. The ratio to be meaningful, the numbers selected must be co-related i.e. must bear a connected relationship. The one must have an influencing effect on the other ratio analysis establishes meaningful quantitative relations between two linked/connected item/variables of financial statements so that the strength or weakness of the business is brought out. For examples, current assets capable of quickly being converted to cash will assure that creditors for liabilities in the short run will be promptly discharged. The quantitative relationship of the set of items is indicated by the sales turnover. Therefore, net profit can be indicated the return on the investment, while the net profit to sales turnover indicates the operational efficiency.

# 2.2 Empirical Review

There are numerous researches on the effect of credit risk management on the performance, and how could the effective credit risk management assist in reducing the possibility of failure and restricting the uncertainty of achieving the required financial performance. Most of these researches support the notion that there is a positive relationship between effective credit risk management and banks' profitability, and some of these studies support the notion that there is a negative relationship between them, as follows. National and international journals, experts' views, review of previous researches and studies are covered in research review.

Paudel (2012) has examined the impact of credit risk management on the financial performance of commercial banks in Nepal using the financial report of 31 banks for eleven years (2001-2011). The methods of data analysis in the study were descriptive, correlation and multiple regressions. The financial performance indicator used in the study was return on assets (ROA). The predictors of the banks" financial performance used in the study were: default rate, cost per loan assets and capital adequacy ratio. The author asserts that all these parameters have an inverse impact on banks" financial performance. However, among the risk management indicators, default rate (NPLR) is the single most influencing predictor of bank financial performance in Nepal whereas cost per loan assets is not significant predictors of bank performance. The author

concludes that credit risk management is crucial on the bank performance since it have a significant relationship with bank performance.

Alshatti (2015) has examined the effect of credit risk management on financial performance of the Jordanian commercial banks during the period 2005-2013 using capital adequacy ratio, credit interest/credit facilities ratio, provision for facilities loss/ net facilities ratio, leverage ratio and non-performing loans/gross loans ratio as independent variables. The dependent variables represent the profitability measured by ROA and ROE. The author concludes that all the credit risk management indicators used in the study have significant effect on the financial performance of the Jordanian commercial banks.

Kodithuwakku (2015) has analyzed the impact of credit risk management on the performance of the commercial banks in Sri Lanka by using both primary and secondary data. The return on assets (ROA) is used as performance indicator and loan provision to total loan (LP/TL), loan provision to non-performing loans (LP/NPL), loan provision to total assets (LP/TA) and non-performing loans/ total loans (NPL/TL) were used as indicators of credit risk. The result shows that non-performing loans and provisions have an adverse impact on the profitability.

Kurawa and Garba (2014) have assessed the effect of credit risk management (CRM) on the profitability of Nigerian banks with a view to discovering the extent to which default rate (DR), cost per loan assets (CLA), and capital adequacy ratio (CAR) influence banks' profitability (ROA). The secondary data from the annual reports and accounts of quoted banks during the period of 2002 to 2011 were used for analysis. The results of the random-effect generalized least square (GLS) regression techniques reveal that default rate (DR) ratio and cost per loan assets (CLA) ratio have indicated significant positive relationship with the dependent variable, ROA. In respect of the control variable such as LOAN has positive relationship with ROA whereas AGE has negative association with ROA. The authors conclude that credit risk management components have significant positive effect on the profitability of Nigerian banks.

Ahmad and Ariff (2007) have examined the key determinants of credit risk of commercial banks on emerging economy banking systems compared with the developed economies. The authors found that regulation is important for banking systems that offer multiproducts and services; management quality is critical in the cases of loan-dominant banks in emerging economies. An increase in loan loss provision is also considered to be a significant determinant of potential credit risk. The authors further asserted that credit risk in emerging economy banks is higher than that in developed economies.

Bhattarai (2016) this study indicate that the sampled commercial have poor credit risk management practices. This is evidenced by the insignificant result of 'capital adequacy ratio' and the negative coefficient of 'non-performing loan ratio'. The insignificant result of 'capital adequacy ratio' indicates that capital adequacy ratio could not be regarded as the influencing variable for bank performance. The study reject the hypothesis that Nepalese commercial banks with higher capital adequacy ratio can advance more loans and absorb credit losses whenever they crop up and record better performance because coefficient is negative and insignificant. This finding does not support the regulators' recapitalization policy for commercial banks. Moreover, the negative coefficient of 'nonperforming loan ratio' confirms the negative effect on bank performance. NPLR, in particular, indicates how banks manage their credit risk because it defines the proportion of loan losses amount in relation to total loan amount. All these evidences support that Nepalese commercial banks have poor credit risk management.

Hosna, Manzura and Juanjuan (2009) found that Non-performing loans indicator effected on profitability as measured by (ROE) more than capital adequacy ratio, and the effect of credit risk management on profitability was not the same for all the banks included in their study.

Kolapo, Ayeni and Oke (2012) showed that the effect of credit risk on bank performance measured by ROA was cross-sectional invariant, though the degree to which individual banks were affected was not captured by the method of analysis employed in the study.

Musyoki and Kadubo (2012) seek to assess various parameters pertinent to credit risk management as it affects banks' financial performance. They concluded that all these parameters had an inverse impact on banks' financial performance; however the default rate was the most predictor of bank financial performance, on the contrary of the other indicators of credit risk management.

Felix and Claudine (2008) have investigated the relationship between bank performance and credit risk management. It could be inferred from their findings that return on equity (ROE) and return on assets (ROA) both measuring profitability were inversely related to the ratio of non-performing loan to total loan of financial institutions thereby leading to a decline in profitability.

Aruwa and Musa (2012) investigated the effects of the credit risk, and other risk components on the banks' financial performance. They found a strong relationship between risk components and the banks' financial performance.

Nawaz and Munir (2012) found that credit risk management effected on the banks' profitability, and they recommended that management should be cautious in setting up a credit policy that might not negatively affect profitability.

The most of the related empirical studies reported that bank performance is affected by capital adequacy ratio, non-performing loan and cost per loan assets. Moreover, bank performance may be affected the cash reserve ratio.

#### 2.3 Research Gap

Most of the Nepalese commercial banks are found to approve the loans that are not well examined. This may lead to increase the loan defaults and non-performing loans. Thus, the existing procedures for credit risk management are not adequate to compete with the existing financial and economic challenges in Nepal. There is need to investigate whether this investment in credit risk management is viable to the banks. This study therefore seeks to investigate the impact of credit risk indicators on a bank's financial performance in Nepal. This study addresses how credit risk affects banks" financial performance using a robust sample and the findings would serve as the basis to provide

policy measures useful to the various authorities on how to tackle the effect of credit risk in order to enhance the quality of banks" risky assets.

This study had selected on the basis of one joint venture bank and another which is fully promoted by Nepalese investors only. So this is the research gap of study.

#### 2.4 Theoretical Framework

The Credit Risk Management framework comes from the financial area. Risk is the position where the actual return of an investment is different than expected return. Risk means the possibility of losing the original investment and the amount of interests accrued on it.

Credit risk is the risk that a borrower defaults and does not honor its obligation to service debt. It can occur when the counterpart is unable to pay or cannot pay on time (Gestel and Baesens, 2008).

Credit risk refers to the probability of loss due to a borrower's failure to make payments on any type of debt. Credit risk management, meanwhile, is the practice of mitigating those losses by understanding the adequacy of both a bank's capital and loan loss reserves at any given time – a process that has long been a challenge for financial institutions (sas.com).

Credit risk denotes to the risk that a borrower will default on any type of debt by failing to make required payments. The risk is primarily that of the lender and includes lost principal and interest, disruption to cash flows, and increased collection costs (bis.org).

Credit risk management may be defined as the combination of coordinated tasks and activities for controlling and directing risk confronted by an organization through the incorporation of key risk management tactics and processes in relation to the organization's objectives (Nikolaidou & Vogiazas, 2014).

