

CHAPTER I

INTRODUCTION

1.1 Background

Banks and financial institutions are engine of economic development of any nation. Banks are financial intermediaries which help to collect the fund from savers and provide to users so that the fund can be used in productive sector. Banks are vehicle to mobilize resources. Nowadays, the role of bank is expanding and widening as per the increasing various economic activities. Economists argued that capital formation and its proper utilization plays a vital role for rapid economic development. Banks invest their collected fund in different sector so that they could maximize their return and minimize the risk. The technique of diversification of fund in different sectors considering its risk return is popularly known as portfolio management. Banks are excessively aware on portfolio management of their fund.

The history of modern banking system is not so long in Nepal. In depth, evidence of money lending functions was also found in practice before 8th century. In those days people use to borrow money from money lenders and pay some interest. In 14th century, Malla King Jayasthi Malla divided people in 64 categories as per working occupation. One of them was “Tankan Dari”; he practiced monetary transaction or money lending business. It shows that lending process was prevailing during the Malla rule in Nepal.

During the period of Rana Rule, Prime Minister Ranodip established a financial institution “Tejarath Adda”. Prior to establishment of Nepal Bank Ltd., certain extent of banking needs of people was fulfilled by the institution. Which was to supply credit to government officials at 5 percent rate of interest, thereafter, they began to provide loan to general people against security of gold, silver & ornament. By the process Tejarath expanded the credit facilities by opening some branches.

Tejarath could not fulfill the credit needs of the whole society. It was a government institution that benefited only to government officials. So, the general people had to depend upon moneylenders. To make free the rural people from the grips of lenders

and develop the trade and industry in the country, the need of a commercial bank was realized in the country.

Nepal's banking history had begun by the establishment of Nepal Bank Ltd. in 1937 A.D with 10 million rupees of authorized capital and 842 thousand of paid up capital. It is the first commercial bank in Nepal with semi-government equities i.e. 51% of government ownership. After establishment of NBL, it replaced Tejarath Adda by taking over its operation and limitations. It has done pioneering function in speaking the banking habits among people.

Banks generally collect unused money from public by providing attractive interest and earn profit by lending it. They are generally investing in business organization, industries, agricultural sectors and government bonds. So, the main function of commercial banks is to mobilize idle resources in productive areas by collecting it from scattered sources and generating profit. As the Bank and Financial Institution Act 2006 there are many functions performed by commercial banks among them accepting deposits and providing loans are major functions. Besides they invest their assets in different sectors as directed by Nepal Rastra Bank.

Commercial banks occupy an important place in the framework of every economy because they provide capital for the development of industry, trade, business and other resource deficit sectors by investing the savings collected as deposits. All the economic activities of each and every country are greatly influenced by the commercial banking business of the country.

Banks are an essential part of the business activities. They have been established to safeguard people's money and thereby using the money in making loans and investments. There are several commercial banks operating inside and outside the valley. Every bank invests its money in some profitable financial sector, which may result in profitable business in the long range. An investment is the commitment of money that is expected to generate additional money. Every investment entails some degree of risk, it requires at present certain sacrifice for a future uncertain benefit.

The network of a well-organized financial system of the country has great bearing on capital formation. It collects scattered financial resources from the masses and invests

them among those engaged in commercial and economic activities of the country. It has been well established that the economic activities of any country can hardly be carried forward without the assistance and support of financial institutions. Financial institutions have catalytic role in the process of economic development. Thus, commercial banks have become the heart of financial system. A key factor in the development in the country is the mobilization of domestic resources and their investment for productive use to the various sectors. To make it more effective, CBs formulate sound investment policies, which help maximize quality of investment and eventually contribute to the economic growth of a country.

Banks plays vital role in the development of the economy. Only successful banks can be stable in the country which is very challenging task. To be a successful bank, formulation of investment policy and its proper utilization or implement is essential. A healthy development of any banks depends heavily upon its investment policy. Good investment policy has a positive impact on economic development of country and vice-versa.

