CHAPTER – I
INTRODUCTION

1.1 General Background of the Study

Investment policy of the financial institutions, especially banks have long term impact not only on their growth and sustainability but also on the economic development of the country. Above all in today's scenario investing is a very risky job, hence to produce a safe and profitable investment; bank must follow a sound Investment policy.p

As we know that one of the main objectives of the commercial banks is to provide the fund needed to the community, i.e. lending service to the community. To make their lending service more effective, the commercial banks formulates sound investment/lending policies which eventually contributes to the economic development of the bank and further contributes to the overall development of the country. As we know that any action proceeded by plans-made are best implemented. Likewise, sound policies help the commercial banks maximize its quality and quantity of its investment and thereby, achieve their focused desired objective. Investment management of a bank is guided by the Investment policy adopted by the bank which helps then in the investment operation of the bank to be efficient and profitable by minimizing the inherent risk. Investment policy comprises the set of guidelines and procedures that direct the long-term management of the investment. Without a clear vision of why the investment are being made and how the goals are to be achieved; it is likely to pursue inefficient approaches which leads to unsatisfactory results. An investment needs a plan that directs the efforts made, and that plan is the Investment policy. However, the fundamental principles of the commercial banks like the volume and quality of deposit, loan, and investment are to be considered while making the Investment policy. Besides the formulation of sound lending policies for all banks should have adequate and careful consideration over the community needs, size of loan

portfolio, character of loan, credit worthiness of borrower and asset pledged to security borrowing, interest rate policy, etc.

It is believed that the soundness of a bank is reflected in the distribution of its funds on different types of assets. A good banker is one which follows a profound Investment policy which brings maximum profit to shareholders and provides maximum security to the depositors. There are no any consistent rules as in to determine the portfolio of a bank. However there may be local conditions in which the bank operations will necessarily have a acceptance to its Investment policy. And apart from the local conditions, a bank fundamentally is governed by three important principles while formulating its Investment policy. The guiding principles of the Investment policy of a commercial bank are liquidity, profitability and security; these three attributes are inter-related and any bank cannot afford to sacrifice one in favor of the other.

Every commercial bank has its Investment policy to guide them on their investing operation. The basic factors that will determine the objectives of a bank's Investment policy are its income, liquidity needs and the management's willingness to trade liquidity for greater income opportunities along with the degree of risk associated. Formulation of an Investment policy must give awareness about the entire risk exposure that the bank management is willing to assume. One of the acceptable methods of reducing risks in the investment portfolio of a commercial bank is by diversification – a basic and important rule of any Investment policy. Risk cannot be completely avoided by diversification, but they can be reduced. Besides the Investment policy of a bank should be revised occasionally and modified as economic conditions changes.

The influence on the cost and availability of credit in the economy heavily relies on the loan and Investment policy of the commercial banking system. Less exclusively yet significantly, the effectiveness of debt management and open market operations in influencing the terms of credit to private borrowers has been linked to the responsiveness of commercial banks to changes in market prices and

yields to government securities. In any commercial banks we find that the deposit relationship of a loan customer is a primary consideration in determining the cost and availability of bank credit to that customer. Here the discussion is based in terms of the broader analytical categories of yield, risk, and liquidity applicable to any investor. But in case of a commercial bank, it neglects the role of deposit as the principle source of an individual bank's power to lend an invest, and this leads to the significance of the deposit relationship for the individual bank and its influence on broader issues as the cost and availability of the bank credit which totally depends upon the bank's Investment policy. Hence the studying devoted to "The Investment policy of Commercial Banks" is so important.

1.1.1 Investment Policy

Investment Policy in simple words is the proper management of any wealth to maximize the value of it or to obtain the favorable return with minimal risk considering the protection of the investment from inflation, taxes, and other factors. It ensures efficiency on the allocation of fund to achieve the materialistic and economic well-being of the society. Inappropriate or say unsuitable investment policy and inadequate knowledge on it usually creates dilemma to the investors on selection of an optimal investment area. Investment policy basically involves the determining of the investors' objectives and the amount of invest -able fund available. Investment is always related with risks and returns. Making money alone cannot be an appropriate objective in itself; the objective should focus on making decent return by recognizing the possible losses. Therefore investment should state in terms of both risk and return. We can say that there is a positive relation between risk and return for sensible investment strategies, and the Investment policy concludes with the identification of the potential categories of financial assets for consideration in the ultimate portfolio.

Investment policy is one aspect of the overall spectrum of policies that guides any firm in its investment operation. A sound and liable Investment policy can be effective for the economy to attain the economic objectives directed towards the

acceleration or the pave of the development of the financial aspect of the economy and country's economy as a whole. A good Investment policy attracts both borrowers and lenders which enhances the volumes and quality of the deposit, loan and investment.

From the above explanation we can say that Investment policy is an important ingredient for the overall economic development. In this regard, the commercial banks also formulate their investment policies which drive to achieve the priority of the commercial sector along with their needs in the context of the whole country's economic development.

1.2 Profile of Sample Bank

In this chapter it has been discussed about the profiles of concerned banks. These profiles are related to the established objectives development, capital structure, investment policy & sector and the facilities granted by the concerned banks.

a. Bank of Kathmandu

Bank of Kathmandu Limited was established in A.D. march ,1995 in collaboration with the Siam commercial Bank PLC, Thailand under the company Act. The Siam commercial Bank has diluted and reduced its equity to 25% by selling 25% of Nepalese citizen in 1998 of its initial holding. The bank has 16 branches in operation. At the end of 2013 is Authorized capital and paid-up capital of Bank of Kathmandu Limited are Rs2000 million & Rs1684.4 million. Respectively & total branches of bank is 50. The establishment objective of this bank is:

1. To contribute the development of nation by mobilizing domestic saving and channeling them into productive areas.
2. To use the updated banking technology this reduces cost and provides better and reliable services.
3. To cooperate with foreign banks and money transfer agencies this makes the financial transaction easier, faster and reliable.

4. To contribute to the overall socio-economic development of Nepal.

This bank has provided variety of services which focuses and attracts many customers. BOK's depositors range from general public to business houses, NGO's, INGO's and institutional depositors. This bank has been providing various services targeted various people. Sajilo Bachat Khata, Griha Laxmi Bachat Khata, Kopila Bachat Khata, Mero Bachat Yojana are some few examples of the various services provided by the bank to its customer. The lending facility of BOK comprises many facilities like consumer loans, vehicle finance, educational loan, housing loan, festivity and personal loan.BOK has also targeted marginalized groups and the poorer people of the Nepalese society. It has established it's development credit unit which has already facilitated mid eastern western Nepal, Eastern Nepal.

BOK has a well developed correspondent relationship with over 190 banks globally to carry it's transactions worldwide conviniently.BOK also offers variety of remittance service like swift transfer ,demand draft, travelers cheque, cash management, money transfer via remitting agencies etc. The other services are safe deposit lockers, ATM/Debit card, gift cheque, utility bills payment, silver sale, thai visa fee payment facility.

b. Nabil Bank Limited

Nabil Bank Ltd. Formerly known as Nepal Arab Bank Ltd. was incorporated 11 May 1984 as the first foreign joint ventures bank in Nepal with the authorized capital of Rs. 100 million. It commenced its operation from 16 July, 1984 with the technical service assistance and 50% share of Dubai Bank Limited and remaining 50% shared among Nepal industrial development, Rastriya Beema Santhan, Nepal Stock Exchange Limited and Nepalese general public. The head office of NABIL bank is in Kathmandu. The main objective of this bank is to collected deposit, provide loan and provide modern banking services to the public. The promoters and the shareholding pattern of Nabil Bank Ltd. are NB (international) limited

50%, Nepal industrial Development Corporation 10%, Rastriya Beema Sansthan 9.67%, Nepal Stock exchange 0.33, General Public 30%, share capital of NABIL Bank Ltd. (end of 2013) is Authorized capital & paid up capital are Rs3100 million & Rs2436.8 million respectively. & total branches of bank is 49.

1.3 Statement of the Problem

In our country we see unequal distribution of income which is the main cause of less mobilization of money which thus creates less saving, inadequate capital formation and insufficient investment. Here we have large population comfortably living (satisfied with what they have) and do not have the amount to spare; so these people should be encouraged to save money and make some investment for their future.

The numbers of joint venture banks as well as financial institutions have been set up at a rapid rate after the adoption of economic liberalization policy of the Government of Nepal. However in today's context, where the commercial banks are mushrooming, the competition among them has been a tough job, where it collects lots of deposits with comparatively low investment opportunities. And due to less investment they happen to discourage their depositors by reducing the interest on deposit and increasing the minimum threshold balance-however nowadays the latter is diminishing instead used as the promotional tool to attract new depositors with minimal threshold balance. On the other hand, these banks seem to be granting much loan, advances and other facilities against insufficient collateral of their clients. Lack of sound knowledge about the financial risk, business risk and other risk leads to more unsecured loan and investment -which compels the bank towards liquidation and bankruptcy. Therefore appropriate Investment policy is the essence of all the joint venture banks, commercial banks and other financial institutions to deal with the cutthroat competition.

It is not just because of lack of potential clients or adequate deposit, but the problem here is about the profitable sector or opportunities to invest. Banking sector are not able to grow to their potentials, they are facing problems from the

external environment like unstable political, legal, economic and social scenarios in Nepal nowadays; and this leads to resulting insecurity towards any investment. For this reason also there should be a proper investment plans to be made concerning about its-how, where and when the investment is to be made.

Various policies launched by NRB may add advantage to the nation, but also providing unnecessary interference in the daily transaction of the commercial banks. Major problems in state owned commercial banks today are: overstaffing, corruption, cutthroat competition including the never ending offers it makes to attract the customers; which affects the Investment policy as well.

Moreover, this study will analyze the relationship of Investment policy and the deposit mobilization and the profit position of the banks. Specifically this study will make a modest attempt to analyze the Investment policy of selected commercial banks which relates to the investment function of the commercial banks of Nepal as a whole and also deals with the supporting issues like:

1. How efficient/reasonable are the commercial banks in Nepal-in accordance to their Investment policy?
2. What is the effect of the investment decision on the Total profit and GDP thereby?
3. What are the views and ideas of the financial executives and customers regarding the knowledge on the various aspects of the Investment policy adopted by the commercial banks today?
4. What is the relationship between the various important variables like deposit, loan and advances, total investments and the net profit of the selected banks?
5 What returns have been obtained by BOK & NABIL bank ltd. from investment and what is the investment loss provision?
6 What should the bank do for having optimum investment policy?

1.4 Objective of the Study

Investment is necessary for economic development of the country. This study attempts to assess the role and impact of Investment on economic development of the country.

The specific objectives of this study are as follows:

1. To study the relationship between Investment and Profitability of the bank.
2. To identify the investment in various sectors, i.e. in government securities, corporate shares and debentures and interbank lending.
3. To examine the return on investment in government securities, corporate shares and debentures and interbank lending.
4. To evaluate the provision for possible losses to total investment.
5. To compare investment policies of concerned banks and discuss the fund mobilization of sample bank.
6. To analyze the deposit utilization trend and its projection for five years of BOK & NABIL Bank Ltd.

1.5 Limitations of the Study

In the context of Nepal, data availability is the major problem for any purpose – that may be because of the poor document handling management or due to the wretched response from the concerned people when asked for any information.

This study is simply a partial requirement of MBS program, and the limitations faced while doing this study are as follows:

- Only available of the secondary data.
- The sample taken for the study may not represent the whole population of the commercial banks in Nepal.
- The study focuses only on investment aspect of banks' performance.
- Out of numerous affecting factors, only those factors related with investment policy are considered.

- This study deals with limited financial and statistical tools. Hence, the drawbacks and weakness of those tools are the limitations of the study as well.

1.6 Significance of the Study

As we know that the commercial banks are the tools of knowing the country's financial position and situations, the study of these banks BOK Ltd. & NABIL Bank Ltd.will be useful which provides information for the investment employees of financial institutions, trainees of banks, academic institutions policy makers etc. It also searches new investment opportunities satisfying the objectives like liquidity and profitability of commercial banks. It fulfills the gap on the study of Investment policy of BOK Ltd. and NABIL bank Ltd.

This study provides valuable information for the persons involved in financial institution and to the policy maker. This study also helps regulatory authority to find out liquidity management and investment portfolio system of commercial banks.

1.7 Organization of the Study

The whole study will be divided into five chapters.

Chapter I :-

This chapter deals with introduction. This includes background , Investment policy ,Profile of Sample Bank, statement of the problem, objectives of the study, limitation of the study and organization of the study.

Chapter II :-

This chapter deals with the review of available literature. It includes review of books, journals, previous Thesis and web sites etc.

Chapter III :-

This chapter explains the Research design, Population and sample, Nature and sources of data, selection of the enterprise and the study period, the method of analysis is financial tools (ratio analysis, profitability ratio, risk ratio, growth ratio)

and statistical tools (mean, standard deviation, variance, coefficient of variance, trend analysis) used for the analysis of the data.

Chapter IV :-

The fourth, which is the important chapter of the study, include presentation and analysis of data.

Chapter V :-

The fifth chapter summarizes the main conclusion the flows the study and offers suggestions, recommendation for further improvement and conclusion of the study. A bibliography and appendices attached at the end of the study.

CHAPTER - II
REVIEW OF LITERATURE

2.1 Introduction

The purpose of this chapter is to review the relevant literature regarding the investment policy of commercial banks in Nepal so as to formulate the appropriate research problem, hypotheses, and the research gap between the previous research studies and the present study. Such a review has been made from various sources of literature available in different libraries, documentation centre, Nepal Stock Exchange Ltd., other information bureaus and the concerned commercial banks, i.e., BOK and NABIL. This chapter first presents the conceptual review, Brief concept of investment policy of commercial bank & It's Importance, Principle's Sound Investment policy, review of journals and articles, research papers and previous research studies relevant to this study, and the research gap.

2.2 Conceptual Review

Conceptual review of various different literature provided by different authors, research scholars, practitioners, etc. have been presented in the following sections:

2.2.1 History of Banking

The term 'bank' derives from the Latin 'Bancus', which refers to the bench on which the bankers would receipts money and his records. Some persons trace its origin to the French 'Benqee' or to the Italian 'Benca', which means a bench for keeping lending and exchanging of money or coins in the market place by moneylenders moneychangers. With the gradual development of bank, its functions are also increasing. It only deals with the exchanges of money in its preliminary phase, but later it started accepting deposits from the public against interest and providing them in the form of loans to the needy persons were the basic functions defined. Today, however, banks cover wide range of activities.

The Bank of Venice", the first public banking institution was established in Italy in 1157 A.D. Subsequently, “Bank of Barcelona" of Spain, the world’s second bank was established in 1401 A.D., and “Bank of Geneva" of Switzerland was established in 1407 A.D. “Bank of Amsterdam”’ The Netherlands was set up in 1609 A.D. was among the very popular commercial banks in the world. The Bank of ’Hindustan’, regarded as India’s first commercial bank, was established in 1770. As so in 1694 A.D., "The Bank of England" was established, which changed the process of establishing the banking institutions remarkably. This was a big landmark in the history of banking development. The idea of commercial banks was rapidly spread to all over the world only after the establishment of this bank.
In course of time, banks are among the most important financial institutions in the economy and essential business in thousands of local town and cities. In this context, there is much confusion about exactly what a bank is? Certainly, banks must be identified by the functions they perform in the economy. However, the word bank is generally used to denote a certain kind of trading in money, which mainly consists the exchanging of money, the lending of money, the depositing of money and the transmitting of money.

Due to the rapid modernization and industrialization of the world, banking institutions have been indispensable for the resource mobilization and all round development of the country as they are important to individuals and institutions such as the public, businesses, organizations, government and other institutions. It provides resources for economic development that maintains economic confidence of various segments and expands credit to people. The bank accumulates surplus money form the public, who cannot use the money at the time and lends to those who are in need of that to use for productive purposes. It refers to any institution that deals in money. However, today banks are established for specific purpose such as commercial bank, industrial bank, merchant bank, development bank, rural bank, and so on. When the bank lends the loan to the customers for earning interest, the bank draw the money from institution or individual or people pay the interest amount by the certain interest rate. There are different types of bank focus

on different types of service to their customers although the basic principle is sane i.e. mobilize idle resources from productive sectors to the growth of trade, industry and commerce. Today, banks in different countries render various different services to the people for strengthening the whole country's economy.

2.2.2 Banking in Nepal

The history of organized banking in Nepal is not very old. In the past, however, indigenous individuals, wealthy agriculturists, lenders, merchants and traders conducted some banking activities along with their other business occupations. These activities were fragmented and mostly localized. The creation of "Kaushi Tosha Khana" as a banking agency during the regime of King Prithvi Narayan Shah could be regarded as first step towards development of banking in Nepal. However, the establishment of "Tejarath Adda" around 1877 A.D., during the Prime Ministership of Ronoddip Singh to provide credit facilities to public at a very confessional rate of interest could be regarded as a primer foundation of modern banking in Nepal. The Tejarath Adda was set up to provide credit; it did not accept deposits from the public. Therefore, the concept of saving was loan existence in Nepal until the establishment of the first ever commercial bank, i.e. "Nepal Bank Limited" under the Nepal Bank Act, 1937 with Rs.10 million Authorized Capital.

Thereafter, government felt the need for a central bank and established "Nepal Rastra Bank (NRB) as the central bank of the country under the Nepal Rastra Bank Act 1956 A.D. in 1956 A.D. It played important role in the monetization and the development of banking sector in the country. Likewise, due to the increasing popularity of the banking functions and rising needs of banking operations in different areas of the country, NRB suggested for the establishment of another commercial bank and in 1966 A.D., Rastriya Banijya Bank was established as a fully government-owned commercial bank whose branches are scattered all over country.

Apart from the commercial banks, NRB also initiated the incorporation of some development banks in the country. As a result, Nepal Industrial Development Corporation was established in 1959 A.D. and Agricultural Development Bank established in 1976 A.D. After then government adopted the liberalization and privatization economic policy during 1980s, Nepal welcomed the foreign banks to operate joint venture banks in the country. Consequently, Nepal Arab Bank Ltd. *f*NABIL) was the first joint venture bank established in 1984 A.D., a joint venture of United Arab Emirates Bank. Then two other banks Nepal Indosuez Bank Ltd. with Indosuez Bank of France and Nepal Grindlays Bank Ltd. with Grindlays Banks of London were established in 1986 A.D., but recently these banks' name have been changed as Nepal Investment Bank Ltd. and Standard Chartered Bank Nepal Ltd. respectively. And other commercial banks, development banks and financial institutions are continued to establish and are contributing to the economy and the banking sector in Nepal.

After the restoration of democracy in Nepal in 1990 A.D., the government took a liberal policy in the banking sector. As an open policy of the government to get permission to invest in banking sector from private and foreign investors under Commercial Bank Act. 1975 A.D. *f*2031 B.S.), different private banks were provided permission to establish with the joint venture of other countries .

2.3 Brief concept of Commercial Banks, Investment Policy and its Importance to the Commercial Banks

Today banking is an industry in change – it is continuously becoming something new – offering new services, adopting new technologies. In spite of its changes, it probably is and always will remain a service industry. Bank involved in a service industry is dedicated to overall financial activities of the economy; they offer a wide range of financial services such as: currency exchange, discounting commercial notes and making business loans, offering savings deposits, safekeeping of valuables and certification of value, supporting government activities with credit, offering demand deposits, offering trust services, granting

consumer loans, financial advising, cash management, offering equipment leasing, making venture capital loans, selling insurance services, selling retirement plans. However among these, the primary function of banks today is to produce and sell financial services demanded by the public. One of the most vital of those services is granting loans, particularly loans used to support business investment. Yet not all bank funds can be allocated to loans because: many loans are illiquid; it is among the riskiest bank asset – carrying the highest borrower default rate of any form of bank credit; all loan income is taxable. For all these reasons, banks have to learn to devote a significant portion of their asset portfolio to another major category of earning asset: investment in securities like government bonds and notes, corporate bonds and notes, other form of debt securities and other stock permitted by law. These holdings perform a number of vital functions in bank asset portfolios- providing income, liquidity, diversification to reduce risk, and the sheltering of at least some portion of bank earnings from taxation. Hence to have a well managed bank asset portfolio a bank must have its investment policy.

For any bank, one of the important steps to take in the investment planning process is the creation of the Investment policy statement. An investment policy statement defines your goals and sets the guidelines for the investment activity, and some even consider it their business plan for making critical decisions. Most importantly it provides discipline. The investment policy statement can be broken down into these following sections:

- Definition of goals and objectives
- Statement of parties' responsibilities
- Risk and return parameters
- Asset allocation detail
- Screening criteria
- Investment due application and monitoring procedures
- Account review and rebalancing guidelines
- Fee and expenses considerations

The investment policy should specifically list how to distribute the investments – also known as the asset allocation which should be very specific. It should also include a provision detailing when to rebalance the portfolio, i.e. reworking the portfolio to the original asset allocation. A lot of time and effort should be given in creating an investment policy – because when constructed and followed properly, it provides the discipline to the investment process (source: Brinson et al. ,1991).