Credit risk is one of significant risks of banks by the nature of their activities. Through effective management of credit risk exposure banks not only support the viability and profitability of their own business but also contribute to systemic stability and to an

efficient allocation of capital in the economy (Psillaki, Tsolas, and Margaritis, 2010). "The default of a small number of customers may result in a very large loss for the bank" (Gestel & Baesems, 2008). It has been identified by Basel Committee as a main source of risk in the early stage of Basel Accord.

Investopedia indicates that credit risk is the risk of loss of principal or loss of a financial reward stemming from a borrower's failure to repay a loan or otherwise meet a contractual obligation. Credit risk arises whenever a borrower is expecting to use future cash flows to pay a current debt. Investors are compensated for assuming credit risk by way of interest payments from the borrower or issuer of a debt obligation, and credit risk is closely tied to the potential return of an investment, the most notable being that the yields on bonds correlate strongly to their perceived credit risk (investopedia.com).

The following sub-sections describe the components of the Credit Risk framework dependent variables and independent variables used in this study are as follows:

# 2.4.1 Dependent Variables

The measures of bank performance may be varied and the choice of the specific performance measure depends on the objective of the study. In theoretical literature the performance measures could be found such as: traditional measures of performance (ROA - return on assets, ROE - return on equity, cost to income ratio, net interest margin), economic measure of performance (EVA- economic value added, RAROC-risk adjusted return on capital) and market based measure of performance (total share return, price-earnings ratio, price-to-book value, credit default swap). Thus, choice of the best measure of performance is tedious task. Moreover, studying the bank performance concept may generate different results depending on the nature of the stakeholders which analyze the term. If they are depositors, the capacity of banks to manage their savings is the measure of performance; if they are equity-holders, then the performance is reflected in obtaining the satisfied levels of divisible profit and if they are banks' managers, then the performance is considered from profit point of view and also taking into considerations employees" requests. Such multitude of opinions opens new directions in banking performance research, but this study points out single

classical performance indicators: ROA which express the risk taking behavior of bank management in obtaining the satisfied level of profit per unit of total resources. In such a scenario, thus, this study has used ROA as dependent variables to represent bank performance.

ROA measures the profit earned per dollar of assets and reflect how well bank management uses the bank's real investments resources to generate profits (Naceur, 2003 and Alkassim, 2005). For banks with similar business risk profiles, ROA is a useful statistic for comparing the profitability of banks because it avoids distortions that are introduced by differences in financial leverage. Return on assets (ROA) is a comprehensive measure of overall bank performance from an accounting perspective (Sinkey and Joseph, 1992). It seems more suitable for comparing the banks in the same industry than other measures of performance. Thus, return on assets (ROA) is chosen as the performance measure for this study. It shows the effectiveness of management in the utilization of the assets of a commercial bank. It is analyzed that bank performance is influenced by the credit risk indicators like: capital adequacy ratio, non-performing loan and cost per loan assets with controlling the effect of cash reserve ratio and leverage.

# 2.4.2 Independent Variables

## Capital adequacy ratio

This is an independent variable for the determination of the performance and is considered as the core measure of a bank's financial strength from a regulator's point of view. Capital requirement (capital adequacy) is the amount of capital a bank or other financial institution has to hold as required by its financial regulator. This helps to ensure that institutions are not involving in or holding investments that amplify the risk of default. In addition, to guarantee that financial institutions have enough capital to sustain operating losses while honouring withdrawals.

Basel Committee on banking supervision (1988) has introduced a capital measurement system which is generally referred to as the Basel Accord. This framework has been replaced by new and significantly more complex capital adequacy framework known

as Basel II (2004). Again, the Basel Committee on Banking Supervision (BCBS) released a comprehensive reform package entitled "A global regulatory framework for more resilient banks and banking systems" (known as Basel III capital regulations) 2010. Whilst Basel III considerably changes the calculation of the risk weights, it sets aside the calculation of capital alone. Basel III is based on a three pillars concept, which helps in boosting stability in the financial system: (Pillar 1) raise the quality and level of risk (addressing risk), (Pillar 2) supervision review process and (Pillar 3) public disclosures.

It is a measure of the amount of bank's capital expressed as a percentage of its risk weighted exposure. It consists of the types of financial capital considered the most reliable, primarily shareholders' equity. Theoretically, banks with good capital adequacy ratio have a good profitability. A bank with a strong capital adequacy is also able to absorb possible loan losses and thus avoids bank "run", insolvency and failure.

Bank capital increases the capacity to raise non-insured debt and thus banks" ability to limit the effect of a drop in deposits on lending (Ashcraft, 2001). Since higher capital reduces bank risk and creates a buffer against losses, it makes funding with non-insured debt less information sensitive (Admati et al., 2010). Thus, capital adequacy can enhance bank performance. However, empirical studies on the relationship between firms" performance and capital adequacy ratio have shown mixed results.

## Non-performing loan ratio

Non-performing loans ratio (NPLR) reflects the bank's credit quality and is considered as an indicator of credit risk management. NPLR, in particular, indicates how banks manage their credit risk because it defines the proportion of loan losses amount in relation to total loan amount (Hosna et al, 2009). NPLR has been used as the default rate on total loan and advances. Gizaw, Kebede and Selvaraj (2015) assert that non-performing loan ratio (NPLR) is the major indicator of commercial banks' credit risk. They finds that NPLR which measures the extent of credit default risk sustained by the banks showed a statistically significant large negative effect on profitability measured by ROA. Since it measures the default rate, a negative relationship could be expected

between nonperforming loan ratio and financial performance of commercial banks. However, empirical studies produce mixed results.

#### Cost per loan assets

Cost per loan assets (CLA) is the average cost per loan advanced to customer in monetary term. Cost per loan assets is calculated dividing total operating costs by total amount of loans. The function of this is to point out efficiency in distributing loans to customers (Appa, 1996; Ahmed et al., 1998; Kolapo et al., 2012). Thus, cost per loan assets is considered as a determinant of the bank's performance and is viewed as an indicator of credit risk. Banks that are efficient in managing their expenses (costs), holding other factors constant, earn high profits. Therefore, it is expected that cost per loan assets and bank performance to be negatively associated. This may not always be true because in cases where there are high expenditures due to a lot of businesses done, the bank can still increase the returns.

#### Cash reserve ratio

Cash reserve ratio is one of the control variable used in analyzing effect of credit risk on the performance of banks. Traditionally, cash reserve ratio (CRR) has been one of the monetary tools in the hands of the central bank. Cash reserve ratio (CRR) is a specified minimum fraction of the total deposits of customers which commercial banks have to hold as reserves with the central bank. By changing CRR, the central bank can control the amount of liquidity. If the reserve requirement is raised, banks will have less money to loan out and this effectively reduces the amount of capital in the economy, therefore lowering the money supply. It will mean less money for investment and spending, and would stunt the growth of the economy. It would also mean that banks earn less interest and expect that their profitability may decline. Moreover, cash reserve requirement does not earn any income for the commercial banks and thus, may be viewed as a drain on the profitability of banks.

#### Leverage ratio

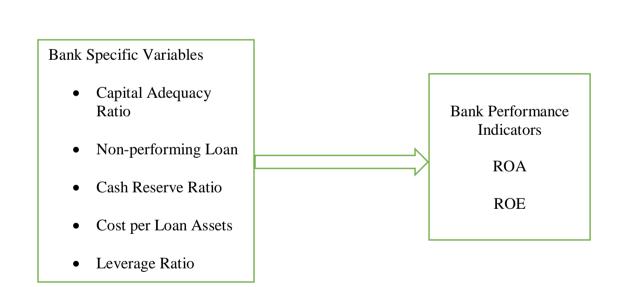
Leverage ratios measure how leveraged a company is, and a company's degree of leverage (that is, its debt load) is often a measure of risk. When the debt ratio is high,

Dependent Variables

for example, the company has a lot of debt relative to its assets. It is thus carrying a bigger burden in the sense that principal and interest payments take a significant amount of the company's cash flows, and a hiccup in financial performance or a rise in interest rates could result in default. When the debt ratio is low, principal and interest payments don't command such a large portion of the company's cash flow and the company is not as sensitive to changes in business or interest rates from this perspective. However, a low debt ratio may also indicate that the company has an opportunity to use leverage as a means of responsibly growing the business.