A portfolio is usually defined as a combination of assets. It is a collection of securities. Portfolio provides the highest possible return for any specified degree of risk. The portfolio that provides the highest rate of return with least possible amount of risk is the real investment portfolio. A key factor in the development in the country is the mobilization of domestic resources and their investment for productive use to the various sectors by commercial banks. Investment portfolio is one which the income or profit of the bank depend upon directly to minimize risk, a bank must diversity its investment on different sectors which is known as portfolio investment.

1.1.1 Investment

The word investment sounds very good and attractive that is why every individual in the world is interested in it. In layman's sense, there is always a return if there is investment. This return may be favorable as well as unfavorable to the investor's stand point. Investment brings forth vision of profit, risk, speculation and wealth. For the uninformed, investing may result in disaster. In general sense, investment means to pay out money to get more. But in the broadest sense, investment means the sacrifice of current money for future money.

1.1.2 Commercial banks and investment portfolio

The success of commercial bank depends upon the proper management of investment. A commercial bank must mobilize its deposit and other funds to profitable, secured, stable sectors. Investment policy provides several inputs to the bank through which they can handle their investment operation efficiently ensuring maximum return with minimum risk which ultimately leads the bank to path of success.

Commercial banks are organization on a joint stock company system, primarily for the purpose of earning profit. They can either of the branches banking type , with a large network of branches, or of the unit banking type as we see in the United States, where a bank's operation is confined to single office or to a few branches within a strictly limited area.

“Commercial bank is a corporation which accepts demand deposits subject to check and makes short term loans to business enterprises, regardless of the scope of its other service.” (Fisher & Ronald; 2000:345-346).

Commercial banks is a heart of financial system they hold the deposits of many person, Government establishment, business unit, they make fund available through their lending and investing activities to borrower, individuals , business firms and service from the producers to customers and the financial activities of the government. They provide a large portion is affected. These fact shows that the commercial banking system of nation is import to the functioning of the economy.

In this way commercial banks are those banks, which are engaged in commercial banking transaction and exclude from description. From the above definition commercial bank, it can be defined as a bank is a financial institution, which performs widest range of economic and financial functions of any business firm in the economy. The commercial banks are these financial institutions, which collect scattered saving of people and provide loan against proper technical helps and suggestions, administrative suggestion, safe keeping of valuable collectives of bills, cheques, and overdraft facilities and provide modern banking facilities to industries and commerce. CB's collect fund as a saving from public of country and invest in highly return yielding firm. It develops saving habits in people. CB's plays vital role for development of a developing country. Banks provides internal resources for

developing country's economy. It collect diversified capital from different part of country through its own branches.

A portfolio is collection of investment securities. Portfolio theory deals with the selection of optimal portfolio; that is, portfolio that provides the highest possible return for any specified degree of risk or the lowest possible risk for any specified rate of return. A portfolio is usually defined as a combination of asset.

“A portfolio simply represents the practice among the investor of having their funds in more than one asset. The combination of investment assets is called a portfolio.” (Weston and Brigham; 2005)

“Portfolio means a collection or group of assets.”(Gitman; 1998)

A commercial bank can maximize its wealth through maximization of return on their investments and lending. So they must invest their funds where they gain maximum profit.

1.1.2 Investment pattern of Nepalese commercial banks

The history of modern banking started from the establishment of “Nepal Bank Ltd.” in 1937 AD. With put forth effort of government and public, as a commercial bank with 10 million authorized capital. Then the government felt the requirement of a central bank and established “Nepal Rastra Bank” in 1956 AD. Likewise, rising of banking function gets popular and more complicated, thus NRB suggested for the establishment of another commercial bank and in 1966 AD. “Rastriya Banijya Bank” was established as a 100 per cent government owned commercial bank. As the country moved towards economic liberalization in 1980s foreign banks were invited to operate in Nepal. The financial scenario has changed with the introduction of Joint Venture Bank's in 1984. The number of commercial banks has been increasing. Since then, various financial institution like, JVB's, Domestic commercial banks, Development banks, Finance companies, Co-operative banks Credit Guarantee Corporation, Employee Provident Fund, National Insurance Corporation, Nepal Stock Exchange Ltd. has come into existence to cater the financial needs of the country thereby assisting financial development of the country.