A bank may decide to embark on aggressive, liberal or a conservative investment policy. The type to be adopted will depend on the bank's objective, income and the level of the bank's present and expected risk exposure. For instance, a bank that is already much exposed to liquidity risks in loans and other assets will definitely pursue a conservative investment policy. Preferably, investment policy should be in writing. This will help to ensure uniformity and consistency in its application. However, it should be flexible enough to give room for the use of initiatives, and for easy room for the use of initiatives, and for easy adaptation to changes in the environment.

Finally, to ensure that the investment policy does not end up as a mere paperwork, appropriate machinery must be set on motion for its implementation. Authorities should be defined, and responsibilities assigned to specific officers or departments. There should be a provision for the appraisal and review of such policy.

2.3.1 Creating Investment Policy

An investment policy statement is an important document that will develop a 'blueprint' for managing an organization's assets. A well-developed statement will establish long-term objectives, promote adherence to these objectives, provide a disciplined process, and serve as a guide through difficult markets. Creating an asset allocation policy is an interactive process in which an organization must consider the strategic goals and objectives for their pools of assets. The process

can be categorized into four important steps- evaluation, construction, implementation, and review of Basic Books. Each step by itself requires detailed analysis, but equally important is that all four must be completed for a thorough review.

) Evaluation

The evaluation component of the process requires an organization to review its policies and objectives regarding the use of the assets. There are several questions that should be considered specifically targeting the requirements of the portfolio. A review of spending requirements of liabilities is key in developing the return requirements.

The offset to return is to identify an acceptable level of risk that can be taken by the portfolio. This includes the traditional volatility review as measured by the standard deviation. However, standard deviation is not the only risk to be considered. Discussions should include the ability to handle both near- and long-term losses, consideration of a maximum acceptable loss for a given year or longer, and the implications if the required return is not met. The time horizon over which the assets will be invested will help in the risk analysis. Investment risk decreases over time, which implies that longer time horizon portfolios can take on additional risk. During the evaluation process, conflicts between the factors may arise, and further evaluation must be done. As an extreme example, if the required return for a particular asset pool was identified as 10% per year, and the organization is uncomfortable with anything other than a high quality fixed income portfolio, it will be impossible to meet those objectives. In that case, the return requirements and risk analysis must be revisited with changes to one or both to settle on a realistic plan. Every organization is different, and must be reviewed so that we can help develop an investment strategy that will meet their goals and objectives.

) Construction

Information gathered during the evaluation phase develops the foundation for portfolio construction. Based on that understanding, an asset allocation can be created to meet those objectives. Studies have shown that over 90% of the

variability in return is based on the asset allocation selected (source: Brinson et al. ,1991) and determining the right mix is a helpful guide in both strong and weak markets.

The foundation for any review is to develop expectations of returns for different investments. Historical analysis is useful by providing an idea of how various asset classes have performed over time and through different market cycles, and forward-looking analysis is critical to reasonably assessing the potential of reaching investment goals. The starting point of our projections is based on forecasting inflation. From that base, we build the estimated returns based on historical risk premia for the different asset classes. We also consider how changes in things such as growth rates of earnings, the inter-relationship of global markets, inflation, the global yield curve, and investor risk sentiment will affect these projected returns.

Additional asset classes such as Emerging Markets, High Yield Bonds, Real Estate, Alternative Investments, etc. can play an important role and should also be considered depending on the comfort level and appropriateness for the investor. While each of the asset classes by themselves carries varying levels and types of risk, each must be analyzed relative to each other and the value that can be added via a broad portfolio. The power of diversification comes from the relationship of uncorrelated assets. Each asset class is reviewed based on its historical correlations with the other investments.

With projections of asset class returns, standard deviations, and correlations, the next step is to create multiple portfolio options that provide the highest level of return for a given level of risk. Using a mean-variance portfolio optimizer, various portfolios can be created. Mean-variance optimization is a statistical process that uses the mean returns (either historical or projected), standard deviations (variance), and correlations to analyze the inter-relationship between various asset classes, and calculate portfolio mixes that are the highest return for each given

level of risk. This collection of "optimal" mixes along the risk spectrum is referred to as the "efficient frontier". This is a useful tool to measure the risk level of portfolios, understand the impact of changes, and ensure that investors are compensated for the amount of risk that is taken. With these benefits, the process does also have limitations. The primary limitation is that it looks at standard deviation as the sole measure of risk. As discussed in the evaluation section, there are other items within the risk category that need to be considered. Nonetheless, it provides useful information as portfolios are constructed.

Projected returns, diversification, and optimizers must be combined with client-specific information gathered in the evaluation phase to develop a customized investment plan. Based on return requirements and risk tolerances, the universe of potential portfolio mixes can be narrowed to specific options that will meet the portfolio objectives. Investors should review the best and worst returns for different years and time periods to determine their comfort level with the outcomes.

Various portfolio options should also be "stress tested" to understand the range of possible outcomes for a given mix. Factors such as cash flows and spending rates can also be factored in to provide more realistic modeling. The output of such analysis will provide statistical probabilities of certain outcomes. This is especially important relative to an investor's risk tolerance because it can provide guidance for "best" case and "worst" case scenarios, and helps validate the chosen allocation.

) Implementation

Once the goals are determined and the portfolio structure is identified, the plan is put to work through the implementation phase. Executing the plan is just as important as how the plan has been developed. Care must be given to the choice of investment strategies that will fill the various asset class "buckets". Determining the use of active investment versus passive (indexing), styles such as growth

versus value, and rules for rebalancing the portfolio are all considerations that must be reviewed.

The "active versus passive" discussion gives investors the ability to take advantage of asset class efficiencies, or inefficiencies as the case may be. While some investors feel strongly one way or the other, the optimal solution can often be reached through a blend of the two. By blending passive and enhanced indexing (mostly in the more efficient asset classes) with active (mostly in the less efficient asset classes), investors can control the amount of risk that they take, make sure they are being compensated where they do take it, and ultimately create more efficient portfolios.

After the strategic asset allocation and investment strategies have been determined, a critical decision is how to manage the asset mix. One option is to manage the asset weights tactically (called Tactical Asset Allocation) based on the manager's evaluation of the current markets and opportunities. With this approach, the manager adjusts the weightings based on these views and, for example, sells stocks when they appear poised to fall and increase equity exposure when the manager sees them rising more than the alternatives. However, the manager would always keep the asset weights within the policy ranges as well as determine how cash flows are invested.

The other option is to keep asset mix consistently in line with the policy benchmark regardless of manager or client's views on the market (called Strategic Asset Allocation). The key decision then becomes how frequently to rebalance the strategic allocations of the portfolio, and how to manage cash flows as the holdings deviate from target allocations due to investment performance. Most investors agree that the strategic allocation will be the most important factor responsible for the long-term results of the portfolio; any reallocation activity should be limited to preserving the integrity of the strategic policy.

There are a few schools of thought when it comes to Rebalancing Policies

- Calendar or periodic rebalancing at specific times such as monthly, quarterly, or annually.
- Rebalancing when the mix drifts to a set trigger point.
- Rebalancing to an allowable range within a set tolerance limit.
- Allowing the asset mix to drift.
- To minimize variation of returns away from a benchmark due to asset drift, monthly rebalancing has been found to be the "optimal" timeframe in the absence of any costs. This ensures a disciplined rebalancing that keeps weights close to target, but without incurring the high costs of trading each month.

- **Review of Basic Books**

A well-created investment policy is a good guide for an organization based on its circumstances at the time of the review. In reality, those circumstances are always changing, and it is important to regularly review the policy statement to ensure that it is still appropriate. A formal required review quite often is suggested to ensure that the investment committee, board, and staff know it is their responsibility to conduct the process. In between formal reviews, any changes in situation, such as a change in funding status, a change in ownership, a large cash inflow, or re-evaluation of risk tolerance should be discussed and reviewed for its impact on the investments. A review does not necessarily require a change in strategy, but to re-affirm that the approach is appropriate is an important step.

Developing an investment policy can be an involved process, but is necessary for a successful investment program. The steps of evaluation, construction, implementation and review provide the framework for developing a policy that will meet an organization's investment goals and objectives (Source: Farley, 2007).

2.3.2 Purpose/Components of an Investment Policy and its Process

The investment policy statement (IPS) should be the basic building block in an intentional investment process. The Investment policy development process provides crucial education for the client and is a key communication step, helping each party to understand the other's perspective and goals. The Investment policy is the document that guides the advisor as future decisions are made; it serves as a guidepost against which the reality of what has happened can be measured against the rules and procedures and benchmarks that were agreed to. Finally, it serves to create a purposeful decision-making process in rational times, to guide clients through the inevitable rough periods when emotions may cause them to make less than optimal decisions.

- **Basic purpose of an Investment Policy**

The investment policy statement serves four basic purposes:

- Identifying objectives - to establish clear, reasonable and definable expectations, risk and return objectives, and guidelines for the investment of the assets.
- Defining the asset allocation policy - to set forth a structure and identify the investment asset classes that will achieve a diversified portfolio, as well as to determine how those assets are to be best allocated to help achieve the investor's objectives.
- Establishing management procedures - to provide a guide for selecting, monitoring and evaluating the performance of those charged with managing and investing the assets, and making changes as appropriate.
- Determining communication procedures - to provide a concise method of communicating the process and objectives among all parties involved with the investments and to assign responsibility for implementation.

Two cautions are worth repeating: (1) if you are going to create an investment policy statement, it is only useful if it is in writing; and (2) if you have an

Investment policy, it is essential that you follow it. Worse than not having an investment policy statement is to have one and ignore it.

⟩ Components of an Investment Policy

There is no one right way to construct an Investment policy, although advisors who use a consistent structure each time will find the process of writing an Investment policy much less arduous and time-consuming. Our approach is to categorize the common components of a complete investment policy statement into seven parts:

- ⟩ Introduction-purpose of the Investment policy and an explanation of why the investments are being structured as suggested
- ⟩ Key factual and account information and summary of investor circumstances
- ⟩ Investment objectives, time horizon and risk attitudes
- ⟩ Permissible asset classes, constraints and restrictions
- ⟩ The asset allocation
- ⟩ Selection, monitoring and control procedures
- ⟩ Signatures

Each advisor will approach each of these parts differently and each client's Investment Policy will require a certain degree of individualization. At the same time, having a template to provide consistency in structure from one client to the next can help save time as well as improve the output.

⟩ Steps of a proper Investment Process

Investment process describes how an investor should go about making investment decision with regard to how to invest (analysis), how much to invest (Portfolio Construction), and when to invest (timing and diversification) so that optimal portfolio (revision) is formed to suit investment strategy (objective).

A thorough and proper investment process has nine steps. Each step relies on many different inputs and will be uniquely determined based on the advisor's sophistication, his or her biases and preferences (Source: Boone & Lubitz, 2007)

Step-I: - Identify Goals
Step-II: - Identify the target rate of return
Step-III: - Knowing the Time Horizon
Step-IV: - Understanding the client's risk tolerance
Step-V: - Identification of asset classes and Investment vehicles
Step-VI: - Design the asset allocation
Step-VII: - Write the investment policy statement
Step-VIII: - Select the Investments
Step-IX: - Monitoring, Managing and Reporting

2.4 Principles of Sound Investment Policy of Banks

The commercial banks are inspired with the goal of earning profit. There are many reasons for having profit as their goal. A bank is like a legal person where shareholders are the owners of the bank, the board of directors is the agent of the bank that operates the bank. There are many employees who were appointed to run the banks and to run the banks, it needs a great amount of expenses, whether it is direct or indirect, there is continuous expense in the bank.

The main aim of any person or institution to invest the money in the bank is to earn more profit only. There is only one bank i.e. central bank which is established without the aim of gaining profits. Other banks are inspired with the objective of earning profit and helping the economic development and finally to take the social responsibility. They should have the ability to use the policy of banking

investment and to implement it much more carefully otherwise a bank may be unsuccessful in its goal. (Bhandari, 2003).

One of the prime tasks of the investment management firms is to allocate the asset and the exercise of allocating funds among these assets is of high importance, while the classes of the assets being stocks, bonds, commodities and real estate. The asset allocation carries significant effect on the performance of a fund as the different asset classes show different interaction effects and market dynamics, while some researches even suggest that the asset allocation are having the predictive power in fund's success. It is the prime task of the investment manager to allocate the asset in the most feasible way in order to ensure the success of the fund.

Without investment, a bank cannot gain profit. The bank cannot be successful until it gains profit. Therefore after the establishments of bank it collects much deposit, get the deposits from the current, saving and fixed deposit account. In this way, the bank apart from the amount deposited from such accounts, collects the capital by selling its shares. The bank can take loans thus; a great capital fund is formed in the bank from different sources. It is not better to keep such capital fund inactive. The bank should able to clear the policy of its investment by making a deep study on the subject that which sector would be the more trust worthy and dependable to invest the amount collected in the bank. If the bank applies following investment policies or principles it can be successful in its goal. Hence these principles or policies or theories are as follows:

2.4.1 Principle of Liquidity

Liquidity is another factor that determines the level of bank performance. Liquidity refers to the ability of the bank to fulfill its obligations, mainly of depositors. Adequate level of liquidity is positively related with bank profitability. The most common financial ratios that reflect the liquidity position of a bank according to the above author are customer deposit to total asset and total loan to customer

deposits. Other scholars use different financial ratio to measure liquidity. (Uren 2011)

2.4.2 Principle of Profitability

Profitability is simply the difference between total revenue and total cost, Thus, the factors which affect commercial bank profitability would be those which affect banks' revenue and costs. Essentially, the determinants of bank profitability are those characteristics of a macro economy that affect the profitability of the banks operating within it. They vary in their respective levels of significance from one economy to another and cannot be directly controlled by individual shareholder and managerial decisions. (Devinaga, 2010)

2.4.3 Principle of Safety

The safety of the investment is the basic factor for investing money. There are several types of risks, which are included in an investment. The prime risk is of facing huge loss. On the other hand the slow paced growth of the investment is also a matter of concern for the investors. So, the best investment should cover these factors. (Flavell, 2002)

2.4.4 Principle of Diversification

The diversification principle says that, if risk-averse utility maximizers can choose between two assets with identical but random returns, they will prefer to invest half of their endowment in each asset. The principle can be paraphrased in the following means: If two risk-averse utility maximizers with assets of the same value face the same distributions of potential losses, they will gain by sharing the potential losses equally. (Skogh, 2006)

2.4.5 Principle of Suitability

Bank should know that why a customer needs loan or it is for appropriate propose or not". If the borrower misuse the loan. Granted by bank, he will never to be able

repay the loan which posses heavy bad debts to bank. In order to avoid such situation advances should be allowed to selected and suitable borrow is and necessary all detailed information about the scheme of project or activities should be demanded and it should be examined before investing. There suitability is the important factors for investment. (Molyneux & Thornton, 1992)

2.5 Review of Journals and Articles

This part consists of a review of past studies conducted by other researchers which are relevant to the topic.

A sound investment policy of a bank is such that its funds are distributed on different types of assets with good profitability on the one hand and provides maximum safety and security to the depositors and bank on the other hand, Moreover risk in banking sectors trends to be concentrated in the loan portfolio. When a bank gets into serious financial trouble its problem usually spring from significant amounts of loan that have become uncollectible due to mismanagement, illegal manipulation of loan misguided lending policy or unexpected economic downturn. So the bank investment policy must be such that it is sound & prudent in order to protect public funds. (Shakespeare 1997)

The investment objective is to increase systematically the individual wealth, defined as assets minus liabilities. The higher level of desired wealth, the higher must be received. An investor seeking higher return must be willing to face higher level of risk (Cheney & Mosses, 1995)

Investment in its broadest sense, means the sacrifice of certain present value for (possible uncertain) future value. The investment is the venture that the return is uncertain. Therefore, they have presented their view in the books that bank should look for the safe and less risky investment. (Sharpe et al. , 2008)

In investment decision expenditure and benefits should be measured in cash. In investment policy, cash flows are more important than accounting profit. It may also be pointed out that investment decision affects the firm's value. The firm's value will increase if investments are profitable and add to the shareholders wealth. Thus, investment should be evaluated on the basis of a criterion, which is compatible with the objectives of the shareholder's fund maximization. Investments will add to the shareholder's wealth if it yields benefit in excess on the minimum benefit as per the opportunity cost of capital. (Pandey, 1992)

The mutual companies are the leading providers of online investment services in a lot of countries including the United States, where insurance firms and banks function as online investment service providers. These are normally managed by the members of the organization rather than the shareholders. If the mutual company happens to be a savings bank or a savings association, then the members are granted the status of depositors, and if the mutual company operates as an insurance company, then the members are regarded as policyholders. (Fielding, 1999)

Perhaps the most familiar but often least understood form of investment risk is market risk. In a highly liquid market like the collective stock exchanges in the United States and across the developed world, the price of securities is set by the forces of supply and demand. If there is a high demand for a given issue of stock, or a given bond, the price will rise as each purchaser is willing to pay more for the security than the last one. The reverse of that occurs when the sellers want to rid themselves of an issue more than the buyers want to buy it. Each seller is willing to receive less than the last one and the market price, or valuation, declines. (Demeterfi et al. , 1999*)*

Investment flows constitute an important part of the balance of payments, and it is of this reason crucial for policy makers to understand their behavior and determinants, both to be able to evaluate the impact of policy decisions on the balance of payments and to be able to correctly forecast this. Investment flows

have, indeed, played an important role in recent emerging market crises, and large inflows of portfolio investment, in particular, often turns out to be a curse rather than a blessing, when such flows come to a sudden stop or even reverse. (Andrés & Rowland, 2009)

Policy makers should play a major role in fostering good fundamentals as a result of sound, transparent and publicly known policies. Good fundamentals affect inflows as reflected in our empirical results. In addition, sound fundamentals can absorb sudden stops at a much lesser cost than unbalanced economies. Unexpected transitory shocks to the capital account of an unbalanced economy may translate into a permanent shock with high output costs. However, good fundamentals take time to consolidate, and their impact on capital flows might not be instantaneous. Finally, not everything is asymmetric information and sound fundamentals. As shown, the influence of external factors continues to be, and should continue to be a main determinant of capital inflows to developing countries as the global economy tends to greater integration. The above policy orientation does not solve the issue of volatile and scarce capital flows. However, it should be able to alleviate some of the threats posed in the current global capital markets with asymmetric information.

Utilized data from a firm-level survey of 61 manufacturing firms in South Africa to identify the determinants of investment and exports of manufacturing firms in South Africa. The sample was chosen to include a region of South Africa where manufacturing firms were particularly subject to adjustment shocks over the past six years. These were adjustment shocks relating to incorporation of so-called homeland areas into South Africa, and the greater liberalization of the South African economy. It was deemed necessary to identify the determinants of investment and exports in manufacturing as this sector is vital for growth and job creation, and need higher levels of investment than in the past as well as higher exports to be internationally competitive. (Naudé et al. , 2010)

The implementation of tariff reform and tariff reductions, in accordance with the country's GATT obligations, reduced the level of protection from international competition that many South African firms enjoyed. During the apartheid era, some manufacturing firms enjoyed "double" protection in that tax, labor and other incentives were awarded to manufacturing firms that were located in the so-called homeland areas. In order to analyze how these firms where adjusting to greater competition, their investment and export behavior, and the determinants thereof, was investigated. The survey results can be summarized as follows, with reference to the results from other African countries. Exporters are more efficient than non-exporters, and that exporting at any scale is only a real possibility for firms if they have achieved a sufficient level of efficiency. Thus, improving firm efficiency and overcoming labor cost disadvantages are serious firm level constraints facing South African manufacturing firms in their adjustment to globalization.

A conceptual model of location determinants is developed, which considers the importance of agglomeration economies, market structure, labor availability and productivity, infrastructure, and fiscal determinants. A cross-regressive model containing spatially lagged explanatory variables and a spatial Durbin model containing spatially lagged explanatory variables, including the lagged dependent variable, are estimated. (Brown et al. , 2011)

The study find a positive impact associated with local agglomeration economies, market size, labor productivity, and transportation infrastructure. Spatial spillovers are found to be of a competitive nature at the state level, implying that a factor that attracts more investment to a particular state is associated with lower investments in neighboring states. Market structure was found to be the most important factor in investment location, which suggests that the manufacturing sector as a whole still prefers to locate near demand centers. One potential policy implication is that policy makers should focus on economic development policies that attract people if they wish to attract manufacturing investment. Moreover, the attempts to increase the investment flows in a particular state may have competitive implications for investment flows to neighboring states. This may point to the

possibility of unintended consequences on the impact of states' economic development policies as well as any federal transfers used to attract investment.

The commercial banks fulfill the credit needs of various sectors and the lending policy of commercial bank is based on profit maximizing of the institution as well as the economic enhancement of country. (Shrestha, 1995)

(Dangol & Prajapati , 2001) *explain the use of Ratio Analysis as follows,*

- For expressing trend
- For showing changes in financial statement
- For explaining plan for future
- For setting standard
- For effective control
- for comparing efficiency
- for maintain uniformity

The commercial banks are centralized and concentrated in the city area only. The people of rural area are not able to get the banking services. The deposit of rural people has not been able to reach the banking channel. After 2010 the Nepalese banking sector will be opened for the international banks and financial institution, in that context Nepalese banks face the challenge to be prepared to face the that competition.(Annapurna post, 2008).