In general, a high debt-to-equity ratio indicates that a company may not be able to generate enough cash to satisfy its debt obligations. However, low debt-to-equity ratios may also indicate that a company is not taking advantage of the increased profits that financial leverage may bring.

Independent Variables



**Conceptual Framework** 

# **CHAPTER-III**

## RESEARCH METHODOLOGY

## 3.1 Research Design

The main objective of research work is to evaluate the credit risk on the performance of commercial bank one joint venture bank (i.e. Everest Bank Ltd) and Nepal Investment Bank Ltd. To accomplish this objective descriptive and analytical methods have been adopted for this study. It is also said that the research design is the plan structure and structure and strategy if investigation conceived so as to obtain answer question and control variance. It tries to describe and analyze all the facts that have been collected for the purpose of the study.

#### 3.1.1 Population and Sample

Population of this study has been all listed commercial banks in NEPSE. There are 28 commercial bank have been listed their shares in NEPSE. They will be have only been considered as population for the study, two leading commercial banks are convenience sample method selected as sample banks. They are Everest Bank Ltd. and Nepal Investment Bank Ltd.

In this research work, five years period is taken. The annual report of concerned banks for five years are taken for the purpose of the study and analysis. It covers the fiscal year from 2012/13 to 2016/17.

# 3.1.2 Nature and Sources of Data

Mainly, the study has been conducted on the design basis of secondary data. The required data will be extracted from balance sheet, profit and loss account and different financial schedules of concerned banks' annual reports. Other supplementary data will be collected from a number of institutions and regulatory authorities likes Nepal Rastra Bank, Nepal Stock Exchange, Securities Exchange Board of Nepal and different related websites.

#### 3.1.3 Data Collection Procedures

As the study is based mainly on the secondary data, required facts and figures have been obtained from the annual report collected from official websites of the banks. Data have also been obtained browsing the official web site site of NRB and Security Board of Nepal. Other reference materials are collected from the Central Library of T.U.

# 3.1.4 Data Processing procedures

Firstly data were extracted from the annual reports of the bank and put them in a sheet. Then data were entered into the spreadsheet to work out the financial ratios and prepare necessary figures, according to the need and requirement of this study. For this purpose, gathered data have been processed using computer programs like Microsoft Excel and Word etc.

#### 3.2 Method of Data Analysis

Only descriptive tools are used to get the meaningful result of the collected data and to meet the research objectives. Collected data are tabulated under various heads. Then the tabulated data are analyzed using various financial tools.

#### 3.2.1 Financial Tools

The following financial tools are applied for the analysis and interpretation of the data;

#### A. Capital Adequacy Ratio

Capital adequacy ratio is a financial tool to measure the ratio between institutions capital to its risk-weighted assets. This can be met only on the basis of an amount and the quality capital, a bank can access. A ratio of capital to risk weighted assets determines the bank's capital adequacy.

Where,

Total Capital fund = (Tier 1 capital + Tier 2 capital)

Total Risk Weighted Assets = (on-balance sheet risk weighted assets + off-balance sheet risk weighted assets)

The bench mark by NRB is 10 percent for CAR to the commercial banks i.e. 'A' graded banks.

# **B. Non-performing Loan Ratio**

The odds of loan repayment decrease significantly after 90 days, which is why the nonperforming loan designation uses this standard. Loans can be classified as nonperforming if the borrower defaults on the loan, declares bankruptcy or loses the income she needs to repay the debt. This ratio indicates the portion of nonperforming loan out of total loan. Low level of ratio is preferable for financial institutions.

#### C. Cash Reserve Ratio

Cash reserve ratio is a specified minimum fraction of the total deposits of customers, which commercial banks have to hold as reserves either in cash or as deposits with the central bank. CRR is set according to the guidelines of the central bank of a country.

Cash Reserve Ratio (CRR) = 
$$\frac{\text{Reserve Requirement with the Central Bank}}{\text{Total Deposits of Customers}}$$

The bench mark by followed by NRB standard for commercial banks.

## D. Cost per Loan Assets Ratio

Cost per loan assets (CLA) is the average cost per loan advanced to customer in monetary term. Cost per loan assets is calculated dividing total operating costs by total amount of loans. Thus, cost per loan assets is considered as a determinant of the performance.

## E. Leverage Ratio

Leverage Ratio help to test of long term solvency position of a firm. The ratio indicators the relationship between long term debt and total equity. It shows the degree of related and protection of total capital against long term or total debt.

Leverage Ratio (LR) = 
$$\frac{\text{Total Debt}}{\text{Total Equity}}$$

Where,

Total Debt = (Long term Debt + Current Liabilities)

Total Equity = (Shareholder's fund + Long term Debt)

# F. Earning Capacity

## a. Return on Assets

This ratio shows the relationship of net profit and total assets and is to determine how efficiently the total assets have been used by the management. This ratio indicates the ability of generating profit per rupees of total assets used by the FIs. Higher ratio implies that the available source and tools are employed efficiently.

Return on Assets (ROA) = 
$$\frac{\text{Net Income}}{\text{Total Assets}}$$

## **b.** Return on Equity

The return on equity measures the profitability of equity funds invested in the firm. This is the income per unit of equity fund invested by the investor. Higher ratio implies that the better quality of the FIs. This is the real income earned by the owner of any FIs.

Return on Equity (ROE) = 
$$\underbrace{\text{Net Income}}_{\text{Total Equity}}$$

## 3.2.2 Statistical Tools

The following statistical tools are applied for the analysis and interpretation of the data;

## A. Mean

Mean is a tool under the measures of central tendency. It is a quantitative average figure for a given series of data. In the thesis this tool will be used to measure the periodic average of different components.

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

Where,  $\sum X = \text{Sum of all data of a series}$ 

N = No of all item in a series

#### **B. Standard Deviation**

Standard deviation is an absolute measure of dispersion. This helps to show the deviation or risk in a series of data.

S.D 
$$(\sigma) = \sqrt{\frac{(X-X)^2}{N}}$$

Where, S.D ( $\sigma$ ) = Sigma, Standard Deviation.

#### C. Coefficient of Variation

Coefficient of variation is a relative measure of dispersion. It is the deviation or risk in per of data.

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

Where, Coefficient of Variation.

#### **D.** Measures of Correlation:

We examine the relation between the variable variables. The correlation between the different variables of a bank is compared to measure the performance of these banks. Correlation refers to the degree of relationship between two variables. If between two variables, increase to degree in one causes increase or decrease in another, then such variables are correlated variables. The reliability of the value of coefficient of correlation is measured by probable error. The correlation coefficient describe the degree of relationship between two variables. It interprets whether variables are correlated positively or negatively. This tools analyze the relationship between those variables by which it is helpful to make appropriate credit risk management. The karl pearson coefficient of correlation (r) is given by following formula.

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

The karl pearson coefficient of correlation always falls between -1 to +1. The value of correlation in minus signifies the negative correlation and in plus signifies the positive correlation. As the value of correlation reaches to the value of zero, it is said that there is no significant relationship between the variables.

#### **CHAPTER-IV**

## RESULTS

#### 4.1 Introduction

This Chapter deals with Presentation and analysis of data collection from annual reports of the bank. The raw data collected has been organized and processed using various tools discussed in the previous chapter "Research Methodology". In this chapter data and information are presented and analyzed using different financial and statistical tools in order to achieve the objective of the study. In data presentation and analysis, the study is focused on Credit Risk Management.