In 1990 A.D. after restoration of democracy, the government adopted liberal policy in banking sector. As an open policy of GoN to get permission to invest in banking sector from private and foreign investor under commercial bank act 1975AD, different private banks are getting permission to establish with the joint venture of other countries. The development of CB's in Nepal is categorized in three phases on the basis of financial institutions policies adopted by the country from time to time.

Taking an overview of financial institutions providing banking facility in Nepal, there are 31 commercial banks, 87 development banks, 79 finance companies, 21 micro credit development banks and 16 co-operative societies licensed by NRB (NRB, 2011). Out of 31 commercial banks, 7 banks are joint ventures with foreign investors.

After liberal and free market policy, Nepalese banks and financial sectors are having greater network and access to national and international markets. They have to go with their portfolio management very seriously and superiority. Most of other commercial banks are providing new schemes like Insurance to depositor, which is an extra bonus to encourage them to deposit their surplus in such banks. Credit card system is other attractive feature of commercial banks. No doubt, if commercial banks and financial institutions has to gain prosperity without delay, they should immediately start to improve customer service quality at high standards to reflect tremendous opportunities in the markets for their customers benefits like managing their risk, giving them the advantage of global strength, insights and philosophy because this can make the customer take full confidence to expands their transaction further more with best approach and feel secured for each investment made to earn superior returns over time. Therefore commercial banks should be aware and at every moment while providing service to their customers and should have better judgment on the quality of service whether they could satisfy their customers up to their expectation and have been able to attract others as many to meet the objectives or not as a result of the quality in service delivered. Actually for commercial banks the customers act as the soul which help in correcting the problems of service providers with which they provides, can identify the defects of the gaps to minimize them in time through strong and intensive analysis of their service market research team.

Nepal being listed among least developed countries, the commercial banks has played a catalytic role in the economic growth. Its investments range from small scale cottage

industries to all types of social and commercial loans and large industries. Generally the investment of the commercial banks include the investment on Government securities, like treasury bills, development bonds, national saving bonds, foreign government securities, shares on government owned companies and non-government companies and investment on debentures, similarly the commercial banks used their funds as loan and advances. The guidelines given by NRB play a significant role in the composition of bank portfolio. Since the constraints framework provided by the central bank is for economic enhancement, it can be hypothesized that the composition of bank portfolio has a considerable impact on national economy. Portfolio management activities of Nepalese banks are in developing stage, however, on the other hand most of the joint venture banks are not doing such activities so far.

1.1.3 Factors affecting the investment portfolio decision

i) Amount of investment

While determining the investment portfolio the financial manager should consider the amount of fund available with organization. Trading and manufacturing organization deals in securities only for the purpose of best utilization of their available surplus cash resource. The amount of surplus funds available with them will therefore decide the quantum of their investment in securities.

ii) Objective of investment portfolio

While determining the investment portfolio there should be clear objective on investment in securities. The objective may differ from organization to organization. However, an organization, looking for investment of provident fund of its employees can invest only in such securities, which can assure the safety fund and its return.

iii) Selection of investment

This is an essential decision to be taken by a financial manager for investing the asset. The selection of investment involves on assuring the type of securities, proportion between fixed and variable yield securities, selection of industries, selection of companies etc. (Maheshwari, 1997:79-81)

iv) Timing of purchase

To maximize the profit, it is not only important for the financial manager to buy the right security but equally important to buy and sell it at the right time. It is the most intricate decision for financial manager.

1.2 Statement of the Problem

Commercial banks are the backbone of the Nepalese economy at present. Nepal being listed among least developed countries, the establishment of the commercial bank in this sector has added more bricks in the construction of Nepalese economy. Its investment range from small-scale cottage industries to large industries in making investment in loans and government securities one may always wonder which investment is better. It can be hypothesized that bank portfolio variables like loans, investment, cash reserve, deposit and borrowing affects the national income. And also how the government policy affects these variables, such as the effect of an interest rate on the banks portfolio variables is of great concern. Therefore, when monitoring money and credit conditions, the central bank has to keep an eye on bank portfolio behavior. The investments planning of the commercial banks in Nepal heavily depend upon the rules and regulation provided by the central banks. The composition of asset portfolio of the banks is influenced by the policy of the central bank.