Nepal financial sector is moving like a "sinking boat". According to him financial institution have failed in delivering beneficial services to needy people by developing credit giving centers in rural areas with sustained economic growth is impossible on the other hand banks and financial institution have enough liquidity but they are finding it difficult to find suitable place for investment. (Tiwari, 2010) At last he suggests that the forthcoming budget should not remain a document merely but should address financial sector ills with a wide vision. He further recommended that in order to create a well regulated, prudent, marketing oriented,

competitive and strong financial system in Nepal, the government should look to build up on it's indigeneous strength and improve upon it's regional lies to improve it's efficiencies.

2.6 Review of Previews studies

Basyal (2007), in her thesis, *"A comparative Study on Investment Policy of Nepal Investment Bank Ltd. and Himalayan Bank Ltd."*, has the main objective to examine and evaluate the investment policy of Nepal Investment Bank and Himalayan Bank. The other specific objectives of the study are;

- To compare the investment policy of concern banks and to discuss the fund mobilization of these two banks.
- To evaluate the liquidity, assets management efficiency, profitability and risk position.
- To determine the growth rate of bank in terms of deposit, loan and advances, investment and profitability of the banks.

The major findings of the study are;

The mean current ratio of both Banks is almost same. However, NIBL has more consistency than HBL in terms of current ratio. Likewise, the mean ratio of cash and bank balance to total deposit of NIBL is higher than that of HBL. It states that the liquidity position of NIBL is better than that of HBL.

The mean ratio of investment on government securities to current asset of NIBL is lower than that of HBL. It states that HBL uses to invest its current assets in government securities more than that of NIBL.

The mean ratio of total investment to total deposit ratio of NIBL is lower than that of HBL. It concludes that HBL has better utilization of deposits to investment than NIBL.

The mean ratio of investment on government securities to total working fund ratio of NIBL is lower than that of HBL. Similarly, the mean ratio of investment on shares and debenture to total working fund ratio of NIBL is lower than that of HBL.

The total investment of both banks is in increasing trend where it will be Rs. 11701 millions in NIBL and Rs. 12784 millions in HBL in the fiscal year 2011/12.

There is highly positive relationship between net profit and outside assets of both NIBL and HBL.

Shah (2008), in his thesis "*A Study on Investment Portfolio of Commercial Banks in Nepal*", has the main objective to identify the current situation of investment portfolio of CBs in Nepal. The other specific objectives are as follows:

- To analyze the investment portfolio of Commercial Banks
- To analyze the risk and return of selected commercial banks on investment using Portfolio concept.
- To forecasting and examine the trend of investment and to provide complementary measures based on analysis.

The major findings of the study are;

Proper investment on various securities i.e. balance allocation of funds on various government securities such as Treasury bills, National saving bonds, Development bonds etc and fixed income percentage rate that help to reduce the variability of return. In the analysis of risk and return comparatively SCBNL have more return from investment on government securities like same NABIL has better position on investment on loan and advances.

The return on share and debenture of commercial banks shows wide fluctuation. These fluctuations in returns are caused mainly by the volatility of the shares prices in market and by the changes in dividends in some extent. Comparatively to other assets, share and debenture has higher return on higher risk. Hence, it is cleared from analysis that investment on share and debenture is highly risky assets.

The return is slightly lower than average return from loan and advances and share and debentures. The portfolio risk on investment is less than that of risk on loan and advances and risk on share and debenture. It shows there is vital role of government securities to reduce the risk.

The study shows that the portfolio return is decreasing trend every year. It shows the investment portfolio concept is not using properly by the selected banks.

SCBNL is the bank that mobilizes its total deposits more effectively on government securities. EBL has concentrated to mobilize its depositor's funds in loan and advances. HBL, NSBIBL and NIBL are not so successful to mobilize its depositor's funds in government securities. But NSBIBL is also more successful to mobilize depositor's funds in loan and advances as well as share and debentures. And NIBL effectively mobilize its depositor's funds in share and debentures.

Thapa (2009) has conducted a thesis research on "Investment Policy of Everest Bank Limited in comparison to NABIL and "Bank of Kathmandu Limited" has the main objective to analyze the portfolio investment of commercial banks.

The major findings of the study are;

She concluded that EBL has successfully invested on government securities and loan & advances but has failed on return. So she has strongly suggested to EBL to initiate strong steps for the recovery part, which in turn can show high growth in profitability and for that EBL should take more consistent liberal lending policy.

She has also recommended to the EBL to expand the branches that amount sufficient to cover the banking business as compare to the other JVB's. In the same course NRB and GON have also encouraged the Joint venture banks to expand the banking services in rural areas and communities without making unfavorable impact in their profits.

Satyal (2010), in her thesis, "*A study on Portfolio Investment Policy of Commercial Banks in Nepal*", has the main objective to analyze the portfolio investment of commercial banks.

The major findings of the study are;

The industrial mean ratio of investment to total deposit is 21.86%. The only EBL has a greater ratio above industrial mean ratio i.e. 24.77>21.8. But other banks have lower investment to total deposit ratio than industrial mean ratio. It shows that EBL has effective mobilization its deposit on investment to generate the return.

Among four commercial banks HBL has invested its more funds on government securities (i.e. risk free assets) and lesser fund on share and debenture (i.e. risky assets). All banks have invested more than 83% amount in government securities. Only BOKL has invested it's 0.63% on non-resident sector. None of the banks have invested any amount on NRB bond.

All of the selected commercial banks are granting very high amount its loan and advances to private sector. NIBL and HBL have given second priority to government enterprise and EBL and BOKL give second priority to foreign bills purchase and discount.

BOKL stock has the highest expected return i.e. 8.34% and HBL has lowest expected return i.e. -8.82%. NIBL has also negative return i.e. -7.71%. The market expected return is -6.47%. The risk of BOKL is the highest i.e. 57.14% and HBL has 36.03% respectively. The market risk is 15.68%.

Gautam (2011), in her thesis, "*Investment Portfolio Policy of Joint Venture Banks*", has the main objective to identify the current situation of investment portfolio of joint venture banks in Nepal.

The major findings of the study are;

SCBNL and HBL have better position. NBBL and NABIL have a low position in the industry. But EBL has a very low position in the industry because of having lowest mean return on shareholder's fund.

SCBNL has the highest mean return and EBL has the lowest return. Expect EBL, all other four banks i.e. NABIL, SCBNL, HBL and NBBL have good performance.

NABIL, SCBNL and HBL are investing low amount of deposits on loans and advance which is lower than industry average and NBBL and EBL have invested a high amount of deposits to loans and advances title which is higher than industry average.

NABIL is investing the highest amount of funds on NRB bond as compared to other JVBs i.e. 3%. NBBL has invested no amount of funds in this title and EBL has invested the lowest of funds i.e 0.4 % and SCBNL and HBL have invested above industry average.

Tamrakar (2012), in his thesis, "*Investment Policy of Nepalese Banks*", has the main objective to analyze the trend of investments in private sectors.

The major findings of the study are;

The target of 12% investment of total outstanding liabilities in priority sector and 3% out of which has been invested in deprived sector has been met by RBB.

Trend analysis of 10 years shows the increasing trend of investment in priority sectors which shows that the CBs are giving due consideration to increase investment in priority sector.

Interest charged on the loan disbursed in this sector is fairly less than the interest charge on loans for other purposes. In addition to this, there is high overhead cost incurred for supervision, administration and others in this program.

Regression analysis shows positive relation between investment and repayment. The Chi square test of effectiveness of program is more

effective in rural and semi rural area as compared to the urban areas. Investment on agriculture is higher than investment on industry and service sector.

2.7 Research Gap

Since many years the study has been done on the topic 'An investment policy'. Most of the studies are related with secondary data. They mainly focus on the data available. However, such special study related to awareness regarding investment policy has been limited. In this study, the researcher has attempted to evaluate the Secondary data by conducting field survey, in order to know somehow about the practical experience of investment policy. So this study will be fruitful to those interested persons, students, scholars, stakeholder, Civil Society, teachers, businessmen and government for academically as well as policy perspective.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is a systematic way to solve the research problem. In other words, research methodology describes the methods and process applied in the entire aspect of the study. Research methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view. Thus the overall approach to the research is presented in this chapter. This chapter consists of research design, sample size and selection process, data collection procedure and data processing techniques and tools. This chapter attempts to have an insight into the investment policy adopted by Bank of Kathmandu Limited and NABIL Bank Limited.

3.2 Research Design

Research design is the plan, structure and strategy of investigation conceived so as to obtain answer to research questions and to control variance. It is arrangement for collection and analysis of data. To achieve the objective of this study, descriptive and analytical research design has been used. Some financial and statistical tools have been applied to examine facts and descriptive techniques have been adopted to analyze the investment policy of commercial banks.

3.3 Population and Sample

Currently there are 30 commercial banks operating in Nepal. The study of all these banks in this study is not impossible. So, two commercial banks, namely NABIL Bank Limited and Bank of Kathmandu Limited, have been selected randomly as sample of the study.

3.4 Data Collection Techniques

Mainly, the study is conducted on the basis of the secondary data. The data required for the analysis are directly obtained from the balance sheet and the P/L

account of the concerned bank's annual reports. Supplementary data and information are collected from the number of institutions and regulating authorities like Nepal Rastra Bank. All the secondary data are compiled, processed and tabulated in the time series as per the need and objectives. Formal and informal talks with the concerned authorities of the banks were also helpful to obtain the additional information of the related problem.

Likewise, various data and information are collected from the economic journals, periodicals, bulletins, magazines and other published and unpublished reports and documents from various sources.

3.5 Data Analysis Tools

This study requires financial and statistical tools to achieve the core objective of this study. These reliable tools help to sink with the objective of this study. The result obtained with the help of financial statistical and accounting tools are tabulated under various headings. Then the results are interpreted and compared to the sample.

There are two types of tool i.e. financial tool and statistical tool which are expressed below:

a. Financial Tools

Financial statement provides the vital information about the firm's position at a point in time and its operation over some past period. Financial tools availability has helped to analyze the strength and weakness of a firm. Ratio analysis is a technique from which different results are known. Simply ratios are designed to show relationships between financial statement accounts within firms. Translation of the accounting figures into relative value allows us to compare the financial position of one firm to another mathematical expressions are needed to show the relationship between the various accounting figures. The ratios are created from different figures and the evaluation of the performance is done. Financial statement can e analyzed using various rations but only four ratios have been taken in this

study which is the core or investment policy of the banks. The ratios analyzed in this study are as follows.

i. Liquidity Ratios

Liquidity ratio is used to find out the liquidity position of a firm. Liquid position is the question of how well the firm is able to meet its current obligation. Short-term or current assets can be easily converted into cash so it is liquid asset. Liquidity ration is the relationship of a firm's cash and other current assets to its current liabilities and it reflects the short-term financial strength of the business. Liquid asset in another words can be defined an asset that can be easily converted to cash without significant loss of its original value. The conversion of current assets such as inventory and receivables are the easiest means by which a firm obtains the funds needed to pay its current bills. The following ratios are calculated for this purpose.

- **Current Ratio**

Current ratios are the indication of the extent to which current liabilities are convert by assets expected to be converted to cash in the near future. Higher current ratio is desired and it indicates the better liquidity position current ratio is calculated by dividing current assets by current liabilities.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Current assets include cash, marketable securities, accounts receivable, inventories, overdrafts, bill purchased, and current liabilities involves account payable, short term notes payable, current maturities of long term debt, accrued income taxes and accrued expenses/esp. wages.

- **Cash and Bank Balance to Total Deposit Ratio**

These are the most liquid current assets of a firm. Cash and bank balance to total deposit ratio measures the percentage of most liquid assets to pay the depositors

quickly. It also shows the ability of bank's immediate funds to cover their total deposit. This ratio is expressed as,

$$\text{Cash and Bank Balance to Total Deposits Ratio} = \frac{\text{Cash \& Bank Balance}}{\text{Total Deposits}}$$

Here, total deposit includes saving account, current account, fixed account, money at call and other deposits.

- **Cash and Bank Balance to Current Assets Ratio**

This ratio declares the percentage of the cash and bank balance among the current assets of a firm. Higher ratio is defined best in this case because higher ratio means the higher capacity of firms to meet the cash demand. This ratio is presented as,

$$\text{Cash and Bank Balance to Current Asset Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Current Assets}}$$

Here, cash and bank balance involves cash in hand, freight cash and foreign banks.

- **Investment on Government Securities to Current Asset Ratio**

This ratio finds out the percentage of current assets invested on government's different securities like treasury bills, development bonds etc. This ratio is calculated by dividing the amount of investment on government securities by the total amount of current assets. It is stated as,

$$\text{Investment on government Securities to Current Asset Ratio} = \frac{\text{Investment on Government Securities}}{\text{Current Assets}}$$

- **Loan and Advances to Current Assets Ratio**

Short term loan which matures with a period of one year are assumed or known as current assets. This loan is the major source of earning for a bank but the bank must be very careful about it. Bank must not allocate all funds in loan and advances. There must be a certain level of loans. This specific ratio is calculated by dividing loan and advances by current assets. It shows the percentage of loan and advances and the portion of loans too. It is expressed as,

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

ii. Asset Management Ratios

Managing assets is also an important function of any profit seeking organization especially commercial banks. The management of assets helps to exist the institution for a long run and it also satisfies the consumer by earning high volume of profit. Asset management ratio helps to understand how the banks are using their resources and how the sample banks have arranged and invested their limited resources. Simply asset management ratios are those set of ratios that measures how effectively a firm is managing its assets. The financial tools and the related ratios to investment policy are calculated and they are as follows.

- **Total Investment to Total Deposit Ratio**

This ratio is calculated bye dividing total amount of investment by total amount of deposit collection. It shows how individual or sample firms are investing their deposit for e.g. Investment on debentures and share of other companies, investment on government securities etc. it is expressed as,

$$\text{Total Investment to Total Deposit Ratio} = \frac{\text{Total Investment}}{\text{Total Deposit}}$$

Investment must be done to earn higher return and it is very essential for the sustainability or any financial institution.

iii. Profitability Ratios

Profitability ratio is related with the term profit which shows the efficiency of the business firm. It measures the capacity of earning of any financial institution. Since profit is essential to exist in competitive market it drives or attracts the investors in that specific financial institution.

Profitability is the next result of a number of policies and decisions. Profitability ratio shows the combined effect of liquidity, asset management and debt management on operating results. Profitability ratio shows the better or worse financial performance so higher profitability ratio is desired. Profit maximization is one of the main objectives of any institution and is very necessary to earn maximum returns for the success of any financial institution. The following financial ratios related to investment policy is calculated which are mentioned below.

- **Return on Loan and Advances Ratio**

This ratio shows how the banks have mobilized and used their resources to earn higher return from loan and advances. This ratio is calculated by dividing net profit or loss by the amount of loan and advances and is formulized as,

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

- **Return on Total Assets**

The ratio of net income to total assets measures the return on total assets (ROA) after interest and taxes. This ratio shows the relationship between net profit and total assets. This ratio is calculated by dividing net income by total assets which is formulated as,

$$\text{Return on Total Assets} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}}$$

iv. Risk Ratios

In every investment people seek profit but the reality is there is not only the element called profit but risk lies there. Risk simply is uncertainty of returns. The bearing of risk can be useful o get high profitability but there is no guarantee of that. So the intention must be to minimize the risk. This ratio finds out the degree of risk involved in financial operations. The analysis or measurement of credit risk ratio and capital risk ratio. Shows the current picture of the risk involved. The following risk ratios are calculated in this study.

- **Credit Risk Ratio**

Credit risk ratio tells us about the possibility of loan to go into default or the possibility of nonpayment of the loan given. It is calculated by dividing loan and advances by total assets and is formulized as,

$$\text{Credit Risk Ratio} = \frac{\text{Total Loan and Advances}}{\text{Total Assets}}$$

- **Capital Risk Ratio**

This ratio is calculated to find the level of profit. It also show the bank's ability to attract deposits and inter-bank funds.

This risk automatically becomes low if the activities are limited. The act of silence or lack of performing any activity keeps the profitability compressed. This ratio is calculated by dividing share capital by risk weighted assets and is presented as,

$$\text{Capital risk ratio} = \frac{\text{Share Capital}}{\text{Risk Weight Assets}}$$

v. Growth Ratios

These ratios are used to understand the fund mobilization and investment management of a commercial bank. It shows the activities related to the maintenance of economic and financial position of a financial organization. The higher growth ratio represents the high level of performance. Following growth ratios are calculated to find out the growth and expansion of the sample banks.

- Growth ratio of total deposits
- Growth ratio of loan and advances
- Growth ratio of total investment
- Growth ratio of net profit

b. Statistical Tools

Statistics are numeric statement of facts. The various statistical tools help us to collect and present numerical data in the proper way and to analyze them. In this

study mean standard deviation, variance, co-efficient of variation least square correlation co-efficient analysis and trend analysis. This individual and collective analysis can be very useful for decision making. This study includes the following statistical analysis:–

- **Mean**

This is also known as average and it is used to get one single value which describes or interest the whole data. It is used for comparison too. The sum of all the observations divided by the number of observations is mean and it is formulized as,

$$\overline{X} = \frac{\sum x}{N}$$

Where,

$\overline{X}$ = Mean

N= Number of observations

$\sum X$ = the sum of observations

- **Standard Deviation**

Standard deviation determines the reliability of central tendency or mean. It measures the dispersion. Dispersion is variability of data and it finds outs how individual values fall apart on an average. The higher standard deviation has higher variability. The standard deviation is defended as the positive square roof of the arithmetic mean of the squared deviation from their arithmetic mean o a set of values. It is usually denoted by the Greek letter (Sigma). It is presented as,

$$\sigma = \sqrt{\frac{\sum(X - \overline{X})}{n}}$$

Where,

N= Number of observations

Or,

$$\sqrt{\frac{\sum x_i^2}{n} - \left(\frac{\sum x_i}{n}\right)^2}$$

- **Variance**

Variance is the square of standard deviation. This tool is also used to interpret data with the help of numeric facts. It is denoted by 6^2. It can also be formulize as,

$$\sigma^2 = \frac{\sum(X-\bar{X})^2}{n}$$

- **Coefficient of Variation (C.V.)**

The relative measure of dispersion based on standard deviation is called coefficient of standard deviation. 100 times coefficient of standard deviation is called coefficient of variation. It is used to compare the variability, homogeneity of two or more distributions. High C.V. is more variable or less consistent and vice versa. It is formulizes as,

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

- **Correlation Coefficient Analysis**

This tool interprets the relationship between two or more variables. It shows whether two or more variables are co-related positively or negatively. These following coefficient of correlation which are related to investment policies are as follows,

i. Co-efficient of correlation between deposit and total investment.
ii. Coefficient of correlation between deposit and loan and advances.
iii. Coefficient of correlation between outside assets and net profit.

It is formulized as:

$$r = \frac{N\sum dxdy - (\sum dx)(\sum dy)}{\sqrt{Ndx^2 - (\sum dx)}\sqrt{N\sum dy^2 - (\sum dy)^2}}$$

Or,

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

Where,

N= Number of Observation in series x and y.

$\sum xy$= Sum of the product of observation in series x & y

$\sum x^2$ = Sum of the squared observation in series x

$\sum y^2$ = Sum of the squared observation in series y

- **Trend Analysis**

The trend analysis is used to predict the future. It is a pattern according from the past and it is assumed that the same patterns will occur in future. The following trend analysis has been used in this study.

i. Trend analysis of Total Deposits
ii. Trend analysis of Loan and Advances
iii. Trend analysis of Total Investment
iv. Trend analysis of Net Profit.

Following equation is developed to calculate trend value." Any value of independent variable x, the estimated value of y, denoted by Y_c can be written as,

$Y_c=a+bx$

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

4.1 Data Presentation and Analysis

This chapter includes an analytical part of the study. The major financial performances which are the core to the investment management and fund mobilization are evaluated and analyzed. This chapter provides the major and necessary findings which are very helpful for the subject matter of this study.