# **4.1.1 Capital Adequacy**

Capital adequacy determines how well banks can manage with shocks to their balance sheets. For the purpose of capital adequacy measurement, bank capital is dividing into Tier I Capital and Tier II Capital. Risk based capital ratio, core capital adequacy ratio, supplementary capital ratio are used to analyze the capital adequacy ratio.

Commercial bank should have adequate capital to support its risk assets in accordance with the risk-weighted capital ratio framework. It has become recognized that capital adequacy more appropriately relates to assets structure than to the volume of liabilities. Adequacy and inadequacy of bank capital directly affects the banking transaction. The adequacy of bank capital, is the most important aspects of a bank. If there is inadequacy of capital, the bank should take step for the adequacy of capital as per legal requirement because its financial health can't be regarded capable and healthy without having adequate capital.

# 4.1.1.1 Analysis of Total Capital Adequacy Ratio (CAR)

It has been already mentioned that the capital of the banks is categorized into 2 parts, namely Tier I capital and Tier II capital. Here, the total capital is analyzed. Total capital ratio can be calculated by dividing the total capital fund by the total risk weighted assets. As the NRB has made it mandatory to publish these ratios for the banks, these ratios can be found in their periodic reports.

Capital Adequacy Ratio (CAR) = <u>Total Capital Fund</u> Total Risk Weighted Assets

Table 4.1 Capital Adequacy Ratio of NIBL and EBL

Year	NIBL's CAR(%)	EBL's CAR(%)	NRB std.(%)
2012/13	11.49	11.59	10
2013/14	11.27	11.15	10
2014/15	11.9	13.33	10
2015/16	14.92	12.66	10
2016/17	13.02	14.69	10
Mean	12.52	12.68	10
S.D	1.34	1.26	0
C.V	10.7	9.94	0

Source: Annual Reports of NIBL and EBL Bank

The Table 4.1 shows the capital adequacy ratios of NIBL were very around the circle from 10 percent to 14 percent. The ratio of 2012/13 was 11.49 percent and it was 11.27 percent for the year 2013/14 ratio was slightly decline. The ratio was slightly increase 11.90 percent for the year 2014/15 and increased to 14.92 percent for the year 2015/16. In the final year of the study period; it was 13.02 percent which was near to the 5- year average i.e. 12.52 percent.

The table 4.1 also reveals that status of EBL capital adequacy ratio for the five year starting from 2012/13 to 2016/17. The table shows that in the year 2012/13, the ratio was 11.59 percent. For the year 2013/14, ratio was slightly decline to 11.15 percent and for the year 2014/15, the ratio was 13.33 percent increase from previous year. In the year 2015/16, the ratio was 12.66 percent from previous year. The final year of study periods, the ratio was 14.69 percent which increasing trend. The overall average for the study period is 12.68 percent.

The table shows that S.D and C.V. of EBL 1.26 and 9.94 is lower than NIBL 1.34 and 10.7. S.D and C.V show the total risk and per unit risk measure.

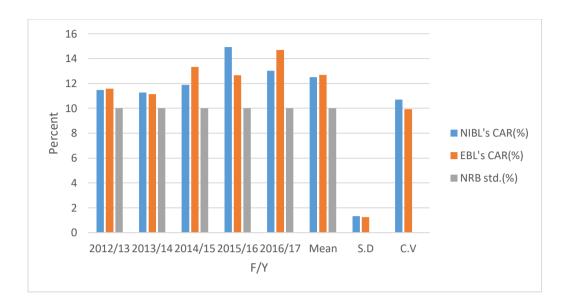


Figure 4.1 Capital Adequacy Ratio of NIBL and EBL

From the table 4.1 and figure 4.1 express the combine presentation of the capital adequacy ratios of NIBL and EBL Bank for the five year study periods. The ratio of NIBL and EBL was fluctuating for the whole periods 2012/13 to 2016/17. The standard deviation of both Bank's ratios also shows that the NIBL has less consistency in the capital adequacy ratio than that of EBL but the overall average ratios EBL is greater than that of NIBL. Both banks has maintained the capital adequacy ratios as directed by the NRB. NRB has prescribed 10 percent total capital ratios under the Basel II.

# 4.1.2 Analysis of Cash Reserve Ratio (CRR)

Cash reserve ratio is one of the control variable used in analyzing effect of credit risk on the performance of banks. Traditionally, cash reserve ratio (CRR) has been one of the monetary tools in the hands of the central bank. Cash reserve ratio (CRR) is a specified minimum fraction of the total deposits of customers which commercial banks have to hold as reserves with the central bank. By changing CRR, the central bank can control the amount of liquidity. NRB has fix a minimum standard of cash reserve ratio 6 percent of commercial banks. It is measured as the ratio of reserve requirement with central bank to total deposits of customers.

Cash Reserve Ratio (CRR) =  $\frac{\text{Reserve Requirement with the Central Bank}}{\text{Total Deposits of Customers}}$ 

4.2	Cash	Reserve	Ratio	of NIBL	and EB	ſ,

Year	NIBL,s CRR(%)	EBL,s CRR(%)	NRB Std.(%)
2012/13	16	15.19	6
2013/14	19.2	16.91	5
2014/15	12	24.27	6
2015/16	7.2	16.61	6
2016/17	10.5	16.52	6
Mean	12.98	17.9	6
S.D	4.2	3.24	0
C.V	32.35	18.1	0

Source: Annual Reports of NIBL and EBL Bank

The table 4.2 is the summary of analysis of cash reserve ratios of NIBL for the five year study period. The ratio of NIBL for the year 2012/13 was 16 percent whereas that for the year 2013/14 ratios was increase 19.2 percent. The ratios for the year 2014/15 to 2016/17 was 12, 7.2, and 10.5 percent decrease from previous year in the final year ratio was increasing trend from the previous year ratio. The overall average for the five year study period is 12.98 percent.

The table 4.2 also reveals the status of EBL cash reserve ratios for the five year starting from 2012/13 to 2016/17. The table shows that in the first three year 2012/13 to 2014/15 ratios was increasing trend 15.19, 16.91 and 24.27 percent. For the year 2015/16 and 2016/17 the ratios was slightly different 16.62 and 16.52 percent the overall average for the study period is 17.90 percent.

The table also show that S.D and C.V of NIBL 4.2 and 32.35 is higher than 3.24 and 18.1. S.D and C.V show the total risk and per unit risk measure.

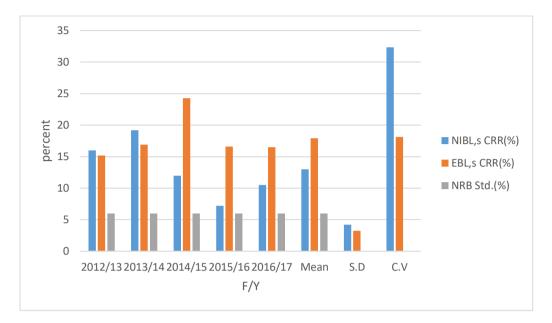


Figure 4.2 Cash Reserve Ratio (CRR) of NIBL and EBL

From the figure 4.2 express the combine presentation of the cash reserve ratios of NIBL and EBL for the five year periods. The ratios of both banks was fluctuating for the whole periods increasing and decreasing trend graph also shows that's. NIBL has less consistency in the cash reserve ratios than that of EBL. Both banks has maintained the cash reserve ratios as directed by the NRB. The bench mark by NRB 6 percent for the commercial bank. Both bank has maintained by the over the cash reserve ratio.

## **4.1.3** Analysis of Non-performing Loan (NPLR)

All loans which have crossed the due are called Non-performing loan. In other words, sub-standard loans, doubtful loans, bad loans and restructured or rescheduled loans ar non-performing loans. Any portion of non-performing loans to total loans helps to determine the quality of assets of any bank. This ratio is calculated by dividing the NPLs by total Loans.