Nowadays Nepalese commercial banks do not seem capable to invest their funds in more profitable sector where there is risk. They are found to more interest in investment in less risky and liquid sector i.e. treasury bills, development bonds, National savings, Shares and Debenture etc. this is due to sound investment policy of commercial banks and lack of portfolio management. Nepalese commercial banks have not formulated their investment policy in an organized manner. They have no consideration towards portfolio optimization. They just rely upon the instruction and guidelines of NRB. They do not have their own clear vision towards investment portfolio. They don't try to pay due attention towards proper matching of deposit and investment portfolio, which creates financial problem enforcing commercial banks to take wrong decisions.

With the prevailing economic recession in the country, there has been lower investment in the agriculture, manufacturing, industrial and financial sectors. Lower

volume of investment is causing lower growth of gross domestic product and hence foreign trade deficit is increasing day by day. Commercial banks are also directly affected by this economic turmoil and are facing difficulties in furnishing their loans and advances towards the profitable sectors. Due to the heavy rules and regulation by government policy, there are most important problems in investment climate prevailing in Nepal.

There are various problems in resources mobilization by commercial banks in Nepal. The most important problem is poor investment climate prevailing in Nepal due to heavy regulatory procedure uncertain government policy portfolio analysis between various types of investment made by commercial banks are most important subject, which helps to minimize risk by diversifying total risk to different sectors. But portfolio management activities of Nepalese commercial banks are in developing stage. There are various reasons behind not using such activities openly by commercial banks; such as unawareness about portfolio management and its usefulness, hesitation of taking risk, lack of proper techniques to run such activities in the best and successful manner; less developed capital market, very limited opportunity for exercising the portfolio management. NRB has also played important role to make commercial banks as well as financial institutions to invest their funds in good sector, which affect the investment portfolio. NRB has imposed many rules and regulations so commercial banks can have sufficient liquidity and security. Banking competition is increasing day per day but investment opportunity is not comparatively extended. Now, commercial banks have to face competition with each other's and many more financial institutions.

Under such situation, the present study will try to analyze investment of commercial banks, portfolio analysis of commercial banks in their investment, return on various types of investment, portfolio risk and return. Therefore, this study will deal with the following issues.

- 1) What is the relationship between investment on government securities and total deposit, loan and advance to total deposit, share and debenture to total deposit?

-) How do commercial banks manage their risk and return using portfolio diversification?
-) Do commercial banks effectively utilize portfolio concept in their investment to minimize risk and maximize return or not?
-) Which bank has the largest degree of financial risk measured in terms of portfolio risk?
-) Is investment portfolio directed towards the objectives of profit maximization?

1.3 Objectives of the Study

The general objective of the present study is to identify the current situation of investment portfolio of commercial banks in Nepal. The specific objectives are as follows.

1. To explore the existing status of investments on government securities, corporate share and debenture and loan & advance of commercial banks.
2. To find out the structure of banks investments in different sectors
3. To find out return and risk of commercial bank in different investment portfolios.

1.4 Significance of the Study

Banks are playing vital role in the economic development of the country. Without banking facilities, the economic growth becomes slow. The main objectives of commercial banks are to earn profit through proper mobilization of resources. They are found to be making investment only on short terms basis, only few banks invest on long terms nowadays. They are hesitating to invest on long terms projects because banks are looking for short term return. They do not seem to be capable to invest their funds in long term investment. They are found to be more interested in investment in less risky and highly profitable. There are various ways to minimize risk, but banks are not aware of this and do not pay any attention toward such field i.e. they do not think about portfolio investment.

The main significance of this study of portfolio analysis on investment of Nepalese commercial banks is to help how to minimize risk on investment and maximize return through portfolio analysis. The researcher has undertaken this study to analyze the existing portfolio investment of Nepalese commercial banks and point out the various weakness and defects inherent in it and provide package of suggestion for its improvement.

The study may be useful to commercial banks to understand their investment behavior and current investment risk return structure. This study also may be helpful to new researchers professionals, academicians and policymakers.