4.1.1. Financial Tools

The weakness and the strength of any organization are identified by financial analysis. It is recognized by establishing relationship between the items of the balance sheet. Ratio analysis is done here to analyze the data. Different financial ratios related to the investment management and fund mobilization are discussed and presented to evaluate the performance of two commercial banks i.e. BOK Ltd and NABIL Bank Ltd. The ratios help to evaluate the situation according to the results achieved from those ratios. It is notable that all financial ratios are not studies here in this chapter. The financial ratios which are important form the view point of the investment policy and fund mobilization are calculated and analyzed. The mathematical relationship developed between the financial figures is simply ratio development. These ratios are calculated to focus the relationship between each item. The important ratios from the view of investment policy are given below.

a. Liquidity ratio
b. Asset management ratio
c. Profitability ratio
d. Risk ratio
e. Growth ratio

a. Liquidity Ratio

Liquidity ratio measures the capacity of the firm to meet its cash urgency and obligation. It is very certain that community may demand for the withdraws for deposited, pay their obligation at the maturity time, conversion of non-cash assets into cash by not losing anything in the real value. So the commercial banks must maintain satisfactory liquidity position. Liquidity position is highlighted and observed by establishing relationship between cash and current assets to current obligation. Liquidity position of BOK Ltd and NABIL Bank ltd. are studied comparatively through following ratios:

- **Current Ratio**

It is the relationship of current assets and current liabilities. Current assets can be converted into cash with in short period of time normally not exceeding one year. Current liabilities are those obligation which are payable with in short period. Current assets consist of each and banks balance money at call or short terms notice, loan and advances investment in government securities and other interest receivable and other miscellaneous current assets. Current liabilities consist of deposits, loan and advances, bills payable. Tax provision, staff bonus, dividend payable and miscellaneous current liabilities.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Here,

Current Assets=

Cash and Bank Balance + Money at Call and Short Notice+ Loan and Advances+ Investment +Interest Receivable +Miscellaneous Current Assets

Current Liabilities =

Deposits and Other Accounts + Short Term Loan + Bills Payable + Tax Provision + Staff Bonus + Dividend Payable + Miscellaneous Current Liabilities

The current ratios of BOK Ltd. and NABIL from the year 2008/09 the table number 4.1

Table 4.1

Current Ratio

(In Times)

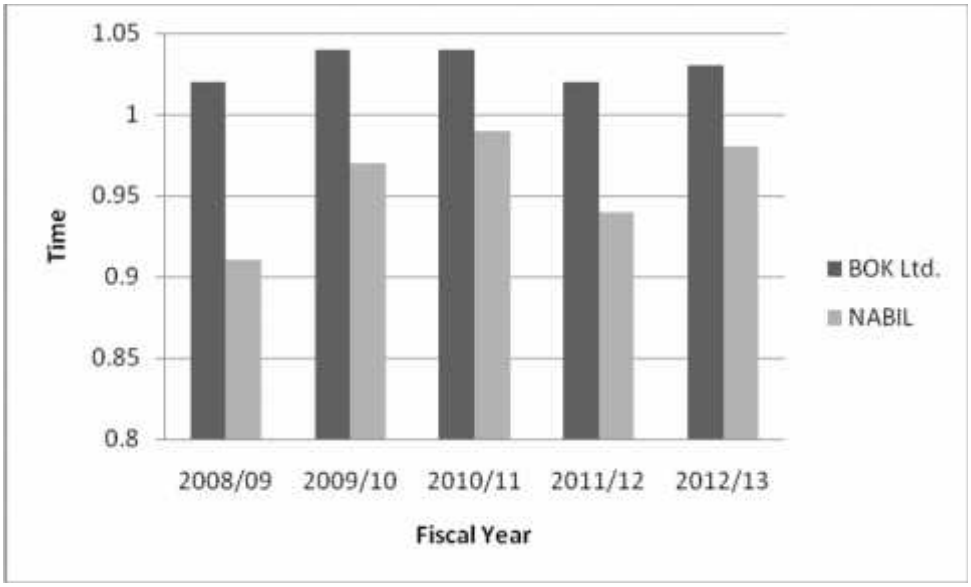
Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	1.02	0.91
2009/10	1.04	0.97
2010/11	1.04	0.99
2011/12	1.02	0.94
2012/13	1.03	0.98
Mean	1.03	0.96
Standard Deviation (S.D.)	0.03	0.015
Coefficient of Variation (C.V.)	2.91	1.56

Source: Appendix 1

In the table 4.1 current ratio of sample banks are analyzed. The current ratios of these banks are in fluctuating trend through out the period of study. Although in specific the ability to discharge the current liabilities are not very convincing because NABIL has its current ratio less than one but BOK Ltd has it ratio more than one in study periods. The current ratio of BOK Ltd is in increasing trend from fiscal year 2008/09 to 2010/11 but later it has decreased in the year 2011/12 by 0.02 and decreased in the year 2012/13 by 0.01. Similarly NABIL has also increasing trend from the fiscal year 2008/09 to 2010/11 but it has decreased in the consecutive years. On the basis of mean ratio, NABIL has lower ratio of 0.96 compared to 1.03 of BOK Ltd. It shows that the liquidity BOK Ltd. is better than that of NABIL. In these study periods BOK Ltd. has highest current ratio in the year 2009/10 whereas NABIL in the year 2010/11. The coefficient of variation of BOK Ltd. is 2.91% which is higher than NABIL's 1.56%. Thus it can be said that current ratio of BOK Ltd. is less consistent than NABIL.

Figure 4.1

Current Ratio of Banks



In the figure 4.1 current ratio of sample banks are analyzed. The current ratios of these banks are in fluctuating trend through out the period of study.

The current ratio of BOK Ltd is in increasing trend from fiscal year 2008/09 to 2010/11 but later it has decreased in the year 2011/12 by 0.02 compared with the first year. Similarly NABIL has also increasing trend from the fiscal year 2008/09 to 2010/11 but it has decreased in the consecutive years.

- **Cash and Bank Balance to Total Deposit Ratio**

Cash and Bank balance are those assets which include cash in hand, foreign cash, cheques and other cash items and also bank balance with domestic financial institutions. This ratio assures that the specific institution can meet its unanticipated call on every type of deposits. The highly liquid assets are measured in this ratio which is essential to meet the demand for cash. Higher ratios are desired. This ratio is expressed as,

$$\text{Cash and Bank Balance to Total Deposits Ratio} = \frac{\text{Cash \& Bank Balance}}{\text{Total Deposits}}$$

Here,

Cash and Bank Balance = Local Currency +Foreign Currency + Current Account + Other Account

Total Deposits = Saving Deposit + Fixed Deposit + Call Deposit + Certificate of Deposit

The table 4.2 shows cash and bank balance to total deposit ratio of BOK Ltd. and NABIL from the Fiscal Year 2008/09 to 2012/13.

Table 4.2

Cash and Bank Balance to Total Deposit Ratio

(In Percentage)

Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	12	9
2009/10	9	3
2010/11	8	2
2011/12	14	8
2012/13	15	9
Mean	11.6	6.2
Standard Deviation (S.D.)	2.73	3.06
Coefficient of Variation (C.V.)	23.53	49.35

Source: Appendix 2

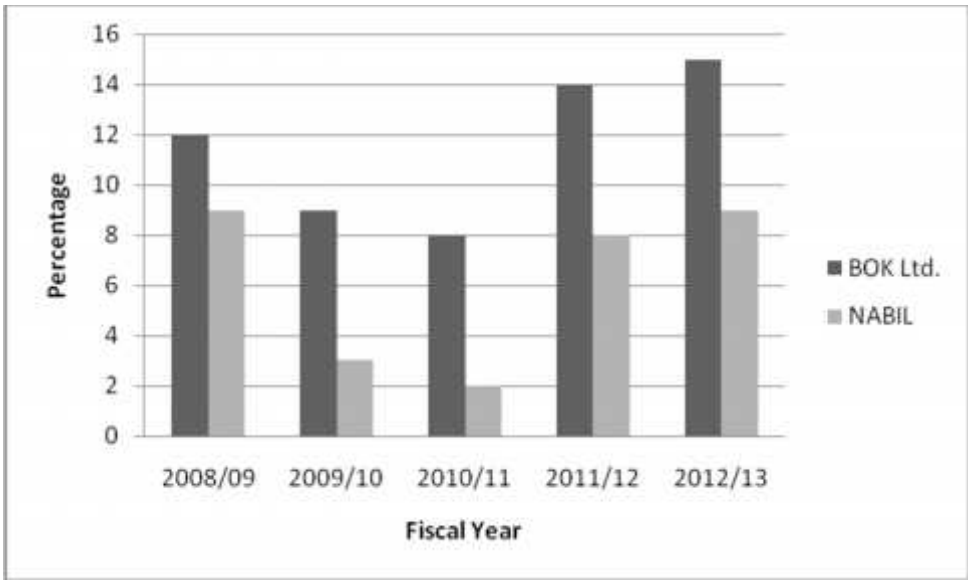
The table 4.2 shows that the cash bank balance to total deposit ratio of BOK Ltd. has fluctuating and decreasing trend. It's highest ratio is 15% in the Fiscal year 2012/13 and lowest in the year 2010/11 which is 8%. Similarly in the case of NABIL too the ratios are decreasing from the fiscal year 2008/09 to 2010/11. The highest ratio of NABIL is 9% in the fiscal year 2008/09 and 2012/2013 and lowest in the year 2010/11 which is 2%.

In case of average, it is found that the mean ratio of BOK Ltd. is 11.6% and 6.2% of NABIL. The standard deviation of BOK is lower than that of NABIL. The coefficient of variation of BOK is 23.53% and NABIL has 49.35%.

The above analysis helps to conclude that BOK has better position of cash and bank balance because it has maintain higher mean ratio. The coefficient of variation of NABIL is higher than BOK which shows that BOK position is more stable than NABIL.

Figure 4.2

Cash and Bank Balance to Total Deposit Ratio



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- **Cash and Bank Balance to Current Asset Ratio**

This ratio measure the part of most liquid form current asset. Higher ratios are desired and the higher ratios indicates the higher ability of the banks to meet it's daily cash requirement against their customer deposit. Quick payment to the customer's deposit in only possible when the bank has got more liquid assets. Here bank has to be very careful to maintain an average position because if a bank maintains higher ratio of cash surely it has to pay much more interest on deposit

which will increase the cost of a fund. Lower ratios are also dangerous because banks fail to make the urgent cash requirement to it's customers presented by cheques. So appropriate funds are needed in the form of reserve.

This ratio is presented as,

$$\text{Cash and Bank Balance to Current Asset Ratio} = \frac{\text{Cash and Bank Balance}}{\text{Current Assets}}$$

Here,

Cash and Bank Balance = Local Currency + Foreign Currency
+ Current Account + Other Account

Current Assets =
Cash and Bank Balance + Money at Call and Short Notice + Loan and Advances+ Investment +Interest Receivable +Miscellaneous Current assets

The table 4.3 shows the cash and bank balance to current asset ratio of BOK and NABIL form the fiscal year 2008/09 to 2012/13.

Table 4.3

Cash and Bank Balance to Current Asset Ratio

(In Percentage)

Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	11	9
2009/10	8	3
2010/11	7	4
2011/12	2	7
2012/13	4	9
Mean	6.4	6.4
Standard Deviation (S.D.)	3.14	2.5
Coefficient of Variation (C.V.)	49.06%	39.06%

Source: Appendix 3

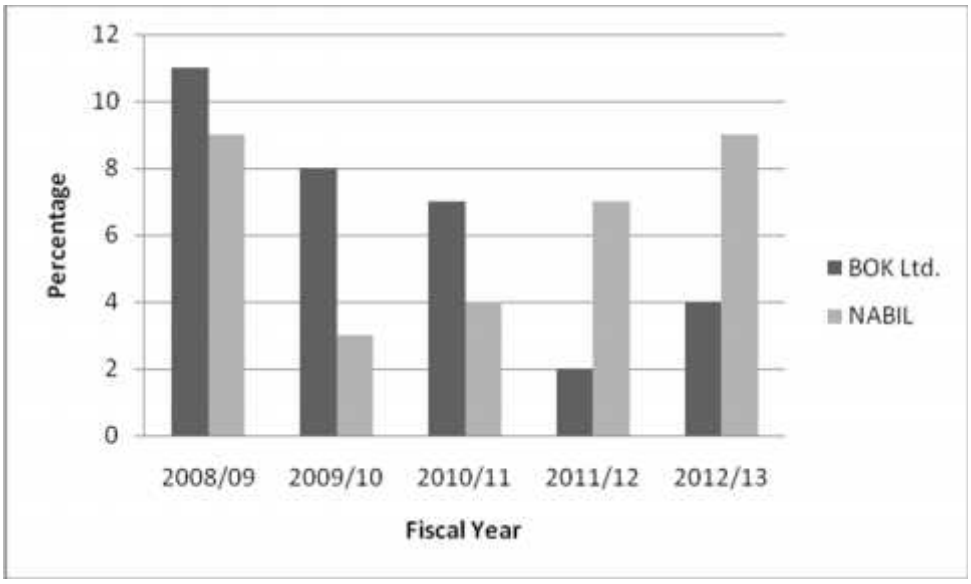
The table 4.3 shows that the cash and bank balance to current assets ratios of both banks BOK and NABIL are in fluctuating trend during the study period. BOK has maintained a highest ratio of 11% in the fiscal year 2008/09. The lower ratio of 2%

is achieved in the fiscal year 2011/12. Similarly in case of NABIL the highest ratio is 9% in the fiscal year 2008/09 and 2012/13 and lowest of 3% in the year 2009/10.

In case of mean ratio BOK and NABIL have same 6.4%. It shows that the liquidity position of both banks is same position. The coefficient of variance between the ratios of BOK is 49.06% which is higher than 39.06% of NABIL bank. It shows that the ratios of BOK are less consistent and stable than NABIL bank.

Figure 4.3

Cash and Bank Balance to Current Assets Ratio



The figure 4.3 shows that the cash and bank balance to current assets ratios of both banks BOK and NABIL are in fluctuating trend during the study period. BOK has maintained a highest ratio of 11% in the fiscal year 2008/09. The lower ratio of 2% is achieved in the fiscal year 2011/12. Similarly in case of NABIL the highest ratio is 9% in the fiscal year 2008/09 and 2012/13 and lowest of 3% in the year 2009/10.

- **Investment on Government Securities to Current Assets Ratio**

The major execution of this ratio is to inform the portion of current assets invested on government securities i.e. treasury bills, government bonds etc. Commercial bank are always committed to incest their collected funds on different types of

government securities. Government securities are also known as risk free assets which mature in a specific period of time. However government securities are not considered as much liquid asset than cash and bank balance but they too can be easily converted into cash. The simple fact about investment is that commercial banks are more profit seekers. So most of the commercial banks invest their excess fund on government securities for the diversification of investment.

It is stated as,

Investment on government securities to Current Asset Ratio=

$$\frac{\text{Investment on Government Securities}}{\text{Current Assets}}$$

Here,

Investment on Government Securities =

Nepal Government Treasury Bills + Nepal Government Saving Bonds + Nepal Government Other Securities + Nepal Bank Bonds

Current Assets =

Cash and Bank Balance + Money at Call and Short Notice + Loan and Advances + Investment +Interest Receivable +Miscellaneous Current Assets

The table 4.4 shows the investment on government securities to current asset ratio of BOK and NABIL form the fiscal year 2008/09 to 2012/13.

Table 4.4

Investment on Government Securities to Current Assets Ratio

(In Percentage)

Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	9	10
2009/10	13	17
2010/11	17	16
2011/12	18	13
2012/13	15	11
Mean	14.4	13.4
Standard Deviation (S.D.)	3.50	2.74

Coefficient of Variation (C.V.)	24.30%	20.37%

Source: Appendix 4

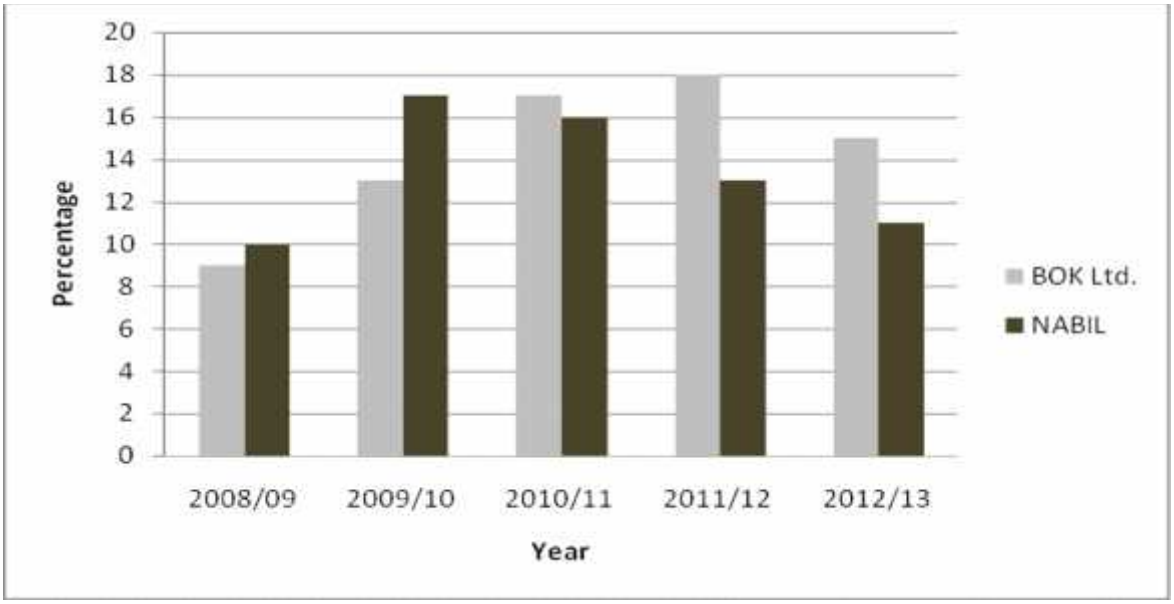
The table 4.4 shows that the investment on government securities to current ratio of BOK has followed a fluctuating trend and NABIL has followed a decreasing trend from the fiscal year 2009/10 to 2012/13. BOK has maintained the highest ratio of 18% in the fiscal year 2011/12 and lowest of 9% in the fiscal year 2008/09. in case of NABIL bank it has maintained highest ratio of 17% in the fiscal year 2009/10 and lowest of 10% in the fiscal year 2008/09.

The mean ratio of BOK is 14.4% which is higher that 13.4% of NABIL bank. It means that BOK has invested more amount of it's current assets to government securities and NABIL has invested more amount of it's current assets in government securities. Form the result achieved from co-efficient of variation of ratios it is concluded that BOK has got higher variation because NABIL has got 20.37% which is less than BOK's 24.30%. The ratios of BOK are more inconsistent than NABIL.

Comparatively it can be said that NABIL has invested more portion of it's current assets in government securities which is a good symptom. The liquidity position from investment on government securities of NABIL is much better than BOK bank.

Figure 4.4

Investment on Government Securities to Current Assets



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- **Loan and Advances to Current Assets Ratio**

Loan and advances includes short and long term loans, overdrafts and cash credit. Commercial banks must not put all their collected funds into reserve or cash and bank balance. In order to generate income bank must invest its fund in form of loan and advances to its customers. If reasonable part of loan and advances cannot be granted the banks are obliged to pay interest on unutilized deposits. If high volume of loan and advances are granted then too it is a threat to the bank because every loan matures in a specific period of time. From that reason banks may not have enough cash or it could not be in most liquid position.

It is expressed as,

$$\text{Loan and Advances to Current Asset Ratio} = \frac{\text{Loan and Advances}}{\text{Current Assets}}$$

Here,

Loan and Advances = Total Loan - Total Provisioning

Total Loan = Performing Loan + Non Performing Loan

Total Provisioning = Provisioning up to Previous Year

Current Assets =

Cash and Bank Balance + Money at Call and Short Notice+ Loan and Advances+ Investment +Interest Receivable +Miscellaneous Current Assets

The table 4.5 shows the loan and advances to current assets ratio of BOK and NABIL from the fiscal year 2008/09 to 2012/13.

Table 4.5

Loan and Advances to Current Assets Ratio

(In Percentage)

Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	77	73
2009/10	74	69
2010/11	73	69
2011/12	66	70
2012/13	70	69
Mean	72	70
Standard Deviation (S.D.)	3.74	1.55
Coefficient of Variation (C.V.)	5.19%	2.21%

Source: Appendix 5

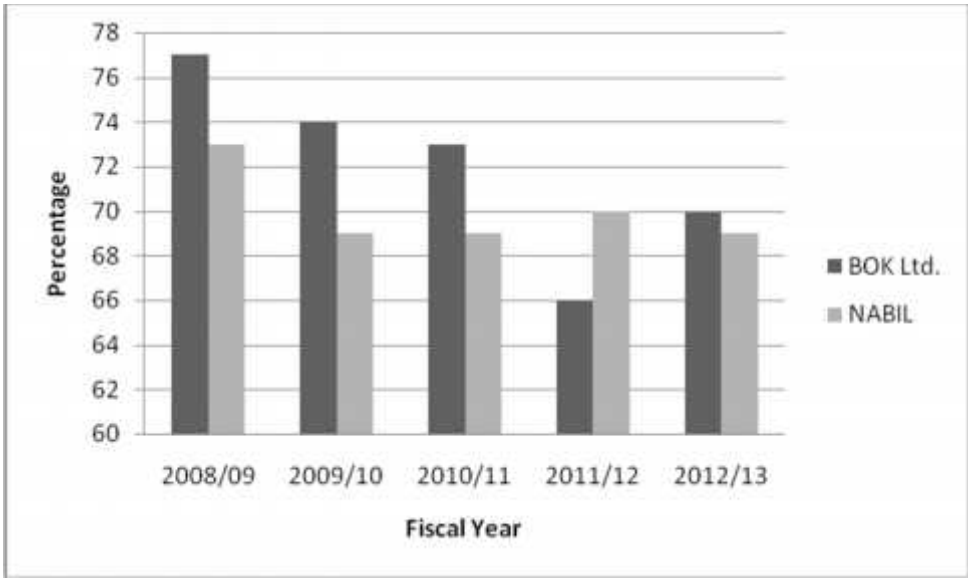
The table 4.5 shows that the loan and advances to current assets ratio of both banks have followed a fluctuating trend BOK has maintained highest ratio of 77% in the fiscal year 2008/09 and lowest of 66% in the fiscal year 2011/12. Similarly NABIL has maintained it's highest ratio of 73% in the fiscal year 2008/09 and lowest of 69% in the fiscal year 2009/10, 2010/11 and 2012/13.

While analyzing the mean ratio BOK has maintain a higher ratio of 72% than NABIL's 70%. There is only slightly difference in the ratio and it can be said that both banks have used their funds appropriately. The coefficient of variation of

BOK is 5.19% which is higher than NABIL's 2.21%. It shows that BOK's ratios are more inconsistent than NABIL's ratios.