Non-performing Loan Ratio (NPLR) = Non-performing loan

Gross Loans and Advance

Table 4.3 Non-performing Loan Ratio of NIBL and EBL

Year	NIBL's NPLR(%)	EBL's NPLR(%)
2012/13	1.91	0.62
2013/14	1.77	0.97
2014/15	1.25	0.66
2015/16	0.68	0.38
2016/17	0.83	0.25
Mean	1.29	0.58
S.D	0.49	0.25
C.V	37.98	43.1

Source: Annual Reports of NIBL and EBL Bank

The table helps to understand the portion of Non-performing loan of NIBL. The table shows the summary of NIBL NPLs ratios. The ratio was the biggest i.e. 1.91 percent in the year 2012/13 and the smallest i.e. 0.68 percent in the year 2015/16. It was 1.77 and 1.25 percent in the year 2013/14 and 2014/15 respectively. 0.83 percent was the ratio for 2016/17 maintaining the average ratios of 1.29 percent for the whole years.

The table also shows the Non-performing loan of EBL for the five year period. In the year 2013/14 the ratio was biggest i.e. 0.97 percent and the smallest i.e. 0.25 percent in the year 2016/17. It was 0.62 and 0.66 percent in the year 2012/13 and 2104/15 respectively. 0.38 percent was the ratio for 2015/16 maintaining the average ratios of 0.58 percent for the whole year.

The average ratios of NIBL is greater than that of EBL. Higher ratios indicates the worsening position of the bank. NIBL bank should grant loan in the affordable area. Its NPLR shoes the ineffectiveness of banks in recovering loan and providing in secure sector. In the year wise comparison, we see that in the first two years the ratios of both bank NIBL and EBL is higher but after than that ratios of goes down.

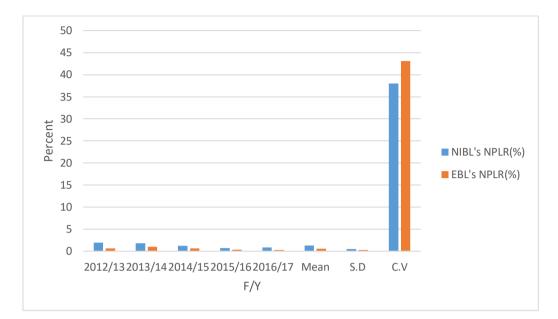


Figure 4.3 Non-performing Loan Ratio of NIBL and EBL

The figure 4.3 also helps to understand the status of selected bank's non-performing loans to total loan. The diagram shows the inconsistency of NIBL rather than EBL regarding the non-performing loans. The Coefficient of variation of NIBL was higher than that of EBL in the study period. Non-performing loan ratio is the major indicator of commercial banks' credit risk.

## 4.1.4 Analysis of Cost per Loan Assets Ratio (CLA)

Cost per loan assets is the average cost per loan advance to customer in monetary term. Cost per loan assets is calculated dividing total operating costs by total amount of loans. Thus, cost per loan assets is the considered as a determination of the bank's performance and is viewed as an indicator of credit risk.

Table 4.4 Cost per Loan Assets Ratio of NIBL and EBL

Year	NIBL's CLA(%)	EBL's CLA(%)
2012/13	1.22	4.79
2013/14	1.13	4.71
2014/15	1.01	3.39
2015/16	0.95	2.75
2016/17	0.91	3.39
Mean	1.04	3.91
S.D	0.12	0.79
C.V	11.15	20.2

Source: Annual Reports of NIBL and EBL Bank

The table 4.4 is the analysis summery of loan cost per loan assets ratio of NIBL and EBL for five year periods. The ratio of NIBL was the higher i.e. 1.22 percent in the year 2012/13 and then after the ratios was slightly goes down 1.13, 1.01, 0.95 and 0.91 percent in the year 2013/14, 2014/15, 2015/16 and 2016/17 respectively. The average ratio of 1.04 percent for five year periods.

The table also shows the CLA of EBL for the five year periods. EBL in the year 2012/13 shows the higher ratio i.e. 4.79 percent and then after the ratios goes down 4.71, 3.39 and 2.75 percent in the year 2013/14, 2014/15 and 2015/16 respectively. The ratio was increase 3.39 percent in the year 2016/17 from previous year ratios. The overall average ratio for the five year periods is 3.91 percent.

The average ratio of EBL is greater than of NIBL. Higher ratio indicate the worsening position of the bank CLA. EBL cost per loan assets performance shows the ineffectiveness. We see that in the both bank first 2 year the ratios is higher but after that was ratios of banks goes down. S.D and C.V of EBL is higher than NIBL.

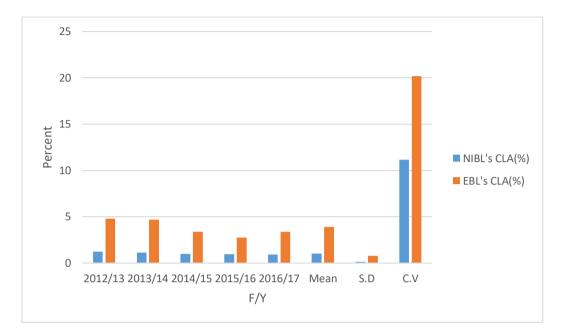


Figure 4.4 Cost per Loan Assets Ratio (CLAR) of NIBL and EBL

The figure 4.4 also help to understand the status of selected banks cost per loan assets ratio. The diagram shows the greater inconsistency of EBL regarding the CLA ratios. The coefficient of variation of EBL was greater than that of NIBL in the five year study periods.

# 4.1.5 Analysis of Leverage Ratio (LR) of NIBL and EBL

Leverage Ratio help to test of long term solvency position of a firm. The ratio indicators the relationship between long term debt and total equity. It shows the degree of related and protection of total capital against long term or total debt.

Leverage Ratio (LR) = 
$$\frac{\text{Total Debt}}{\text{Total Equity}}$$

Table 4.5 Leverage Ratio of NIBL and EBL

Year	NIBL's LR(%)	EBL's LR(%)
2012/13	9.42	12.62
2013/14	9.87	11.91
2014/15	9.64	13.39
2015/16	6.97	12.38
2016/17	7.06	9.09
Mean	8.59	11.88
S.D	1.45	1.65
C.V	16.87	13.86

The table 4.5 is the analysis of Leverage Ratio of NIBL. The table show the five year summary of NIBL LR ratios. The ratio of NIBL was 9.42 in the year 2012/13 and is further increased to 9.87 percent in the consequently year. After that it decreased to 9.64 percent and 6.97 percent in the year 2014/15 and 2015/16 then that ratio was slightly increased 7.06 in the year 2016/17. The overall average ratios was 8.59 percent five year periods.

This table shows that in the year 2012/13 the LR of EBL bank, was 12.62 percent whereas it was 11.91 percent slightly smaller than previous year, in the year 2013/14. It was further increased to 13.39 in the year 2014/15. After that it decrease 12.38 and 9.09 in the year 2015/17 and 2016/17. Its average overall ratio was 6.82 percent.

The average ratio of EBL is greater than of NIBL. Higher ratio indicate the well position of the bank LR. Leverage ratio show the long term solvency of the firm.

The table show that S.D of EBL 1.65 is higher than NIBL 1.45 and C.V of EBL 13.86 is lower than NIBL 16.87 both result is different.

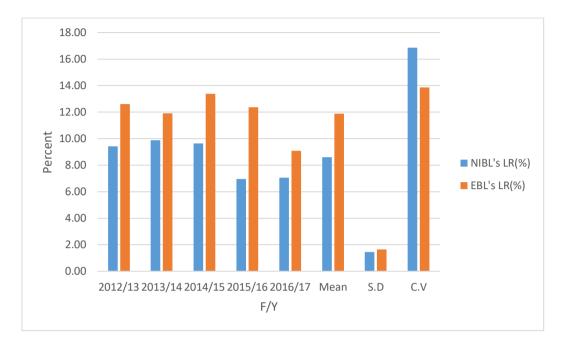


Figure 4.5 Leverage Ratio (LR) of NIBL and EBL

The figure 4.5 also help to understand the status of selected banks Leverage Ratio. The diagram shows the greater inconsistency of NIBL regarding the LR ratios. The coefficient of variation of NIBL was greater than that of EBL in the five year study period. Leverage ratio show the long term position of FIs.

### **4.2 Earning Capacity**

Earning is a yardstick indicating the management, shareholders and depositors to evaluate the performance of the banks, sustainability of earnings and to forecast growth of the bank. The success of the bank heavily relies upon the efficiency of its management to derive the bank to earn good profits. Net profit is the major indicator to measure such profits. A required level of profit is necessary for the firm growth and survival in the competitive environment. Profitability is vitally more important for assuring that a bank stay in business or activity. Net profit of any bank decreases resulting from high non-performing loans, lack of avenues for earning fee based income and operating in-efficiencies.

#### 4.2.1 Analysis of Return on Assets Ratio (ROA)

The ratio measure earnings per unit of assets. In other word this is the reward for the total assets generated by deploying them in business activities. Higher level of return on assets is considered as the better productivity of those assets. This ratio can be derived by dividing the net income by total assets of any institutions. The following equation is used to calculate the return on assets.

Here the researcher will apply this ratio to the two selected banks performance analysis. The following table and diagram help to better understand, analyze and interpret about NIBL and EBL Bank.

Table 4.6 Return on Assets of NIBL and EBL Bank

Year	NIBL's ROA(%)	EBL's ROA(%)
2012/13	2.6	2.39
2013/14	2.3	2.25
2014/15	1.9	1.85
2015/16	2	1.62
2016/17	2.1	1.72
Mean	2.18	1.96
S.D	0.25	0.3
C.V	11.47	15.3

Source: Annual Reports of NIBL&EBL Bank

The table 4.6 evaluate the return on assets of NIBL and EBL bank for the five year study period. The ratio of NIBL was the higher i.e. 2.6 percent in the year 2012/13 and then after the ratios was slightly goes down 2.3 and 1.9 percent in the year 2013/14 and 2014/15 respectively. The ratio was increase 2.0 and 2.1 percent in the year 2015/16 and 2016/17 from previous year the average ratios of 2.18 percent for five year study period.

The table also show the ROA of EBL for the five year periods. EBL in the year 2012/13 shows the higher ratio i.e. 2.39 percent and then after the ratios goes down 2.25, 1.85,

and 1.62 percent in the year 2013/14, 2014/15 and 2015/16 respectively. The ratios was slightly increase 1.72 percent in the year 2016/17 from previous year ratio. The overall average ratio for the five year periods is 1.96 percent.

The average ratio of NIBL is greater than of EBL. Higher ratio indicate the more efficient operating of management. The ratio indicates the ability of generating profit per rupees of total assets. S.D and C.V also show the lower risk than EBL bank.

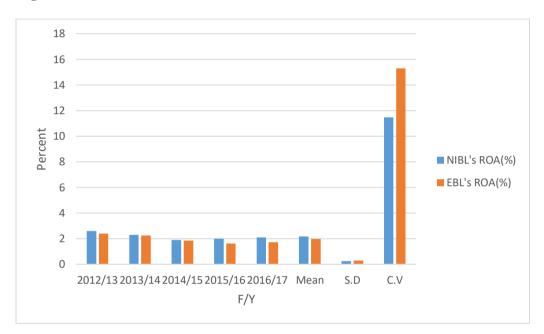


Figure 4.6 Return on Assets (ROA) of NIBL and EBL

The figure 4.6 also help to understand the status of selected banks ROA ratio. The diagram shows the NIBL ratios slightly higher. The coefficient of variation of NIBL was greater than that of EBL in the five year study periods. ROA Show the efficient operating of management.

#### 4.2.2 Analysis Return on Equity of NIBL and EBL

The return on equity measures the profitability of equity funds invested in the firm. This is the income per unit of equity fund invested by the investor. Higher ratio implies that the better quality of the FIs. This ratio is directly or indirectly affects the price of shares of any specific institutions. Higher return on equity pays more in the market. The following equation is used to calculate ROE of any institution.

The following table and diagram help to describe the position of ROE of NIBL and EBL bank.

Table 4.7 Return on Equity (ROE) of NIBL and EBL.

Year	NIBL's ROE (%)	EBL's ROE(%)
2012/13	31.7	30.47
2013/14	27.6	28.39
2014/15	24.8	22.84
2015/16	26	20.32
2016/17	19.1	17.38
Mean	25.84	23.88
S.D	4.58	5.47
C.V	17.73	22.91

Source: Annual Report of NIBL and EBL Bank

The table 4.7 is the analysis tabular presentation of ROE of NIBL and EBL Bank for the study period. Return on equity of NIBL is 31.7 percent for the first year and start decline to two year was 27.6 and 24.8 percent. In the fourth year the ratio was slightly increase to 26 percent from previous year and fifth year ratio was decline to 19.1 percent. The average ROE of NIBL was 25.84 percent in those years.

Return on equity of EBL is 30.47 percent for the first year and start to decline next four year slightly 28.39, 22.84, 20.32 and 17.38 percent ratios was goes down decreasing trend. The overall ROE of EBL was 23.88 percent five year period.

The table reveal that the position of NIBL bank is superior to EBL. The ratios of NIBL were higher than that EBL in average. To get the profitability as that of NIBL, NIBL should manage the activity perfectly.

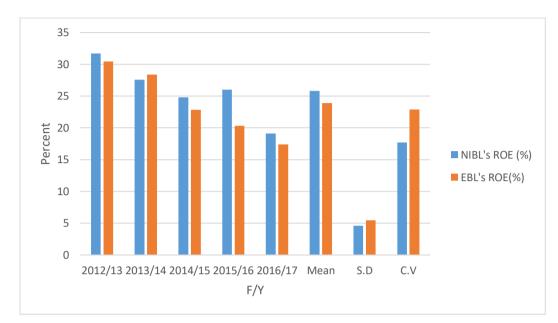


Figure 4.7 Return on Equity (ROE) of NIBL and EBL

The figure 4.7 also help to understand the status of selected banks ROE ratio. The diagram shows the NIBL ratio higher. The coefficient of variation also lower than that NIBL in the five year study periods. Higher ratio implies that the better quality of the FIs.

#### 4.3 Correlation Co-efficient (r)

Correlation analysis deals to determine the degree of relationship between two or more variables. In correlation analysis, only one variable is treated as dependent and one or more variables are treated as independent. The correlation coefficient between two variables X and Y, denoted by r, is a numerical measure of linear relationship between them.

Table 4.8 Pearson Coefficient Correlation Analysis with ROA

	Capital	Non-	Cost per	Cash	Leverage
Variable	Adequacy	performing	Loan	Reserve	Ratio
	Ratio	Loan Ratio	Assets	Ratio	
NIBL	-0.53	0.78	0.85	0.68	0.39
EBL	-0.77	0.72	0.98	-0.28	0.30

The table 4.8 shows that the coefficient of correlation with ROA and effect of credit risk management indicators. Capital adequacy ratio show the negative relationship with ROA Both bank NIBL and EBL (-0.53 and -0.77). Non-performing loan ratio show the positive relationship with ROA (0.78 and 0.72). In the cash reserve ratio of NIBL was show the positive relationship and EBL was show the negative relationship. Cost per loan assets was the correlation is positive relation with ROA (0.85 and 0.95) and also leverage ratio of both bank show positive correlation with ROA (0.39 and 0.30).