Comparatively the sample bank BOK Ltd and NABIL's has effectively utilized their funds on loan and advances. However the higher mean ratio of BOK Ltd tells that it has used fewer funds than NABIL bank in loan and advances. More loan and advances too create problem at the time to meet it's current obligation, so one has to be very careful about that.

Figure 4.5
Loan and Advances to Current Asset Ratio



The figure 4.5 shows that the loan and advances to current assets ratio of both banks have followed a fluctuating trend BOK has maintained highest ratio of 77% in the fiscal year 2008/09 and lowest of 66% in the fiscal year 2011/12. Similarly NABIL has maintained it's highest ratio of 73% in the fiscal year 2008/09 and lowest of 69% in the fiscal year 2009/10, 2010/11 and 2012/13.

b. Asset Management Ratios

Assets management ratio delivers the various answers about whether the amount of assets seen in the balance sheet is too high, reasonable or too low. Too much assets increases interest expenses. Profit is always reduced by too much assets and too low assets cannot assure profit too and it may be lost. So the main objective of asset management is to manage it's assets in profitable and satisfactory way.

- **Total Investment to Total Deposit Ratio**

Investing in government securities, other financial institutions, non-financial sectors are also a very promising way to achieve the profit seeking objective. These investments are done by utilizing the part of the total deposit. This ratio examines whether the banks are investing it's deposit portion to a different securities. Investment is always welcomed and encouraged by these commercial banks.

It is expressed as,

$$\text{Total Investment to Total Deposit Ratio} = \frac{\text{Total Investment}}{\text{Total Deposit}}$$

Here,

Total Investment = Investment in Government Securities + Others + Investment in Shares + Debentures + Others

Total Deposits = Saving Deposit + Fixed Deposit + Call Deposit + Certificate of Deposit

The table 4.6 shows the percentage of total investment to total deposit ratio of BOK Ltd and NABIL from fiscal year 2008/09 to 2012/13.

Table 4.6

Total Investment to Total Deposit Ratio

(In Percentage)

Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	15	29
2009/10	16	29
2010/11	20	26
2011/12	21	26
2012/13	17	26
Mean	17.8	27.2
Standard Deviation (S.D.)	2.32	1.47
Coefficient of Variation (C.V.)	13.03%	5.40%

Source: Appendix 6

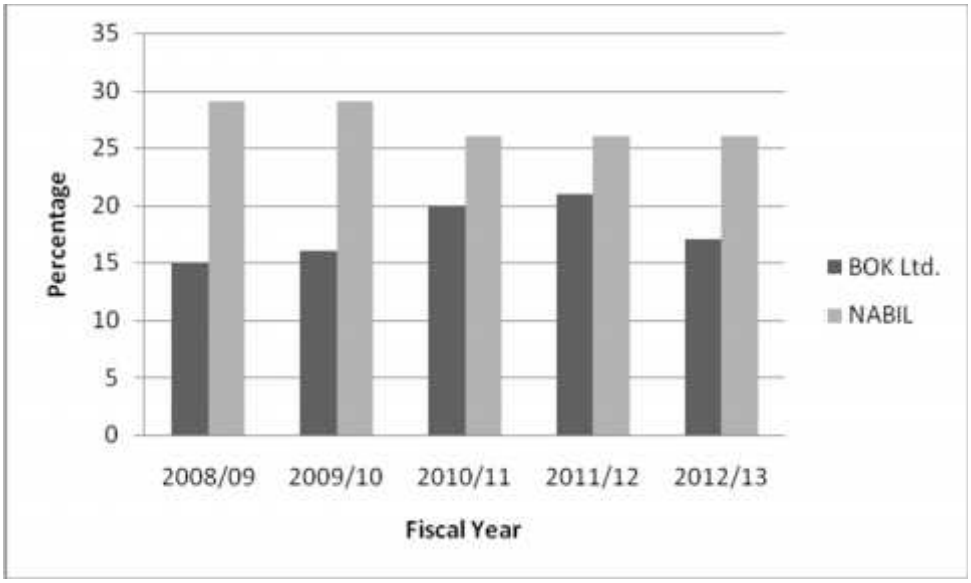
The comparative table shows that the ratio of total investment to total deposit ratio of both banks are in fluctuating trend. BOK Ltd has highest ratio 21% in the fiscal year 2011/12 and lowest of 15% in the fiscal year 2008/09. Similarly NABIL has highest ratio of 29% in the fiscal year 2002/03 and 2009/10 and lowest of 26% in the fiscal year 2010/11 to 2012/13.

The mean ratio of BOK Ltd is 17.8% which is lower than NABIL's 27.2%. It can be said that both banks have not been very keen to invest from their available funds. However NABIL has investment more portion of it's total deposit. The coefficient of variation of BOK Ltd is 13.03%. The ratios of BOK Ltd are more homogeneous due to it's low coefficient of variation.

Comparatively both banks are not utilizing their enough funds for the investments as mean ratios of both banks are lower i.e. 17.8% of BOK Ltd and 27.2% of NABIL. Both banks must invest more portion of it's deposit to diversify the reserves.

Figure 4.6

Total Investment to Total Deposit Ratio



The figure 4.6 shows that the ratio of total investment to total deposit ratio of both banks are in fluctuating trend. BOK Ltd has highest ratio 21% in the fiscal year 2011/12 and lowest of 15% in the fiscal year 2008/09. Similarly NABIL has highest ratio of 29% in the fiscal year 2002/03 and 2009/10 and lowest of 26% in the fiscal year 2010/11 to 2012/13.

c. Profitability Ratio

Profitability ratio analyzes the efficiency of firms or industries based upon profit. Profit is one of the most common indicators of a firm. It easily measures the financial performance. Profits are generated by providing different facilities to its customer. Profit can give prosperity to facilities to it's customer. Profit can give prosperity to any organization by expanding it's branches financing different investment opportunities, grabbing new investment opportunities etc. higher profitability ratio shows the efficiency of the management as well as of entire organization.

- **Return on Loan and Advance Ratio**

This ratio measures the earning capacity of bank on it's mobilization of deposit on loan and advances head. The effect of deposit on loan and advances must always

create return. Loan and advances include loan, cash credit, overdraft, bills purchased and discounted.

This ratio is calculated b dividing net income by total assets which is formulated as,

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

Here,

Net Profit After Tax=Expenses-Income

Expenses = Interest Expenses + Personal Expenses + Provision for Possible Losses+ Provision for Staff Bonus + Book Write Off

Income = Interest Income + Non Performing Income + Commission and Discount + Other Operating Income + Exchange Income

The table 4.7 shows the ratio of return on loan and advances ratio from fiscal year 2008/09 to 2012/13.

Table 4.7

Return on Loan and Advances Ratio

(In Percentage)

Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	3	4
2009/10	3	3
2010/11	4	3
2011/12	3	4
2012/13	3	5
Mean	3.2	3.8
Standard Deviation (S.D.)	0.4	0.75
Coefficient of Variation (C.V.)	12.5%	19.74%

Source: Appendix 7

The table shows that the return on loan and advances ratio of both banks have fluctuating trend. BOK Ltd has maintained it's highest ratio of 4% in the fiscal year 2010/11 and the lowest ratio is 3% in the fiscal year 2008/09, 2009/10, 2011/12 and 2012/13 respectively. NABIL has maintained it's highest ratio of 5%

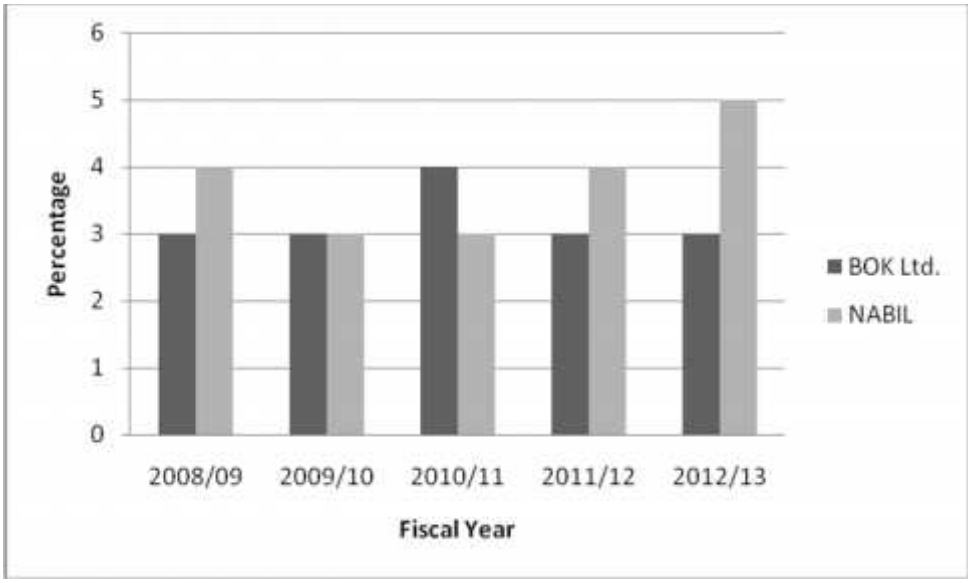
in the fiscal year 2012/13 and lowest of 3% in the fiscal year 2009/10 and 2010/11 respectively.

The mean ratio of BOK Ltd is 3.2% which is lower than NABIL's 3.8%. NABIL bank has maintained it's profit level to it's highest against BOK. The coefficient of variation of BOK Ltd is 12.5% and NABIL has 19.74%. So the ratios of NABIL are more variable and less consistent than BOK.

It can be said that the profit of return generating capacity of BOK Ltd is not at satisfactory level as compared to NABIL bank. Mean ratios an coefficient of variation are in favor of NABIL bank.

Figure 4.7

Return on Loan and Advances Ratio



The figure 4.7 shows that the return on loan and advances ratio of both banks have fluctuating trend. BOK Ltd has maintained it's highest ratio of 4% in the fiscal year 2010/11 and the lowest ratio is 3% in the fiscal year 2008/09, 2009/10, 2011/12 and 2012/13 respectively. NABIL has maintained it's highest ratio of 5% in the fiscal year 2012/13 and lowest of 3% in the fiscal year 2009/10 and 2010/11 respectively.

- **Return on Total Assets Ratio (ROA)**

It is also known as return on asset. This ratio measures the profit earning capability of any organization. When the total assets are mobilized in different forms for investment there is always a necessity of earning profit. Net profit is that part of profit which is left after all the charge and expenses cast. Every banks are therefore encouraged to manage its working fund which generates higher return. To increase the profit legal minimizing system are very useful.

This ratio is calculated b dividing net income by total assets which is formulated as,

$$\text{Return on Total Assets} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}}$$

Here,

Net Profit After Tax=Expenses-Income

Expenses = Interest Expenses + Personnel Expenses + Provision for Possible Losses+ Provision for Staff Bonus + Book Write Off

Income = Interest Income + Non Performing Income + Commission and Discount + Other Operating Income + Exchange Income

Total Working Fund = Current Assets + Fixed Assets + Loans for Development Bank + Investment + Miscellaneous Assets

The table 4.8 shows the ratios of return on total working fund ratio from the fiscal year 2008/09 to 2012/13.

Table 4.8

Return on Total Assets Ratio

(In Percentage)

Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	2	2
2009/10	2	2
2010/11	2	2
2011/12	2	2
2012/13	2	3
Mean	2	2.2
Standard Deviation (S.D.)	0	0.4
Coefficient of Variation (C.V.)	0	18.18%

Source: Appendix 8

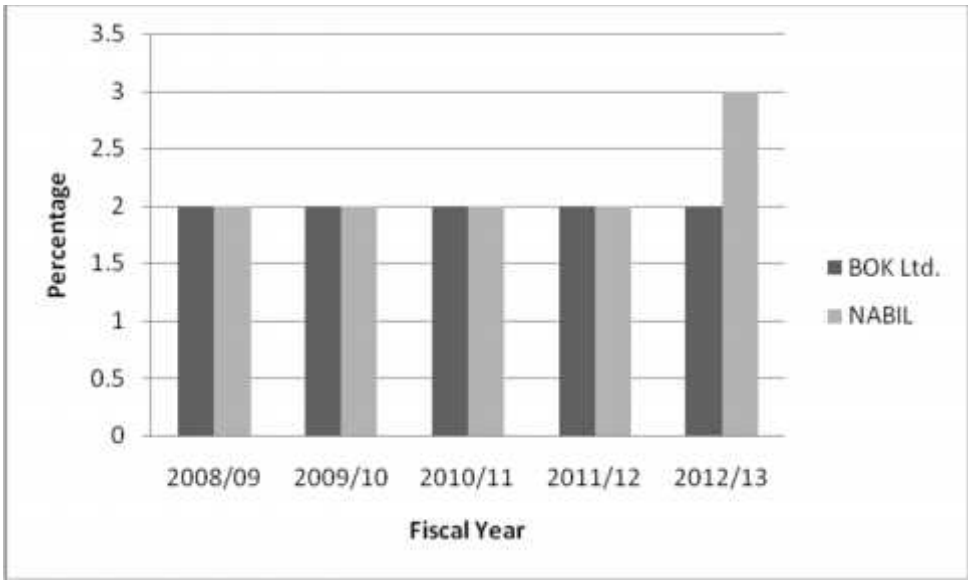
The comparative table indicates that BOK Ltd's ratio of return on total working fund has followed same trend. However NABIL's ratios are fluctuated. Even though there is fluctuation the ratios are very impressive and higher profit than BOK Ltd. BOK Ltd has it's same ratio of 2% in the fiscal year 2008/09 to 2012/13. Similarly NABIL has it's highest ratio of 3% in the fiscal year 2012/13 and lowest of 2% in the fiscal year 2008/09 to 2011/12.

In case of mean ratio BOK Ltd has recorded 2% which is lower than 2.2% of NABIL bank. The coefficient of variation of NABIL is 0.4% which is higher than BOK's 0%. It indicates that the ratios of return on total working fund of NABIL are less consistent than BOK.

From this analysis it can be said that BOK Ltd has weaker position than NABIL in terms of profit. The mean ratio and coefficient of variation are in favor of NABIL bank, which shows NABIL is best in terms of profitability.

Figure 4.8

Return on Total Assets Ratio



The figure 4.8 indicates that BOK Ltd's ratio of return on total assets has followed same trend. However NABIL's ratios are fluctuated. Even though there is fluctuation the ratios are very impressive and higher profit than BOK Ltd. BOK Ltd has it's same ratio of 2% in the fiscal year 2008/09 to 2012/13. Similarly NABIL has it's highest ratio of 3% in the fiscal year 2012/13 and lowest of 2% in the fiscal year 2008/09 to 2011/12.

d. Risk Ratio

Risk is inevitable in any kind of investment. The risk is taken to get maximum return on it's investment. Higher risk's assures higher profit but the level of risk has to be clearly understood. Without any prospect of return if higher risk is taken then the organization surely fails to recover it's investment and can occur huge losses. Thus investment has been very challenging these days.

- **Credit Risk Ratio**

The primary and general concept of bank is that it utilizes it's collected funds in various prospective sectors which may generate higher return. Credit risk ratio

measures the risk involved while making investment or granting loans. The bad debt creates choose and it badly hurts the heart of financial systems.

It is calculated by dividing loan and advances by total assets and is formulized as,

$$\text{Credit Risk Ratio} = \frac{\text{Total Loan and Advances}}{\text{Total Assets}}$$

Here,

Total Loan and Advances = Loans and Advances and Overdraft + Bills Purchased and Discounted

Total Assets =

Current Assets + Fixed Assets + Loans for Development Bank + Investment + Miscellaneous Assets

The table 4.9 shows credit risk ratio of BOK and NABIL from the Fiscal year 2008/09 to 2012/13.

Table 4.9

Credit Risk Ratio

(In Percentage)

Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	71	61
2009/10	70	60
2010/11	67	63
2011/12	61	60
2012/13	65	61
Mean	66.8	61
Standard Deviation (S.D.)	3.6	1.1
Coefficient of Variation (C.V.)	5.39%	1.80%

Source: Appendix 9

The comparative table shows the credit risk ratio of both bank have followed a fluctuating trend. BOK Ltd has highest ratio of 71% in the fiscal year 2008/09 and lowest of 61% in the fiscal year 2011/12. In case of NABIL it has highest ratio of

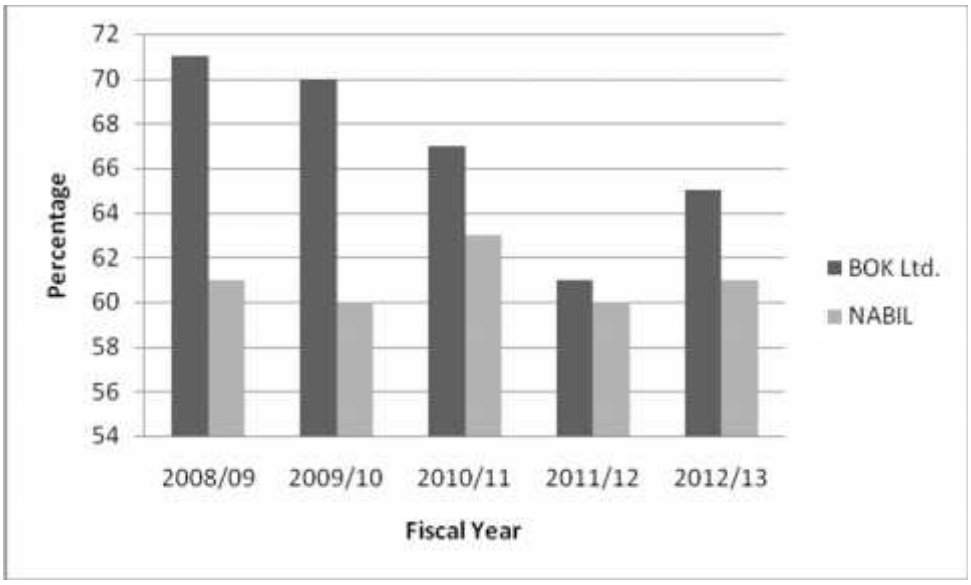
63% in the fiscal year 2010/11 and lowest of 60% in the fiscal year 2009/10 and 2011/12 respectively.

The mean ratio of BOK Ltd is 66.8% which is higher than NABIL's 61%. It can be said that the credit risk of NABIL is lower than BOK Ltd. The coefficient of variation shows that NABIL has 1.80% which is lower than 5.39% of BOK. BOK's ratios are more variable then NABIL Ltd's ratio.

So it can be said that the more risk factor is attached with the bank BOK Ltd but the ratio's of BOK Ltd are consistent.

Figure 4.9

Credit Risk Ratio



The figure 4.9 shows the credit risk ratio of both bank have followed a fluctuating trend. BOK Ltd has highest ratio of 71% in the fiscal year 2008/09 and lowest of 61% in the fiscal year 2011/12. In case of NABIL it has highest ratio of 63% in the fiscal year 2010/11 and lowest of 60% in the fiscal year 2009/10 and 2011/12 respectively.

- **Capital Fund To Risk Weighted Assest Ratio**

Capital fund to risk weighted assest ratio measure the ability of banks to attract deposits and inter-bank funds. It too determines the level of profit. High ratio

indicates higher risk as well as higher risk and vice-versa. Bank can earn more if banks choose to take high capital risk.

This ratio is calculated by dividing share capital by risk weighted assets and is presented as,

$$\text{Capital Fund To Risk Weighted Assest Ratio} = \frac{\text{Share Capital}}{\text{Risk Weight Assets}}$$

Here,

Share Capital = Ordinary Share + Bonus Share + Preference Share

Risk Weighted Assets = On Balance Sheet Assets + Off Balance Sheet Assets

On Balance Sheet Items = Cash Balance + Deposit Receipt + Money at Call + Fixed Assets + Balance at Foreign Banks etc

Off Balance Sheet Items = Bills Collection + Bid Bond + Financial Guarantee + Performance Bond + Contingent Tax Liability

The table 4.10 shows the capital risk ratio of BOK Ltd and NABIL from the fiscal year 2008/09 to 2012/13.