#### 4.4 Major Findings

All commercial banks are required to follow regulations of center bank regarding different statutory issue of risk management. After the analyzing the one joint venture bank Everest Bank Limited and another Nepal Investment Limited bank of Nepal from the financial and statistical aspects, the major findings of the study are described below.

- 1. The capital adequacy ratio of EBL (12.68) is higher than NIBL bank (12.52), it states that capital adequacy ratio position of EBL higher than NIBL bank. Both bank was maintained NRB standard.
- 2. Non-performing loan ratio reflects the banks credit quality and is considered as an indicator of credit risk management. The mean of NPLR of EBL (0.58) is lower than that NIBL bank (1.29) and also risk is lower EBL than NIBL bank. EBL was maintained NPLR better than NIBL bank, so the NPLR show negative effect of the bank performance.

- 3. The mean of cost per loan assets ratio of EBL (3.81) is higher than that NIBL bank (1.04) and standard deviation lower NIBL than EBL. CLA was better maintain by the EBL than NIBL if the CLA ratio was increased bank performance will also increase.
- 4. Cash reserve ratio is one of the control variable used in analyzing effect of credit risk on the performance of banks. The mean of CRR of EBL (1.04) is higher than NIBL bank (3.81). It show that EBL was the lower the money supply than that NIBL and both bank have maintain the NRB standard. If the bank can't meet the standard as prescribed by NRB, it will be charged and if it is very high then it can loss opportunity gain. Lower level of ratio indicates liquidity crunch and very high level of CRR indicates idle money which do not generate any income.
- 5. The mean of leverage ratio of EBL (11.88) is higher than that NIBL (8.95) and standard deviation is lower NIBL than EBL. EBL was better maintain by leverage ratio than NIBL. So the leverage ratio show the long term solvency of the bank performance and show the relationship between debt and equity.
- 6. Return on Assets of NIBL range from 1.9 to 2.6 percent with average 2.18 percent but it 1.62 to 2.39 percent for EBL with average 1.96 percent and also standard deviation is lower NIBL than EBL.
- 7. ROE of NIBL bank is range 19.1 to 31.7 percent with average 25.84 percent but it is 17.38 to 30.47 percent for NIBL with range 23.88 percent. This concludes that NIBL has more profitability than EBL.
- 8. The correlation coefficient between ROA and capital adequacy both bank EBL and NIBL was negative correlation there is inverse relationship ROA and CAR.
- 9. The result indicate that bank performance (ROA) is positively correlated with non-performing loan ratio. The result implies that as the value of non-performing loan ratio increase the performance of bank will decrease. Both bank was positive correlation (0.78 and 0.72).

10. The bank performance (ROA) is positively correlated with cost per loan assets which implies that as the value of cost per loan assets increase. The performance will also increase both bank NIBL 0.85 and EBL 0.95 was positive. EBL bank was near to perfectly positive correlation 0.98 to +1.

#### CHAPTER-V

#### CONCLUSIONS

#### 5.1 Summary

The main purpose of this research is to investigate the impact of credit risk on performance, one is joint venture bank Everest Bank Ltd. and another Nepal Investment Bank Ltd. which is fully promoted by Nepalese investors only. Though identifying the credit risk management and financial performance indicators, and to find an empirical evidence of the degree to which credit risk management affects banks' financial performance and how the banks can enhance their financial performance ratios. The study based on the secondary data for the study period of 2012/13 to 2016/17 and the data obtained were analyzed using various financial tools.

#### 5.2 Conclusion

Based on the findings the following conclusions have been drawn

- 1. The study of Capital adequacy ratio indicate that the sampled commercial bank have poor credit risk management practices. This is the evidenced by the negative result of capital adequacy ratio of both bank EBL and NIBL. The negative result of capital adequacy ratio indicates that capital adequacy ratio could not be regarded as the influencing variable for bank performance. NIBL and EBL maintained the adequate and sufficient total capital fund prescribed by NRB.
- 2. This research indicate that Non-performing loan /gross loans ratio of NIBL is higher than that EBL Higher the ratios indicate the worsening position of the bank. It is employed to estimate the effectiveness and suitability of a banks' credit risk management. Amazingly the ratio has a positive effect. The empirical result show a positive effect of non-performing loans on bank profitability.
- 3. Cost per loan assets average of EBL was higher than NIBL higher the ratios indicate the position show the bank. Cost per loan assets has positive effects on the bank performance. The positive coefficient of CLA indicates the efficiency

in distributing loans to customer and collecting level of interest revenue as compare to interest expenses and other operating cost.

- 4. The ROA of NIBL bank stronger then EBL bank. It means that Nepal Investment Bank Limited has the better productivity of assets than joint venture bank Everest Bank Limited.
- 5. The average return on equity of NIBL is higher than EBL bank. It means that Nepal Investment Bank Limited has the better productivity of assets than joint venture bank Everest Bank Limited.
- 6. Cash reserve ratio of EBL is higher than that NIBL bank. It show that EBL was the Lower the money supply than that NIBL. Lower level of ratio indicate liquidity crunch and very high level of CRR indicate idle money which do not generate any income.

#### 5.3 Recommendation

The following the recommendations and suggestion are made based on conclusions to overcome the weakness as regard to financial performance of NIBL and EBL Bank.

- Both banks have maintained adequate capital to meet the NRB standard for probable risk arising from market, operation and credit expansion. Thus, Nepalese commercial banks should follow the prevailing NRB Directive as well as Basel II accord while Manage credit Risk
- 2. This research indicate that Non-performing loan /gross loans ratio of NIBL is higher than that EBL. EBL was better maintain NPL than NIBL so NIBL need to be maintain quality management of NPL it is employed to estimate the effectiveness and suitability of a banks' credit risk management.
- 3. Cost per loan assets (CLA) coefficient exerts most significant positive effect on the performance across the banking firms. Based on the findings of this study, EBL has better maintained cost per loan assets than that NIBL. It is

recommended that NIBL maintain the quality (CLA) of enhance their capacity in credit analysis.

- 4. Cash reserve ratio of EBL is higher than that NIBL bank. It show that EBL was the Lower the money supply than that NIBL. The result of the study reveals that cash reserve ratio affect the performance banks. It is recommended that EBL maintain their liquidity position of bank.
- 5. The ROA of NIBL bank stronger then EBL bank that indicate NIBL has the better productivity of assets then Everest Bank Ltd. It is recommended that EBL need to be increase their productivity and assets quality.

The result in the study therefore, suggested the need for strong credit risk and loan service process management must be adopted to keep the level of NPL as low as possible which will enable to maintain the high performance (profitability) of both banks.

Further, this study is also hoped to be useful to academicians a source of knowledge for further research.

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# Appendices

Appendix 1. Total Capital Fund to Total Risk Weight (Amount in Rs.) (000)

	Total Capital Fund	Total Risk Weight	
Year	(NIBL)	(NIBL)	Ratio (%)
2012/13	7813075	67995228	11.49
2013/14	8993849	79776912	11.27
2014/15	11754294	98745831	11.90
2015/16	18182544	121867349	14.92
2015/17	20367203	156448460	13.02

Year	Total Capital Fund (EBL)	Total Risk Weight (EBL)	Ratio (%)
2012/13	5777682	49834045	11.59
2013/14	6328487	56780162	11.15
2014/15	8457023	63451114	13.33
2015/16	10094804	79711762	12.66
2015/17	13063702	88929577	14.69

# Appendix 2. Total debt to Total Equity Ratio (Amount in Rs.) (000000)

Year	Total debt EBL	Total equity EBL	Ratio (%)
2012/13	60914	4827	12.62
2013/14	64988	5457	11.91
2014/15	92262	6890	13.39
2015/16	105371	8514	12.38
2016/17	104966	11544	9.09