Table 4.10

Capital Fund to Risk Weighted Assest Ratio

(In Percentage)

Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	11.91	11.71
2009/10	11.45	11.61
2010/11	11.62	11.75
2011/12	12.58	12.71
2012/13	12.62	13.17
Mean	12.036	12.19
Standard Deviation (S.D.)	0.48	0.63
Coefficient of Variation (C.V.)	4.02%	5.18%

Source: Appendix 10

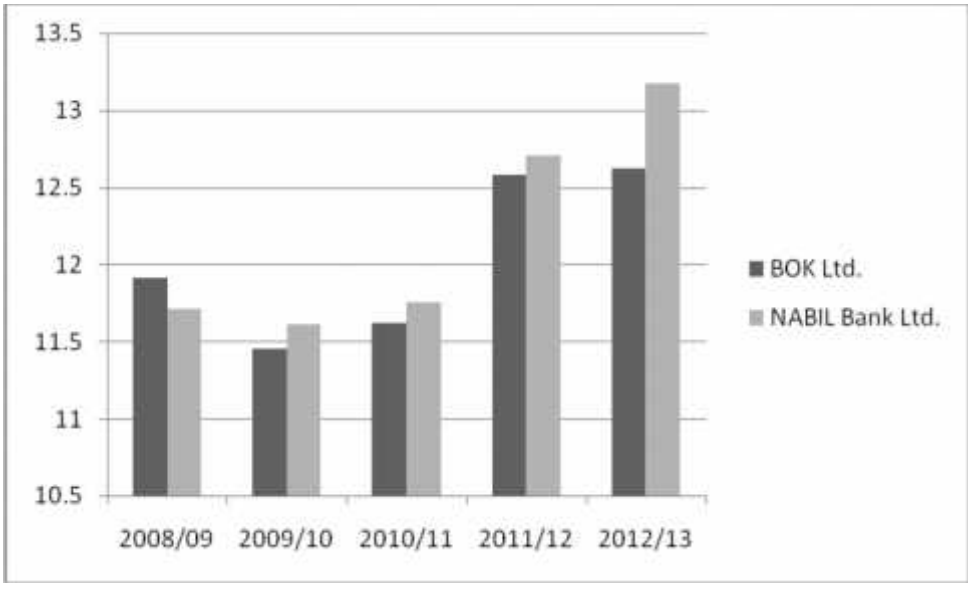
From the comparative table the capital fund to risk weighted assest ratios of both banks have followed a fluctuating trend. The highest ratio of BOK Ltd is 12.62% in fiscal year 2012/13 and lowest ratio is 11.45% in the fiscal year 2009/10 . NABIL Bank Ltd. has highest ratio of 13.17% in the fiscal year 2012/13 and lowest of 11.61% in the fiscal year 2009/10.

Mean ratio of NABIL Bank Ltd is 12.19% which is higher than BOK Ltd is 12.036%. Coefficient of variance of BOK Ltd is 4.02% and NABIL Bank Ltd.has 5.18%.

It can be said that the risk of BOK Ltd is high and the ratios of BOK are inconsistent. To gain high return the risk level should be high so the position of BOK is better.

Figure 4.10

Capital Fund To Risk Weighted Assest Ratio



From the comparative table the capital risk ratios of both banks have followed a fluctuating trend. The highest ratio of BOK Ltd is 12.62% in fiscal year 2012/13 and lowest ratio is 11.45% in the fiscal year 2009/10 . NABIL Bank Ltd. has highest ratio of 13.17% in the fiscal year 2012/13 and lowest of 11.61% in the fiscal year 2009/10.

e. Growth Ratios

Growth ratio simply indicates the fluctuation of figure on the basis of past data. Growth ratios are analyzed to know the situation of fund mobilization and investment management of bank. Higher ratios are the indicators of excellent performance. It also shows that now much growth has been in deposit supported by growth in investment, loan and advances etc. This clearly shows the balance between assets and liabilities.

Table 4.11

Growth Ratio of Total Deposits

(Rs. In million)

Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	18083.9	37348.3
2009/10	20315.8	46334.8
2010/11	21018.4	49691.4
2011/12	24991.4	55023.7
2012/13	27701.0	63611.3
Growth Rate	11.25%	14.24%

Source: Appendix 11

The comparative table 4.11 shows that the growth ratios of deposits of BOK Ltd are 11.25% and 14.24% of NABIL. So from this increment in percentage it indicates that BOK has poor collection of deposits than NABIL. The growth pattern of NABIL is very impressive than BOK though both of them should try to increase their deposit level.

Figure 4.11

Growth Ratio of Total Deposits

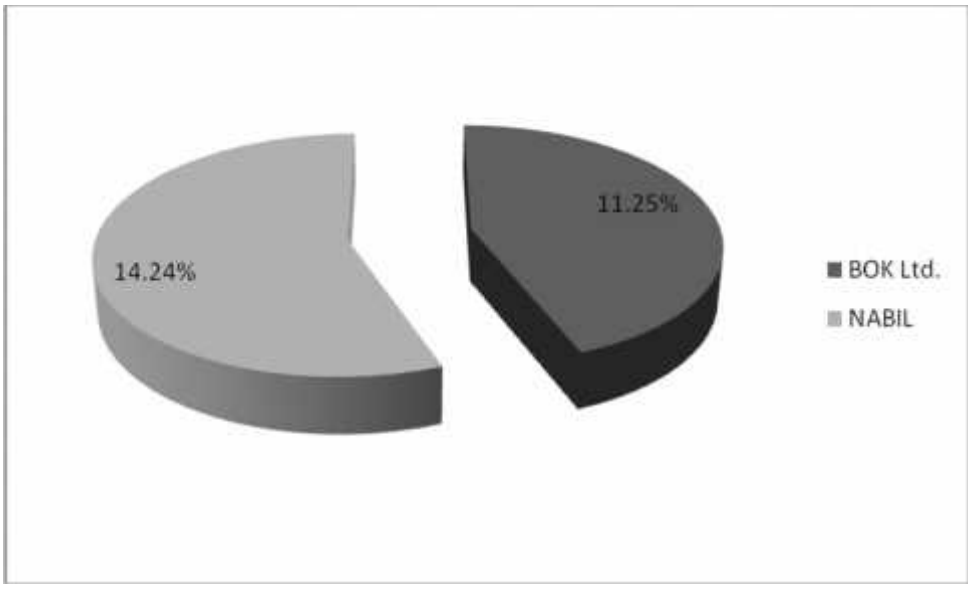


Figure 4.11 shows that the growth ratios of deposits of BOK Ltd are 11.25% and 14.24% of NABIL. So from this increment in percentage it indicates that BOK has poor collection of deposits than NABIL. The growth pattern of NABIL is very impressive than BOK though both of them should try to increase their deposit level.

Table 4.12

Growth Ratio of Loan and Advances

Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	14894.7	27816.6
2009/10	16847.1	32902.8
2010/11	17247.8	38765.6
2011/12	18064.1	42731.7
2012/13	21805.7	47522.9
Growth Rate (%)	10%	14.33%

Source: Appendix 11

The comparative table 4.12 shows the growth ratio of loan and advances of BOK has 10% growth rate which is lower than NABIL's 14.33%. Though both of them

have tried to mobilize their loan and advances BOK seem little unsuccessful in comparison to NABIL.

Figure 4.12

Growth Ratio of Loan and Advances

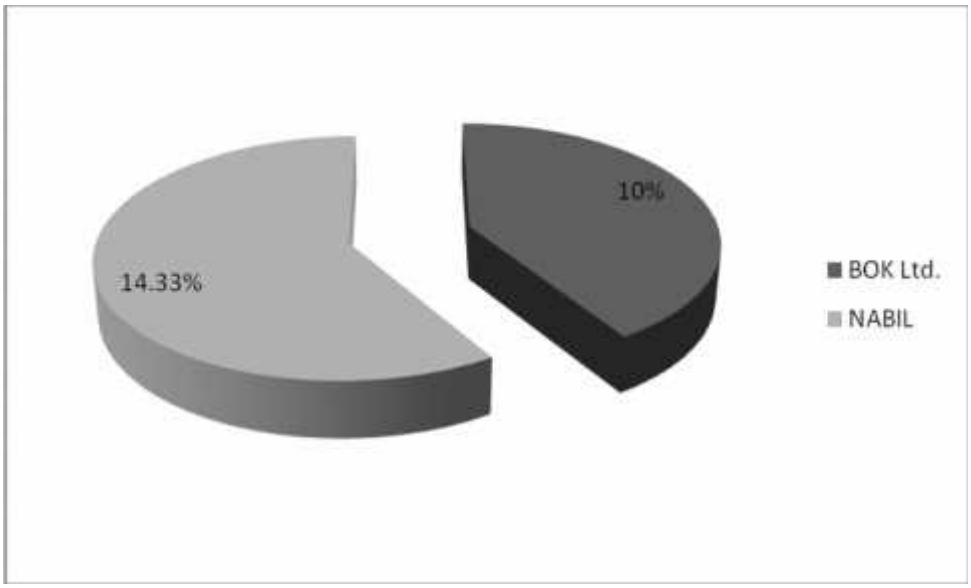


Figure 4.12 The comparative table 4.12 shows the growth ratio of loan and advances of BOK has 10% growth rate which is lower than NABIL's 14.33%. Though both of them have tried to mobilize their loan and advances BOK seem little unsuccessful in comparison to NABIL.

Table 4.13

Growth Ratio of Total Investment

Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	2774.4	10875.0
2009/10	3269.2	13612.1
2010/11	4283.6	13082.8
2011/12	5246.7	14074.9
2012/13	4757.8	16348.4
Growth Rate (%)	14.43	10.72

Source: Appendix 11

The comparative table 4.13 shows the growth ratio of total investment which has been compared. The growth rate of BOK Ltd is higher than NABIL bank. BOK Ltd has maintained 14.43% and NABIL has 10.72%. So from the growth in total investment view BOK Ltd has better utilization of it's fund in total investment compared with NABIL.

Figure 4.13

Growth Ratio of Total Investment

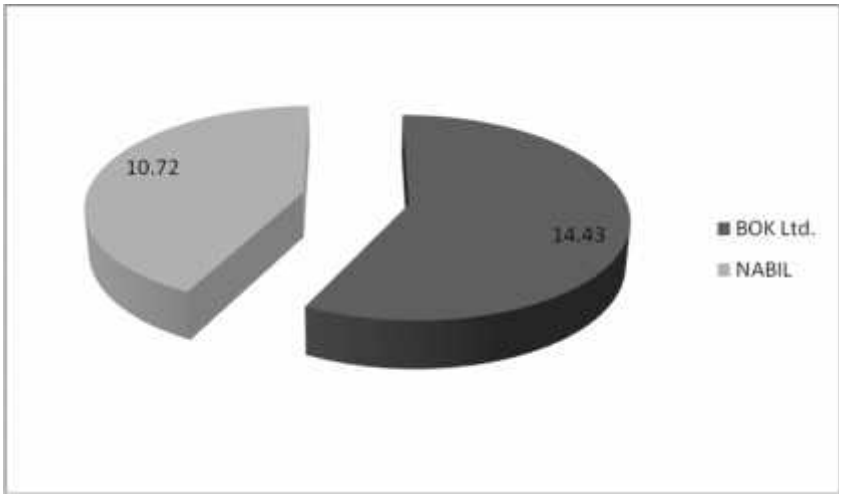


Figure 4.13 shows the growth ratio of total investment which has been compared. The growth rate of BOK Ltd is higher than NABIL bank. BOK Ltd has maintained 14.43% and NABIL has 10.72% of total investment. So from the growth in total investment view BOK Ltd has better utilization of it's fund in total investment compared with NABIL.

Table 4.14
Growth Ratio of Net Profit

Fiscal Year	BOK Ltd.	NABIL Bank Ltd.
2008/09	461.74	1031.05
2009/10	509.26	1138.57
2010/11	605.15	1344.18
2011/12	607.66	1696.28
2012/13	617.10	2218.76
Growth Rate (%)	7.52%	21.11%

Source: Appendix 11

The comparative table 4.14 shows the growth ratio of Net Profit. NABIL has been successful to increase it's net profit. The growth ratio of NABIL is 21.11% which is very promising compared to 7.52% of BOK. BOK has not been able to increase it's net profit compared to NABIL.

Figure 4.14
Growth Ratio of Net Profit

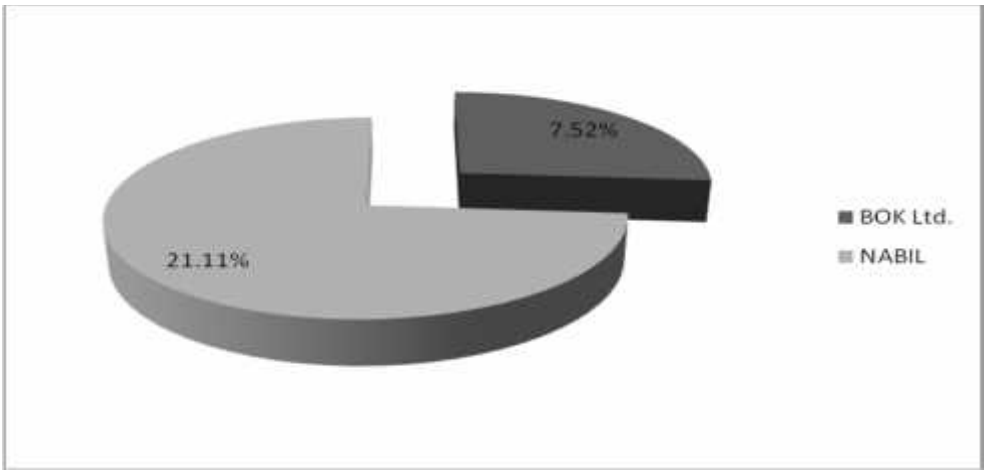


Figure 4.14 shows the growth ratio of Net Profit. NABIL has been successful to increase it's net profit. The growth ratio of NABIL is 21.11% which is very promising compared to 7.52% of BOK. has not been able to increase it's net profit compared to NABIL.

4.1.2 Statistical Tools

(a) Coefficient Correlation Analysis

Correlation analysis shows the relationship between the variables. It's range is +1 to -1.. Positive figure shows perfect positive correlation and negative figure shows perfect negative correlation. The zero result is interpreted as independent variables. It is denote by r.

Interpretation of Correlation Co-efficient

- It lies between +1.0 +0 -1.0
- When r = +1, it is perfect positive correlation

- When r = -1, it is perfect negative correlation
- When r = 0, there is no correlation
- When r lies between 0.7 to 0.999 or -0.7 to -0.999, there is high degree of positive or negative correlation.
- When r lies between 0.5 to 0.69 or -0.5 to -0.69 there is moderate degree of positive or negative correlation.
- When r is less than 0.5, there is low degree of correlation
- Probable Error
- If r < 6* P.Er, then the value of 'r' is insignificant
- If r > 6* P.Er , then the value of 'r' is significant

i) Correlation between Total Deposit and Total Investment

It measures the relationship between total deposit and total investment. Total deposit (X) is independent variables and total investment (Y) is dependent variable. The calculation is done to find out whether there is significant relationship or not.

The table 4.15 shows the value of 'r', 'r^2', P.Er, 6 P.Er between total deposit and total investment of BOK Ltd and NABIL form the fiscal year 2008/09 to 2012/13.

Table 4.15

Coefficient of Correlation between Total Deposit and Total Investment

Banks	Evaluation Criterion			
	R	r^2	P.Er	6*P.Er
BOK Ltd	0.8604	0.7403	0.783	0.47
NABIL Bank Ltd.	0.9659	0.9330	0.0202	0.12

Source: Appendix 13& 14

From the comparative table it has been found that the value of 'r' in case of BOK Ltd is 0.8604; which means it has high degree of positive correlation between deposit and total investment. The coefficient of determination 'r^2' is 0.7403 that is

74.03%, the variation of dependent variable. The P.Er and 6*P.Er are 0.783 and 0.47 respectively. The coefficient of correlation is higher than 6 times probable error. This shows that the value of r is significant.

The coefficient of correlation between total deposit and total investment of NABIL is 0.9659, which means there is high degree of positive correlation between total deposit and total investment. The coefficient of determination 'r^2' is 0.9330 that is 93.30%, the variation of dependent variable. Further, P.Er and 6*P.Er are 0.0202 and 0.12 respectively. The coefficient of correlation is higher than 6 times probable error. This shows that the value of r is significant.

So it can be said that BOK Ltd and NABIL have significant relationship and the increase in investment is due to increase in investment and other factors have lets role to play in increase in investment. But NABIL Ltd has highly significant with higher dependency. So NABIL Ltd is successful to utilize it's deposit in total investment, BOK Ltd also has high degree of positive correlation.

b) Trend Analysis

Trend analysis helps to know the trend which is simply a pattern of behavior. By the analysis of which fiscal year's trend future is predicted. The time period here is five years and the next five year's projections are done. The future forecast is based of these assumptions:

- Other this remains the same except the analyzed trend.
- The validity is only possible when least square approach is carried out.
- The bank runs in present position.
- The central bank's guideline to commercial banks remains constant.

(i) Analysis of Trend Value of Total Deposit

This calculation tries to extract the trend values of total deposit of BOK and NABIL for five years from F/Y 2008/09.

The table 4.16 shows the trend values of 10 years from 2008/09 to 2017/18.

Table 4.16

Trend Values of Total Deposit of BOK and NABIL

(Rs. in million)

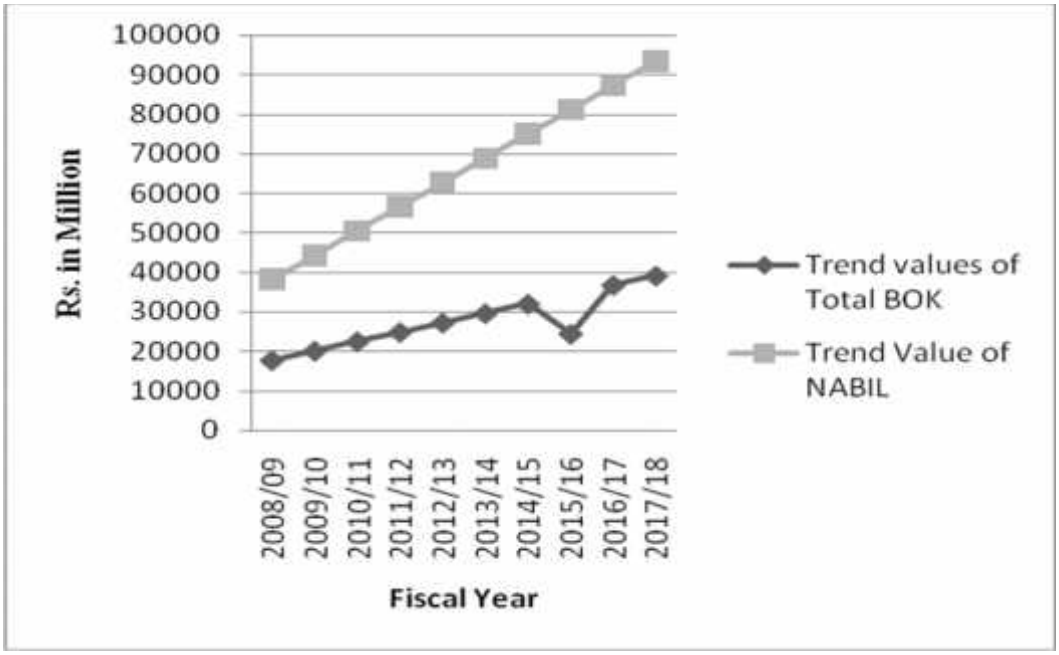
Fiscal Year	Trend values of BOK Ltd.	Trend Value of NABIL Bank Ltd.
2008/09	17640.14	38158.84
2009/10	20031.12	44280.41
2010/11	22422.10	50401.98
2011/12	24813.08	56523.55
2012/13	27204.06	62645.12
2013/14	29595.04	68766.69
2014/15	31986.02	74888.26
2015/16	24377.00	81009.83
2016/17	36767.98	87131.4
2017/18	39158.96	93252.97

Source: Appendix 14&15

The total deposit of BOK and NABIL have increasing trend. If all things remain the same the total deposit of NABIL will be highest deposit among the two banks. BOK's total deposit in the fiscal year 2017/18 will be 39158.96 million and NABIL's 93252.97 million. Among these calculations the deposit collection of NABIL will be better than that of BOK by 2017/18.

Figure 4.15

Trend Values of Total Deposit of BOK Ltd. and NABIL Bank Ltd.



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ii) Analysis of Trend Value of Loan and Advances

Here the trend value of loans and advances of BOK and NABIL calculated for five years from 2008/09 to 2012/13. The forecast for next five from 2013/14 to 2017/18.

The table 4.17 shows the trend values of loan and advances for from F\Y 2008/09 to 2017/18.

Table 4.17

Trend Values of Loan and Advances of BOK Ltd. and NABIL Bank Ltd.

(Rs. in million)

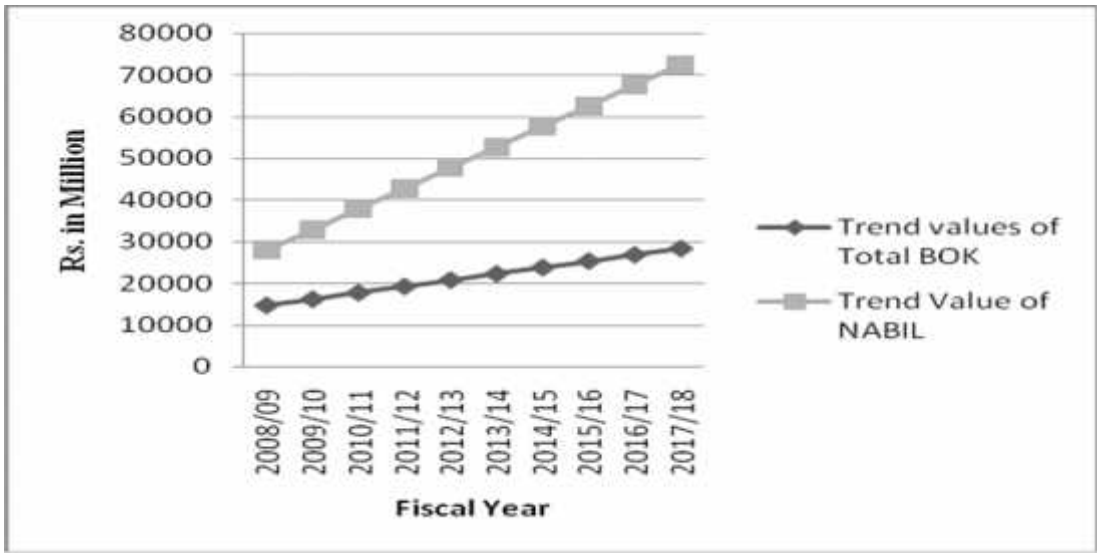
Fiscal Year	Trend value of BOK Ltd.	Trend Values of NABIL Bank Ltd.
2008/09	14764.08	28099.62
2009/10	16237.98	33023.77
2010/11	17771.88	37947.92
2011/12	19275.78	42872.07
2012/13	20779.68	47796.22
2013/14	22283.58	52720.37
2014/15	23787.48	57644.52
2015/16	25291.38	62538.67
2016/17	26795.28	67492.82
2017/18	28299.18	72416.97

Source: Appendix 16 &17

The comparative table shows that both banks BOK and NABIL have increasing trend of loan and advances, other things remaining the same total loan and advances of BOK will be 28299.18 million in fiscal year 2017/18. Similarly total loan and advances of NABIL will be 72416.97 which is higher than BOK's loan and advances. NABIL"S position regarding loan and advances will be better than BOK in fiscal year 2017/18.

Figure 4.16

Trend Value of Loan and Advances of BOK Ltd. and NABIL Bank Ltd.



The figure 4.16 shows that both banks BOK and NABIL have increasing trend of loan and advances, other things remaining the same total loan and advances of BOK will be 28299.18 million in fiscal year 2017/18. Similarly total loan and advances of NABIL will be 72416.97 which is higher than BOK's loan and advances. NABIL"S position regarding loan and advances will be better than BOK in fiscal year 2017/18.

iii) Analysis of Trend Value of Total Investment

The effort here is to calculate trend values of total investment from the year 2008/09 to 2012/13 and forecasted trend values from 2013/14 to 2017/18.

The table 4.18 shows the trend values of total investment from 2008/09 to 2017/18 of the BOK and NABIL.

Table 4.18

Trend Value of Total Investment of BOK Ltd.

and NABIL Bank Ltd.

(Rs. in million)

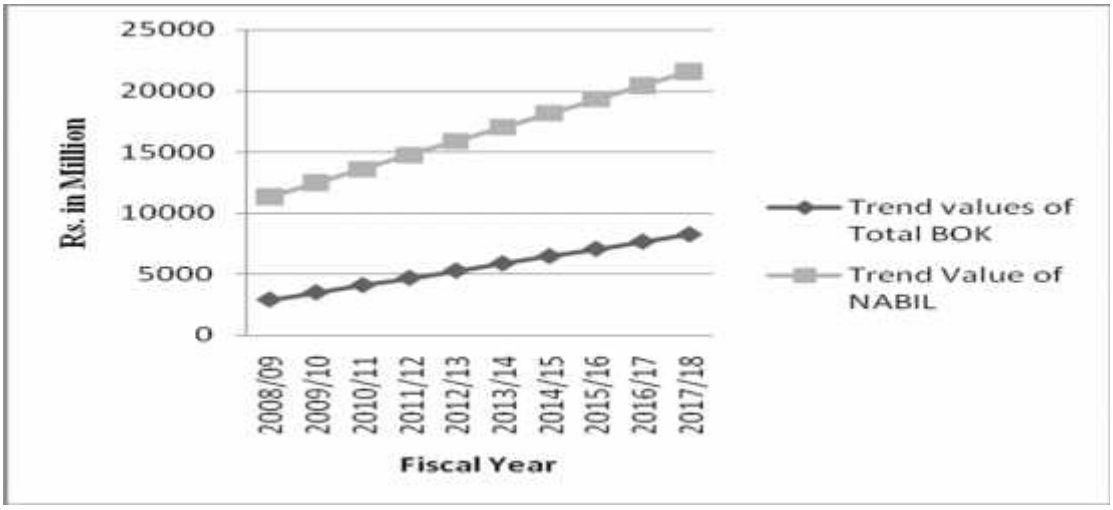
Fiscal Year	Trend Value of BOK Ltd.	Trend Value Of NABIL Bank Ltd.
2008/09	2877.48	11316.72
2009/10	3471.91	12457.68
2010/11	4066.34	13598.64
2011/12	4660.77	14739.6
2012/13	5255.2	15880.56
2013/14	5849.63	17021.52
2014/15	6444.06	18162.48
2015/16	7038.49	19303.44
2016/17	7632.92	20444.4
2017/18	8227.35	21585.36

Source: Appendix 18 & 19

Total investment of BOK and NABIL Bank has increasing trend value. The total investment of BOK will be 8227.35 million by 2017/18 which is lower trend NABIL's 21585.36 Million. The investment trend of NABIL is better than that of BOK.

Figure 4.17

Trend Value of Total Investment of BOK Ltd. & NABIL Bank Ltd.



Total investment of BOK and NABIL Bank has increasing trend value. The total investment of BOK will be 8227.35 million by 2017/18 which is lower trend NABIL's 21585.36 Million. The investment trend of NABIL is better than that of BOK.

iv) Trend Analysis of Net Profit

The trend values of net profit of BOK and NABIL from 2008/09 to 2012/13 and forecast from 2013/14 to 2017/18 is done here.

The table 4.19 shows the trend values of net profit for ten years form 2008/09 to 2017/18 of BOK and NABIL.

Table 4.19

Trend Value of Net Profit of BOK Ltd. and NABIL Bank Ltd.

(Rs. in million)

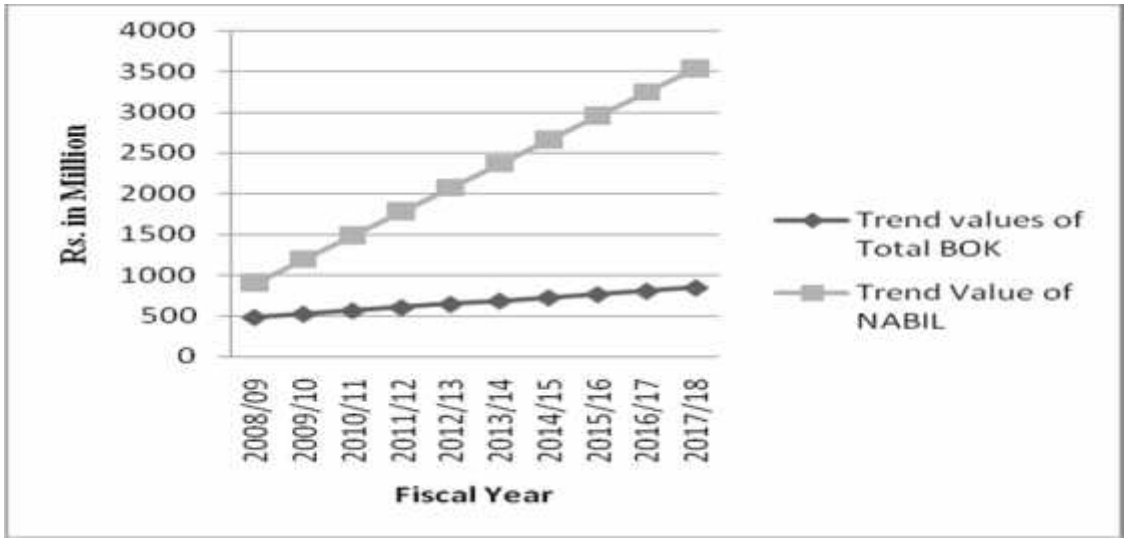
Fiscal Year	Trend value of BOK Ltd.	Trend Value of NABIL Bank Ltd.
2008/09	478.36	899.142
2009/10	519.27	1192.45
2010/11	560.18	1485.77
2011/12	601.09	1779.08
2012/13	642.0	2072.39
2013/14	682.91	2365.71
2014/15	723.82	2659.02
2015/16	764.73	2952.33
2016/17	805.64	3245.65
2017/18	846.55	3538.96

Source: Appendix 20 & 21

The table shows that the net profit of BOK and NABIL have increasing trend. The net profit of BOK will be 846.55 million by the year 2017/18. Similarly the net profit of NABIL will be 3538.96 million by the year 2017/18. This shows that the net profit of NABIL will be highest among the sample banks. Simply NABIL is considered Best in terms of net profit.

Figure 4.18

Trend Value of Net Profit of BOK Ltd. and NABIL Bank Ltd.



The figure 4.18 shows that the net profit of BOK and NABIL have increasing trend. The net profit of BOK will be 846.55 million by the year 2017/18. Similarly the net profit of NABIL will be 3538.96 million by the year 2017/18. This shows that the net profit of NABIL will be highest among the sample banks. Simply NABIL is considered Best in terms of net profit.

4.2 Major Findings of The Study

The completion of basic analysis leads forward to the important task for the researcher which is to enlists the findings issues and gaps of the study. The findings of the study are derived of the basis of analyzing financial data of the sample bank BOK and NABIL and are presented as follows:

Liquidity Ratio

- The mean current ratio of BOK is higher and it is better than NABIL bank's during the study period. BOK has been efficient to meet it's short term obligation but NABIL has failed to do so in all the study period. It means BOK has better liquidity positions and it has enough current assets to meet it's immediate cash obligation.
- The current ratio of BOK is less variable than NABIL.

- The mean ratio of cash and Bank balance to deposit ratio of BOK is higher than NABIL.BOK has better liquidity position to serve it's customers deposit withdrawal demand. There is low inconsistency in the ratio of BOK.
- The mean ratio of cash and bank balance to current asset ratio of both banks are same. It states that the liquidity of both banks are same. The ratios of NABIL are low inconsistent. NABIL is capable in maintaining it's cash and bank balance to meet it's daily requirement to make the payment on customers deposit withdrawal in comparison with BOK.
- The mean ratio of investment on government securities to current assets ratio of BOK is lower than NABIL. It shows that NABIL has invested more of its fund in government securities. The ratios of BOK are inconsistent and variable. The current assist's of NABIL has been used in a high proportion than BOK.
- The mean ratio of loan and advances to current assets ratio of BOK is more than NABIL bank. It can be said that both banks have utilized it's fund in recoverable loan and advances because there is not very difference in the mean ratios of sample banks in the period of study. The ratios of BOK are more inconsistent than NABIL.

Asset Management Ratio

- The mean ratio of total investment to total deposit ratio of BOK is lower than NABIL. NABIL'S and BOK ratios both have fluctuating trend. NABIL has mobilization significant amount of fund of in its investment. The ratios of BOK are inconsistent.

Profitability Ratio

- The mean ratio of return of loan and advances of BOK is lower than that of NABIL. The ratios of NABIL are inconsistent.
- The mean ratio of return on total working fund of BOK is less than NABIL but the ratios of NABIL are too inconsistent compared to BOK.

Risk Ratio

- The mean credit risk ratio of BOK is higher than NABIL. The fluctuation of ratios of BOK are inconsistent than NABIL.
- BOK has the higher mean ratio of capital risk. the ratios of BOK are inconsistent too.

Growth Ratios

- NABIL has higher growth ratio in terms of total deposit. BOK's ratios are little weak because it has growth rate of 11.25% compared to NABIL'S 14.24%.
- NABIL has slightly higher ratios of loan and advances 14.33% than BOK'S 10%. So the fund of NABIL is utilized in loan and advances more than BOK.
- The growth ratio of total investment of BOK is 14.43% which is higher than NABIL'S 10.73% BOK has invested more funds than NABIL.
- The growth ratio of net profit of NABIL is 21.12% which is higher than BOK's 7.52%. The increment of net profit of NABIL has hit a high record.

Co-efficient of Correlation Analysis

- The value of 'r' is higher than 6*P.Er. so there is significant relationship in case of BOK . Similarly the value of 'r' is higher than 6*P.Er of NABIL bank and there is also significant relationship between total deposit and total investment

Trend Analysis and Projection for Next Five Years

- Trend values of total deposit of both banks BOK and NABIL have followed an increasing trend. The total deposit of BOK and NABIL will be 39158.96 and 93252.97 millions respectively by the year 2017/18. This forecasting is possible if other things remain the same.
- The trend value of loan and advances of BOK and NABIL has followed an increasing trend. The highest trend of BOK will be 28299.18 and 72416.97 million. By the year 2017/18 this shows the increase in loan and advances to support the investors.

- The total investment's trend value suggests that both banks BOK and NABIL have increasing trend. The investment position of BOK and NABIL will be 8227.35 and 21585.36 million respectively. For this the economic condition of the bank must not go downward.
- The trend value of net profit of BOK and NANIL has followed an increasing trend. The trend value of BOK and NABIL will reach 846.55 and 3538.96 million respectively. The increase in net profit can be very beneficial to the commercial banks.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The fifth chapter includes summary, conclusions and recommendation based on their findings. After the basic analysis the most important remaining part is to summarize and recommend. These findings and recommendations are very useful to top management to execute the decision.

5.1 Summary

The development of commercial and industrial sector opens the door of prosperity in the country. Bank promotes development by uplifting the activities related to the financial situations. The recent peace process and stability also assures the prosperity in the whole economic activity.

Bank always fits itself into an economy with an important role of capital provider. The main function of bank is lending and borrowing. But the things have changed. The modern banking system provides many more advanced and new facilities, so the function of commercial bank musty push the national economy, the mobilize the collected fund, canalize into productive sectors. These can easily achieve investment objective of gaining maximum return.

The terms investment covers a wide area of money transactions. Simply it has a concept of income, saving and other collected funds. These activities fall under the bank. The primary objective of any financial institution like commercial is profit maximization. The income and profit of the bank depends upon it's lending procedure, lending policy and investment of its fund utilized in different securities.

The high credit created by bank results in higher profitability. In a developing country like Nepal the must play and disburse facilities all parts of country.

The objective of this study is to evaluate the investment policies adopted by BOK and NABIL. This study depends on secondary data collected from different sources. Journals, articles, annual reports & Supervision Reports are the secondary

dates used in this study. Analysis is done categorically and in a simple way. Table, graphs are drawn to make the analysis easier to understand.

The financial tools such as profitability ratio, liquidity ratio asset management ratio risk ratios are calculated. Statistical tools like mean standard deviation, correlation has also been used.

5.2 Conclusion

Two commercial banks are selected for this study. The review of available literatures helped to conduct a sound methodology which's used for the analysis and interpretation of data. The two sample banks are BOK and NABIL secondary data are used as the sources of data.

The financial ratio analysis includes liquidity ratio, asset management ratio, profitability ratio, risk ratio and growth ratio. The liquidity position of BOK is comparatively better than that of NABIL. So the liquidity position of BOK better. Cash and bank balance to total deposit ratio of BOK is higher than NABIL. It shows the ability of BOK to meet the cash demand of their customers, cash and bank balance to current asset ratio of both banks are same which shows the both banks possess high liquid asset among it's current assets. Investment on government securities to current asset ratio of NABIL is high and it tells us that NABIL has invested it's more portion of current assets in government securities which can be converted into cash quickly. Loan and advances to current assets ratio of BOK is slightly higher than NABIL. It shows that both banks have utilized their funds to gain maximum profit.

From the analysis of asset management ratio it is found that BOK has better managed its assets. It shows BOK has mobilized its more deposit on the total investment to total deposit ratio of BOK is lower than NABIL.

The analysis of profitability ratio shows that NABIL is in better position than BOK. Return on total assets of NABIL is higher than BOK. It shows that BOK

fails to earn higher profit on its working fund. Return on loan and advances of NABIL are higher than BOK.

The analysis of risk ratio shows that the credit risk ratio of BOK is higher than NABIL. It shows BOK has provided higher portion on loan which involves high risk but it can also provide high return if it is secure loan.

The capital risk of NABIL Bank Ltd. is higher than BOK Ltd.. This shows there is high risk for NABIL Bank Ltd but there is chance to high profit too.

The analysis of growth ratio shows that NABIL has highest ratios of total deposits compared than BOK. The deposit mobilization of BOK is weaker than NABIL. Growth ratio of loan and advances of NABIL is higher than BOK. It reflects the mobilization of funds on loans and advances. Growth ratio of total investment of BOK is better than NABIL. The investment position of BOK is better than NABIL. Growth ratio of net profit of NABIL is better than BOK because it has higher growth ratios.

This analysis includes the statistical tools which are co-efficient of correlation and trend analysis. The coefficient of correlation between total deposit and total investment of both banks has very high degree of positive correlation. The value of 'r' is greater than 6*P.Er so there is significant relationship between total deposit ad total investment.

The analysis of trend value of five years period and projected future trend values of sample banks of BOK and NABIL shows the projection for future if the things remain same. The trend of total deposit of BOK and NABIL are in increasing trend. NABIL'S deposit collection position is better than BOK. The trend value of loan and advances of BOK and NABIL has increasing trend. NABIL'S position will be better in terms of granting loans. The trend values of investment of BOK and NABIL has followed a increasing trend. NABIL'S future trend is higher than

BOK. Net profit of BOK and NABIL are in increasing trend but the future trend of NABIL is higher than BOK.

5.3 Recommendations

Recommendation refers to the suggestive measures derived from the findings of the study. On the basis of core analysis and findings the following recommendation can be useful to overcome the weaknesses and inefficiency of the sample banks BOK and NABIL. It also helps to improve the present fund mobilization and investment analysis of BOK and NABIL.

- Commercial banks liquidity position in this has not been recorded at satisfactory position. The standard rate of liquidity is 2:1 which has not been found in both Banks i.e. BOK and NABIL'S ratios. BOK and NABIL should try to lower it's current liabilities to improve it's liquidity position. NABIL liquidity position is too poor because it has not been able to meet its current liabilities and the ratios are below in all study periods.
- The ratio of cash and bank balance to total deposit of BOK is higher than NABIL which can decrease the profit of bank. So it is suggested to mobilize cash and bank balance in profitable sectors.
- From this study it has been revealed that BOK has invested small portion of it's current assets. There is huge amount of cash being kept on reserve, cash and bank balance of BOK which is needed to invest on treasury bills, development bonds which are risk free securities.
- BOK Ltd.'s total investment to total deposit ratio is lowest in comparison to NABIL Bank Ltd.. To overcome from the situation it is recommended to follow liberal lending policy and invest more and more in total investment of it's deposits and maintain stability on the investment policy.
- Profitability ratio of BOK is weaker then NABIL but these are not satisfactory ratio. It is recommended to BOK that it should improve its profitability condition.

- NABIL possess lower credit risk compared to BOK. The risk taken by BOK are average but there is insecurity of bad debts. The risk taken by BOK must utilize its funds in highly profitable as well as in secure areas.
- This study shows the trend of investment in increasing range. Investment is the maximum use of resources to create income by investing in income generating sectors. So it is recommended to keep wide vision in different areas.
- The growth of commercial banks is very essential for the economic development. The main problem existing in Nepal is it's traditional system of borrowing money with money lenders. The rural areas are not facilitated with the facilities of commercial banks. So the people are forced to borrow money in higher costs. So it is recommended to expand the branches in rural areas which help the rural economic development.
- The change in technology has given us advantage to use many tools and techniques which has made our life easier and better. Internet banking, credit card facilities, should be expanded which creates new prospective customers. Banks must pay attention to extend it's ATM facilities to all over the country.
- The most neglected part in developing countries is the investment in research and development. Until and unless enough money is not spent the new innovative ideas to reach near the customer and to adjust in any environment is not possible. So it is strongly recommended to increase investment in research and development.

The main problem of developing countries like Nepal is it lacks enough capital formation. The development can only exist if there is a strong economic activity. To get success in the economy commercial banks must act according to its nature. Nepal commercial banks have faced different problem related to investment, fund mobilization. The working pattern of commercial banks has not adopted very new changes. The traditional method has been used.

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Appendix 1

Current Ratio

(Rs in million)

Banks	BOK Ltd.			NABIL Bank Ltd.		
Fiscal Year	Current Assets	Current Liabilities	Ratio (Times)	Current Assets	Current Liabilities	Ratio (Times)
2008/09	19231.6	18941.4	1.02	37956.3	41880.6	0.91
2009/10	22726.5	21807.6	1.04	48027.6	49681.7	0.97
2010/11	23711.9	22899.3	1.04	55859.7	56187.2	0.99
2011/12	27394.6	26789.8	1.02	61435.4	65257.9	0.94
2012/13	31101.9	30258.2	1.03	68836.4	70563.0	0.98

Calculation of Mean, Standard Deviation and Coefficient of Variation of Current Ratio

BOK Ltd.			NABIL Bank Ltd.		
Fiscal Year	(X_1) Current Ratio	$(X_1)^2$	Fiscal Year	Current Ratio (X_1)	$(X_1)^2$
2008/09	1.02	1.04	2008/09	0.91	0.83
2009/10	1.04	1.08	2009/10	0.97	0.94
2010/11	1.04	1.08	2010/11	0.99	0.98
2011/12	1.02	1.04	2011/12	0.94	0.88
2012/13	1.03	1.06	2012/13	0.98	0.96
N=5	x_1 X5.15	fx_1 Å X5.30		x_1 X4.79	fx_1 Å X4.59

(1) Calculation of Mean, S.D and C.V of BOK

Mean Ratio $= \frac{x_1}{N} = \frac{5.15}{5} = 1.03$

Standard deviation $= \sqrt{\frac{\sum (x_1)^2}{N} - \left(\frac{\sum x_1}{N}\right)^2}$

$= \sqrt{\frac{5.30}{5} Z \left(\frac{5.15}{5}\right)^2} = 0.03$

Coefficient of variation (C.V) $= \frac{S.D}{X_1} \times 100\%$

$= \frac{0.03}{1.03} x100 = 2.91\%$

Thus,

Mean = 1.03

S.D. = 0.03

C.V = 2.91%

(2) Calculation of Mean, S.D and C.V of NABIL Bank Ltd.