Year	Total debt NIBL	Total equity NIBL	Ratio (%)
2012/13	66132	7020	9.42
2013/14	78248	7925	9.87
2014/15	94539	9806	9.64
2015/16	113495	16287	6.97
2015/17	132111	18707	7.06

Appendix 3. Coefficient of Correlation (r) with ROA

Year	NIBL's ROA(%)	NIBL's CAR(%)
2012/13	2.60	11.49
2013/14	2.30	11.27
2014/15	1.90	11.9
2015/16	2.00	14.92
2016/17	2.10	13.02
CORREL.	-0.53	

Year	EBL's ROA(%)	EBL's CAR(%)
2012/13	2.39	11.59
2013/14	2.25	11.15
2014/15	1.85	13.33
2015/16	1.62	12.66
2016/17	1.72	14.69
CORREL.	-0.77	

Year	NIBL's ROA(%)	NIBL's NPLR(%)
2012/13	2.60	1.91
2013/14	2.30	1.77
2014/15	1.90	1.25
2015/16	2.00	0.68
2016/17	2.10	0.83
CORREL.	0.78	

Year	EBL's ROA(%)	EBL's NPLR(%)
2012/13	2.39	0.62
2013/14	2.25	0.97
2014/15	1.85	0.66
2015/16	1.62	0.38
2016/17	1.72	0.25
CORRE.	0.72	

Year	NIBL's ROA(%)	NIBL's CLA(%)
2012/13	2.60	1.22
2013/14	2.30	1.13
2014/15	1.90	1.01
2015/16	2.00	0.95
2016/17	2.10	0.91
CORREL.	0.85	

Year	EBL's ROA(%)	EBL's CLA(%)
2012/13	2.39	4.79
2013/14	2.25	4.71
2014/15	1.85	3.39
2015/16	1.62	2.75
2016/17	1.72	3.39
CORREL.	0.98	

Appendix 4.
5 YEARS PRINCIPAL INDICATORS ON NIBL.

Particulars	Indicators	(F/Y	(F/Y	(F/Y	(F/Y	(F/Y
		069/70)	070/71)	071/72)	072/73)	073/74)
1. Percent of Net Profit/ Gross Income	Percent	28.3	27.8	28.1	31.0	28.1
2. Earning Per Share	Rs.	46.2	40.7	30.9	29.3	29.3
3. Market Value Per Share	Rs.	784	960	704	1,040	770
4. Price Earning Ratio	Ratio	17.0	23.6	22.8	35.5	26.3
5. Dividend (including bonus) on share capital	Percent	35.0	40.0	34.7	41.0	40.0
6. Cash Dividend on Share Capital	Percent	25.0	25.0	1.7	21.0	25.0
7. Interest Income/ Loan & Advances	Percent	12.3	10.8	9.0	8.4	9.0
8. Staff Expenses/ Total operating Expenses	Percent	42.4	44.8	45.6	46.4	48.8
9. Interest Expenses on Total Deposit and Borrowings	Percent	4.8	4.0	3.4	2.8	3.7
10.Exchange Gain/ Total Income	Percent	5.3	6.6	6.6	6.5	5.6
11.Staff Bonus/ Total Staff Expenses	Percent	72.1	63.2	58.7	65.1	67.3
12.Net Profit/Loan and Advances (Gross)	Percent	4.0	3.6	2.9	2.9	2.9
13.Net Profit/Total Assets	Ratio	2.6	2.3	1.9	2.0	2.1
14.Total Credit/Deposit	Percent	76.4	72.4	74.7	80.1	84.9
15.Total Operating Expenses**/ Total Assets 16.Adequacy of Capital Fund on Risk Weighted As- sets	Percent	1.22	1.13	1.01	0.95	0.91
a. Core Capital	Percent	10.01	9.52	9.54	13.05	11.58
b. Supplementary Capital	Percent	1.97	1.75	2.36	1.87	1.44
c. Total Capital Fund	Percent	11.49	11.27	11.90	14.92	13.02
17.Liquidity (CRR)	Percent	16.0	19.2	12.0	7.2	10.5
18.Non-performing credit/ Total credit	Ratio	1.91	1.77	1.25	0.68	0.83
19. Base Rate	Percent	-	6.9	6.5	5.1	8.4
20. Weighted Average Interest Rate Spread	Percent	5.5	4.8	4.6	4.7	4.3
21.Book Net-worth	Rs. in '000	7,020,644	7,925,479	9,806,953	16,287,752	18,707,884
22. Total Shares (incl. proposed bonus shares)	No.	41,448,085	47,687,136	63,457,007	87,066,118	106,264,357
23.Total Staffs	No.	910	942	969	1,005	1,187
24.Book Value Per Share	Rs.	169	166	155	187	176
25. CD Ratio (LCY Deposit with Equity)	Percent	74.8	71.9	72.8	76.8	77.6
26. Return on Paid-Up Capital (opening)	Percent	50.8	46.8	41.1	40.2	35.8
27. Return on Shareholders' Fund (Opening)	Percent	31.7	27.6	24.8	26.0	19.1
28. Market Capitalization (in Billion)	Rs.	32.5	45.8	44.7	90.5	81.8
29. Total number of Branches	No.	44	44	46	46	61
30. Total number of ATMs	No.	73	80	82	82	98

Source: Annual Report of NIBL

Appendix 4.
5 YEARS PRINCIPAL INDICATORS ON EBL.

	Particulars	Indicator	2012/13	2013/14	2014/15	2015/16	2016/17
1	Net Profit/Total Income	%	26.45	26.63	27.20	28.88	25.82
1	Per Share Earning (after tax income)	Rs.	91.88	86.04	78.04	65.97	44.32
3	Market PricePer Share	Rs.	1591	2631	2120	3385	1353
4	Price/Earning Ratio	Times	17.32	30.58	27.17	51.31	30.53
5	Dividend on Share-Bonus Share	%	10	12	30	70	33
6	Cash Dividend	%	50	50	5	_	_
7	Interest Income/Loans & Advances	%	10.49	10.11	8.76	6.94	8.19
8	Employee Expenses/Total Operating Expense	s %	14.66	15.44	20.46	22.35	19.29
9	Interest Expenses/Total Deposits & Borrowi	ng %	3.72	3.61	2.52	1.93	3.13
10	Exchange Income/Total Income	%	0.08	0.06	_	_	_
11	Staff Bonus/Total Employee Expenses	%	45.49	43.29	32.69	36.21	32.45
12	Net Profit /Loans& Advances	%	3.33	3.20	2.84	2.51	2.56
13	Net Profit/Total Assets	%	2.39	2.25	1.85	1.61	1.72
14	Total Loans & Advances/Total Deposits	%	76.57	78.01	66.63	73.52	2.32
15	Total Operating Expenses/Total Assets	%	4.79	4.71	3.39	2.75	3.93
16	Capital Adequacy Ratio:						
	a) CoreCapital	%	9.31	9.35	10.44	10.34	12.72
	b) Supplementary Capital	%	2.28	1.96	2.89	2.33	1.97
	c) Total Capital Funds	%	11.59	11.31	13.33	12.66	14.69
17	Cash ReserveRatio (CRR)	%	15.19	16.91	24.27	16.61	16.52
18	NPAs/Total Loans & Advances	%	0.62	0.97	0.66	0.38	0.25
19	BaseRate	%	7.16	6.40	6.14	4.86	7.68
20	Weighted Average Interest RateSpread	%	5.68	5.69	4.76	4.89	4.48
21	Book Net Worth (Rs. in Lacs)	Rs.	46678	53371	67704	83941	114646
	Total Shares	Number	16 <b>0</b> 1264	18012391	20173877	26226041	45264269
	Total Employee	Number	643	696	696	739	748
22	Others						
	- Per Employee Business (Rs. in Lakh)	Rs.	1585	1588	1989	2201	2318
	- Employee Expenses/Total Income	%	8.31	8.80	11.88	11.68	11.36

. Source: Annual Report of EBL