Mean Ratio (X_1) = $\frac{\sum X_1}{N}$

$= \frac{4.79}{5}$ = 0.96

Standard deviation = $\sqrt{\frac{\sum (X_1)^2}{N} - \left(\frac{\sum X_1}{N}\right)^2}$

$= \sqrt{\frac{4.59}{5} Z \frac{4.79}{5}^2}$

= 0.015

Coefficient of variation (C.V) = $\frac{S.D}{X_1} \times 100\%$

$= = \frac{0.015}{0.96} x100$ =1.56%

Appendix 2

Cash and Bank Balance to Total Deposit Ratio

(Rs in million)

Banks	**BOK Ltd.**			**NABIL Bank Ltd.**		
Fiscal Year	Cash and Bank	Total Deposit	Ratio	Cash and Bank Balance	Total Deposit	Ratio
2008/09	2169.0	18083.9	0.12	3372.5	37348.3	0.09
2009/10	1792.4	20315.8	0.09	1395.6	46334.8	0.03
2010/11	1679.0	21018.4	0.08	2432.0	49691.4	0.12
2011/12	3382.7	24991.4	0.14	4272.2	55023.7	0.08
2012/13	4290.6	27701.0	0.15	5878.9	63611.3	0.09

Appendix – 3

Cash and Bank Balance to Current Asset Ratio

(Rs in million)

Banks	**BOK Ltd.**			**NABIL Bank Ltd.**		
Fiscal Year	Cash and Bank Bal.	Current Assets	Ratio	Cash and Bank Balance	Current Assets	Ratio
2008/09	2169.0	19231.6	0.11	3372.5	37956.3	0.09
2009/10	1792.4	22726.5	0.08	1395.6	48027.6	0.03

2010/11	1679.0	23711.9	0.07	2432.0	55859.7	0.04
2011/12	3382.7	27394.6	0.12	4272.2	61435.4	0.07
2012/13	4290.6	31101.9	0.14	5878.9	68836.4	0.09

Appendix 4

Investment on Government Securities to Current Asset Ratio

(Rs in million)

Banks	**BOK Ltd.**			**NABIL Bank Ltd.**		
Fiscal Year	Investment on Government Securities	Current Asset	Ratio	Investment on Government Securities	Current Assets	Ratio
2008/09	1745.0	19231.6	0.09	3706.2	37956.3	0.10
2009/10	2954.9	22726.5	0.13	7941.3	48027.6	0.17
2010/11	4002.1	23711.9	0.17	8742.3	55859.7	0.16
2011/12	5037.6	27394.6	0.18	7991.2	61435.4	0.13
2012/13	4566.1	31101.9	0.15	7914.0	68836.4	0.11

Appendix 5

Loan and Advances Current Assets Ratio

(Rs in million)

Banks	**BOK Ltd.**			**NABIL Bank Ltd.**		
Fiscal Year	Loan and Advances	Current Asset	Ratio	Loan and Advances	Current Assets	Ratio
2008/09	14894.7	19231.6	0.77	27816.6	37956.3	0.73
2009/10	16847.1	22726.5	0.74	32902.8	48027.6	0.69
2010/11	17247.8	23711.9	0.73	38765.6	55859.7	0.69
2011/12	18064.1	27394.6	0.66	42731.7	61435.4	0.70
2012/13	21805.7	31101.9	0.70	47522.9	68836.4	0.69

Appendix 6

Total Investment to Total Deposit Ratio

(Rs in million)

Banks	**BOK Ltd.**			**NABIL Bank Ltd.**		
Fiscal Year	Total Investment	Total Deposit	Ratio	Total Investment	Total Deposit	Ratio
2008/09	2774.4	18083.9	0.15	10875.0	37348.3	0.29
2009/10	3269.2	20315.8	0.16	13612.1	46334.8	0.29
2010/11	4283.6	21018.4	0.20	13082.8	49691.4	0.26
2011/12	5246.7	24991.4	0.21	14074.9	55023.7	0.26

2012/13	4757.8	27701.0	0.17	16348.4	63611.3	0.26

Appendix 7
Return on Loan & Advances Ratios

(Rs in million)

Banks	BOK Ltd.			NABIL Bank Ltd.		
Fiscal Year	Net Profit After Tax	Loan and Advance	Ratio	Net ProfitAfter tax	Loan and Advance	Ratio
2008/09	461.74	14894.7	0.03	1031.05	27816.6	0.04
2009/10	509.26	16847.1	0.03	1138.57	32902.8	0.03
2010/11	605.15	17247.8	0.04	1344.18	38765.6	0.03
2011/12	607.66	18064.1	0.03	1696.28	42731.7	0.04
2012/13	617.10	21805.7	0.03	2218.76	47522.9	0.05

Appendix 8

Return on Total Assets Ratios

(Rs in million)

Banks	BOK Ltd.			NABIL Bank Ltd.		
Fiscal Year	Net ProfitAfter Tax	Total Assets	Ratio	Net ProfitAfter Tax	Total Assets	Ratio
2008/09	461.74	21009.3	0.02	1031.05	45941.6	0.02
2009/10	509.26	24058.8	0.02	1138.57	54609.8	0.02
2010/11	605.15	25582.1	0.02	1344.18	61292.6	0.02
2011/12	607.66	29834.1	0.02	1696.28	71545.3	0.02
2012/13	617.10	33575.3	0.02	2218.76	78260.0	0.03

Appendix 9

Credit Risk Ratio

(Rs in million)

Banks	BOK Ltd.			NABIL Bank Ltd.		
Fiscal Year	Loan and Advances	Total Assets	Ratio	Loan and Advances	Total Assets	Ratio
2008/09	14894.7	21009.3	0.71	27816.6	45941.6	0.61
2009/10	16847.1	24058.8	0.70	32902.8	54609.8	0.60
2010/11	17247.8	25582.1	0.67	38765.6	61292.6	0.63
2011/12	18064.1	29834.1	0.61	42731.7	71545.3	0.60
2012/13	21805.7	33575.3	0.65	47522.9	78260.0	0.61

Appendix 10

Capital Fund to Risk Weighted Assest Ratio

(Rs in million)

Banks	BOK Ltd.			NABIL Bank Ltd.		
Fiscal Year	Capital Fund	Risk Weight Assets	Ratio	Capital	Risk Weight Assets	Ratio
2008/09	2067.70	17361.04	0.1191	4065.20	34715.60	0.1171
2009/10	1741.60	15210.48	0.1145	3129.41	26954.44	0.1161
2010/11	2071.36	17825.82	0.1162	3835.70	32644.26	0.1175
2011/12	3240.64	25760.25	0.1258	6921.00	54453.18	0.1271
2012/13	3943.70	31249.60	0.1262	8337.71	63308.35	0.1317

Appendix 11

Calculation of Growth Ratio

Let,

Dn = Variable in the Nth Year

Po= Variable in the initial Year

n = No of period study

g = Growth Rate

Total Deposit growth ratio of BOK Ltd.

D_n= Do $(1+g)^{n-1}$

27701.0= 18083.90 $(1+g)^{5-1}$ 1+g = $\left(\frac{27701.0}{18083.9}\right)^{\frac{1}{4}}$ g= 11.25%

Total deposited Growth Ratio of NABIL Bank Ltd.

D_n = Do $(1+g)^{n-1}$ 63611.3=37348.3 $(1+g)^{5-1}$ 1+g = $\left(\frac{63611.3}{37348.3}\right)^{\frac{1}{4}}$

g = 14.24%

Total loan and advances growth rate of BOK Ltd.

$D_n = Do\ (1+g)^{n-1}$ 21805.7 = 14894.7 $(1+g)^{5-1}$ 1+g = $\left(\frac{21805.7}{14894.7}\right)^{\frac{1}{4}}$

g = 10%

Total loan and advances growth rate of NABIL Bank Ltd.

$D_n = Do\ (1+g)^{n-1}$ 47522.9 = 27816.6 $(1+g)^{5-1}$ 1+g = $\left(\frac{47522.9}{27816.6}\right)^{\frac{1}{4}}$

g = 14.33%

Total Investment growth rate of BOK Ltd.

$D_n = Do\ (1+g)^{n-1}$ 4757.4 = 2774.4 $(1+g)^{5-1}$ 1+g = $\left(\frac{4757.8}{2774.4}\right)^{\frac{1}{4}}$

g = 14.43%

Total Investment growth rate of NABIL Bank Ltd.

$D_n = Do\ (1+g)^{n-1}$ 16348.4 = 10875.0 $(1+g)^{5-1}$

1+g = $\left(\frac{16348.4}{10875}\right)^{\frac{1}{4}}$ g = 10.72 %

Total Net Profit Growth Rate of BOK Ltd.

$D_n = Do\ (1+g)^{n-1}$ 617.09 = 461.74 $(1+g)^{5-1}$ 1+g = $\left(\frac{617.09}{461.74}\right)^{\frac{1}{4}}$

g = 7.52%

Total net profit Growth Rate of NABIL Bank Ltd.

$D_n = Do\ (1+g)^{n-1}$ 2218.76 = 1031.05 $(1+g)^{5-1}$ 1+g = $\left(\frac{2218.76}{1031.05}\right)^{\frac{1}{4}}$

g = 21.11%

Appendix 12

Coefficient of correlation between Total Deposit and Total Investment (BOK Ltd.)

(Rs in million)

Ficial Year	Total Deposit(X)	X=X-$\bar{X}$	X^2	Total Investment (Y)	Y=Y-$\bar{Y}$	Y^2	XY
2008/09	18083.9	-4338.2	18819979.24	2774.4	-1291.94	1669108.96	5604694.11
2009/10	20315.8	-2106.3	4436499.69	3269.2	-797.14	635432.18	1679015.98
2010/11	21018.4	-1403.7	1970373.69	4283.6	217.26	47201.91	-304967.86
2011/12	24991.4	2569.3	6601302.49	5246.7	1180.36	1393249.73	3032698.95
2012/13	27701.0	5278.9	27866785.21	4757.8	691.46	478116.93	3650148.19
Total	112110.5	-	59694940.32	20331.7	-	4223109.71	13661589.37
Mean	**($\bar{X}$)=22422.1**		**$\sum x^2$ = 59694940.32**	**($\bar{Y}$)=4066.34**		**$\sum y^2$ = 4223109.71**	**$\sum xy$ = 13661589.37**

Coefficient of correlation (r):

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

$$= \frac{13661589.37}{\sqrt{59694940.32}x\sqrt{4223109.71}}$$

= 0.8604

r = 0.8604

Coefficient of Determination $(r)^2$ = 0.7403

Calculation of Probable Error

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

$$= 0.6745 \text{ x } \frac{1Z0.7403}{\sqrt{5}}$$

6 (p. E. r) = 6×0.783

= 0.47

Appendix 13
Coefficient of correlation between Total Deposit and Total Investment
(NABIL Bank Ltd.)

(Rs in million)

Ficial Year	Total Deposit(X)	X=X-$\bar{X}$	X^2	Total Investment (Y)	Y=Y-$\bar{Y}$	Y^2	XY
2008/09	37348.3	-13053.6	170396473.0	10875.0	-2723.64	7418214.85	35553307.1
2009/10	46334.8	-4067.1	16541302.41	13612.1	13.46	181.17	-54743.17
2010/11	49691.4	-710.5	504810.25	13082.8	-515.84	166090.91	366504.32
2011/12	55023.7	4621.8	21361035.24	14074.9	476.26	226823.59	2201178.47
2012/13	63611.3	13209.4	174488248.4	16348.4	2749.76	7561180.06	36322679.74
Total	252009.5		383291869.2	67993.2		15472490.57	74388926.47
Mean	**($\bar{X}$)=50401.9**		**$\sum x^2$ =383291869.2**	**($\bar{Y}$)=13598.64**		**$\sum y^2$ = 15472490.57**	**$\sum xy$ = 74388926.47**

Coefficient of correlation (r):

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

$$= \frac{74388926.47}{\sqrt{383291869.2} \mid \sqrt{15472490.57}}$$

= 0.9659

r = 0.9659

Coefficient of Determination $(r)^2$ = 0.9330

Calculation of Probable Error

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

$$= 0.6745 \text{ x } \frac{1Z0.9330}{\sqrt{5}}$$

6 (p. E. r) = 6×0.0202

= 0.12

Appendix 14
Trend Analysis of Total Deposit of BOK Ltd.

(Rs in million)

Fiscal Year (t)	Total Deposit (Y)	x = t-2011	X^2	XY	$Y_c = a + bx$ Y_c=22422.1+2390.98x
2008/09	18083.9	-2	4	-36167.8	17640.14
2009/10	20315.8	-1	1	-20315.8	20031.12
2010/11	21018.4	0	0	0	22422.10
2011/12	24991.4	1	1	24991.4	24813.08
2012/13	27701.0	2	4	55402.0	27204.06
Total	y X**112110.5**	x **=0**	$\sum X^2 = 10$	xy **= 23909.80**	

$$a = \frac{\sum Y}{n} = \frac{112110.5}{5} = 22422.1$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{23909.80}{10} = 2390.98$$

Projects trend values of total deposit for next five years

Fiscal Year	x = t-2011	Y_c = a + bx Y_c = 22422.1+2390.98x
2013/14	3	29595.04
2014/15	4	31986.02
2015/16	5	24377.00
2016/17	6	36767.98
2017/18	7	39158.96

Appendix 15

Trend Analysis of Total Deposit of NABIL Bank Ltd.

(Rs in million)

Fiscal Year (t)	Total Deposit (Y)	x = t-2011	X^2	XY	$Y_c = a + bx$ Y_c=50401.98+6121.57x
2008/09	37348.3	-2	4	-74696.6	38158.84
2009/10	46334.8	-1	1	-46334.8	44280.41
2010/11	49691.4	0	0	0	50401.98
2011/12	55023.7	1	1	55023.7	56523.55
2012/13	63611.7	2	4	127223.4	62645.12
Total	y X**252009.9**	x **=0**	$\sum X^2 = 10$	xy **= 61215.7**	

$$a = \frac{\sum Y}{n} = \frac{252009.9}{5} = 50401.98$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{61215.7}{10} = 6121.57$$

Projects trend values of total deposit for next five years

Fiscal Year	x = t-2011	Y_c = a + bx Y_c = 50401.98+6121.57x
2013/14	3	68766.69
2014/15	4	74888.26
2015/16	5	81009.83
2016/17	6	87131.4
2017/18	7	93252.97

Appendix 16
Trend Analysis of Loans and Advance of BOK Ltd.

(Rs in million)

Fiscal Year (t)	**Loan & Adv. (Y)**	**x = t-2011**	X^2	**XY**	$Y_c = a + bx$ **Y_c=17771.88+1503.9x**
2008/09	14894.7	-2	4	-29789.4	14764.08
2009/10	16847.1	-1	1	16847.1	16237.98
2010/11	17247.8	0	0	0	17771.88
2011/12	18064.1	1	1	18.64.1	19275.78
2012/13	21805.7	2	4	46611.4	20779.68
Total	y **X88859.4**	x **=0**	$\sum X^2 = 10$	xy **= 15039.0**	

$$a = \frac{\sum Y}{n} = \frac{88859.4}{5} = 17771.88$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{15039.0}{10} = 1503.9$$

Projects trend values of loans and advance for next five years

Fiscal Year	**x = t-2011**	**Y_c = a + bx** **Y_c = 17771.88+1503.9x**
2013/14	3	22283.58
2014/15	4	23787.48
2015/16	5	25291.38
2016/17	6	26795.28
2017/18	7	28299.18

Appendix 17

Trend Analysis of Loans and Advance of NABIL Bank Ltd.

(Rs in million)

Fiscal Year (t)	Loan & Adv. (Y)	x = t-2011	X^2	XY	$Y_c = a + bx$ Y_c=37947.92+4924.15x
2008/09	27816.6	-2	4	-55633.2	28099.62
2009/10	32902.8	-1	1	-32902.8	33023.77
2010/11	38765.6	0	0	0	37947.92
2011/12	42731.7	1	1	42731.7	42872.07
2012/13	47522.9	2	4	95045.8	47796.22
Total	y X**189739.6**	x **=0**	$\sum X^2 = 10$	xy **= 49241.5**	

$$a = \frac{\sum Y}{n} = \frac{189739.6}{5} = 37947.92$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{49241.5}{10} = 4924.15$$

Projects trend values of loan and advance for next five years

Fiscal Year	x = t-2011	Y_c = a + bx Y_c = 37947.92+4924.15x
2013/14	3	52720.37
2014/15	4	57644.52
2015/16	5	62538.67
2016/17	6	67492.82
2017/18	7	72416.97

Appendix 18
Trend Analysis of Investment of BOK Ltd.

(Rs in million)

Fiscal Year (t)	Investment (Y)	x = t-2011	X^2	XY	$Y_c = a + bx$ Y_c=4066.34+594.43 x
2008/09	2774.4	-2	4	-5548.8	2877.48
2009/10	3269.2	-1	1	-3269.2	3471.91
2010/11	4283.6	0	0	0	4066.34
2011/12	5246.7	1	1	5246.7	4660.77
2012/13	4757.8	2	4	9515.6	5255.2
Total	y X20331.7	x =0	$\sum X^2 = 10$	xy = 5944.3	

$$a = \frac{\sum Y}{n} = \frac{20331.7}{5} = 4066.34$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{5944.3}{10} = 594.43$$

Projects trend values of investment for next five years

Fiscal Year	x = t-2011	Y_c = a + bx Y_c = 4066.34+594.43x
2013/14	3	5849.63
2014/15	4	6444.06
2015/16	5	7038.49
2016/17	6	7632.92
2017/18	7	8227.35

Appendix 19

Trend Analysis of Investment of NABIL Bank Ltd.

(Rs in million)

Fiscal Year (t)	investment (Y)	x = t-2011	X^2	XY	$Y_c = a + bx$ Y_c=13598.64+1140.96x
2008/09	10875.0	-2	4	-21750.0	11316.72
2009/10	13612.1	-1	1	-13612.1	12457.68
2010/11	13082.8	0	0	0	13598.64
2011/12	14074.9	1	1	14074.9	14739.6
2012/13	16348.4	2	4	32696.8	15880.56
Total	y X67993.2	x =0	$\sum X^2 = 10$	xy = **11409.6**	

$$a = \frac{\sum Y}{n} = \frac{67993.2}{5} = 13598.64$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{11409.6}{10} = 1140.96$$

Projects trend values of investment for next five years

Fiscal Year	x = t-2011	Y_c = a + bx Y_c = 13598.64+1140.96x
2013/14	3	17021.52
2014/15	4	18162.48
2015/16	5	19303.44
2016/17	6	20444.4
2017/18	7	21585.36

Appendix 20
Trend Analysis of Net Profit of BOK Ltd.s

(Rs in million)

Fiscal Year (t)	Net Profit (Y)	x = t-2011	X^2	XY	$Y_c = a + bx$ Y_c=560.18+40.91x
2008/09	461.74	-2	4	-923.48	478.36
2009/10	509.26	-1	1	-509.26	519.27
2010/11	605.15	0	0	0	560.18
2011/12	607.66	1	1	607.09	601.09
2012/13	617.09	2	4	1234.18	642.0
Total	y X**2800.9**	x **=0**	$\sum X^2 = 10$	xy **= 409.1**	

$$a = \frac{\sum Y}{n} = \frac{2800.9}{5} = 22422.1$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{409.1}{10} = 40.91$$

Projects trend values of Net Profit for next five years

Fiscal Year	x = t-2011	Y_c = a + bx Y_c = 560.18+40.91x
2013/14	3	682.91
2014/15	4	723.82
2015/16	5	764.73
2016/17	6	805.64
2017/18	7	846.55

Appendix 21

Trend Analysis of Net Profit of NABIL Bank Ltd.

(Rs in million)

Fiscal Year (t)	Net Profit (Y)	x = t-2011	X^2	XY	$Y_c = a + bx$ Y_c=1485.77+293.31x
2008/09	1031.05	-2	4	-2060.1	899.142
2009/10	1138.57	-1	1	-1138.57	1192.45
2010/11	1344.18	0	0	0	1485.77
2011/12	1696.28	1	1	1696.28	1779.08
2012/13	2218.76	2	4	4437.52	2072.39
Total	y X7428.84	x =0	$\sum X^2 = 10$	xy = 2933.13	

$$a = \frac{\sum Y}{n} = \frac{7428.84}{5} = 1485.77$$

$$b = \frac{\sum XY}{\sum X^2} = \frac{2933.13}{10} = 293.31$$

Projects trend values of Net Profit for next five years

Fiscal Year	x = t-2011	Y_c = a + bx Y_c = 1485.77+293.31.57x
2013/14	3	2365.71
2014/15	4	2659.02
2015/16	5	2952.33
2016/17	6	3245.65
2017/18	7	3538.96