There are following significance of the study

-) Existing situation of portfolio analysis on investment of commercial banks in Nepal.
-) Profitability situation of commercial banks and comparing with each other.
-) Loan and advance portfolio analysis of commercial banks in Nepal.
-) Risk and return analysis of commercial bank in Nepal.

1.5 Limitations of the Study

Some of the assumptions of the study are as follows:

- (i) This study took into account only five commercial banks and it is assumed that the sample of five commercial banks taken for the study is enough to support for the result.
- (ii) This study considered only five years secondary data and it is assumed that study of five years secondary data are enough for study and analysis.
- (iii) This study was based on secondary data published by the commercial banks and it is assumed that secondary data published by the commercial banks are 100% correct and right.
- (iv) This study is based on the key financial indicators published by the commercial banks and it is assumed that these key financial indicators

are enough to know the relation between deposit and government securities, loan and advance and share and debenture.

- (v) The assumptions of the study are time constraints, limited budget, lack of experience, up-to-date information.

1.6 Organization of the Study

This study has been organized into five chapters.

Chapter-I: Introduction

The first chapter deals with the subject matter consisting introduction, background of the study, statement of the problem, objective of the study, significance of the study, limitation of the study and organization of the study.

Chapter II: Review of Literature

The second chapter is mainly focused with literature review that includes a discussion on the conceptual framework on advertisement and review of major–studies relating.

Chapter III: Research and Methodology

The third chapter describes the research methodology used to conduct the present research. It deals with research design, nature and sources of data, data collection procedure, population and sample, data processing and analysis and data presentation.

Chapter IV: Data Presentation and Analysis

The fourth chapter is concerned with data presentation and analysis. The major findings are also included at the end of the chapter.

Chapter V: Summary, Conclusion and Recommendations

The fifth chapter includes the summary, conclusion and recommendations of the study which deals about the main theme of study.

The bibliography and appendices are also included at the end of the study.

CHAPTER II

REVIEW OF LITERATURE

2.1 Literature Review

Literature review is an account of publications on a topic by accredited scholars and researchers. It is a summary and analysis of current knowledge about particular topic or area of inquiry.

It is a review of related research studies, publications in the related area of the study which is vital and mandatory process in research. The combination of investment in more than one sector is called portfolio. Hence, in this chapter, the focus has been made on the review of literature relevant to the portfolio analysis of commercial banks in Nepal. Various journal, article, books, annual reports, and research papers related to portfolio of commercial banks reviewed. Review of literature is divided into following subjects:

-) Review of relevant text books.
-) Review of legislative provisions
-) Review of previous studies or theory or concept
-) Review of unpublished thesis

2.1.1 Review of relevant text

Review of supportive text provides the fundamental theoretical framework and foundation to the present study. This concept states investment with zero risk and maximum risk. If the risk is zero, condition is recognized as saving or lending. If there is maximum risk then it is called gambling. Books, research paper, articles dealing with theoretical aspects of investment and portfolio analysis are taken into consideration.

Definition of investment

“Investment is the current commitment of funds for a period of time to derive a future flow of funds that will compensate the investing unit for the time funds are committed, for the expected rate of inflation and also for uncertainty involved in the future flow of the funds.” (Frank and Reilly; 2004:298-299)

“Investment is any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generated positive returns.”(Gitman and Joehnk; 1990:265)

“Investment may be defined as the purchase by an individual or institutional investor of a financial or real asset that produces a return proportional to the risk assumed over some future investment period.”(Amling; 1994:147)

“The measurement of a portfolio risk is not as a straight forward as the calculation of a portfolio’s expected return. In order to calculate the risk of a portfolio, consideration must be given not only to the risk of the individual asset in the portfolio and their relative weights but also to the extent to which the asset’s return move together. The degree to which the assets returns move together is measured by the covariance or correlation coefficient. By combining the measures of individual assets risk, relative asset weights and the co-movement of asset’s return the risk of the portfolio can be estimated.” (Cheney and Moses; 1992:653)

Source of investment risk and return

Every investment involves uncertainties that make future investment return risky. Some of the sources of uncertainty that contribute to investment risk are as follows;

i. Interest rate risk

It is the potential variability of return caused by changes in the market interest rates. Present value of investment moves inversely with changes in the market interest rate. If market interest rises, the investment’s present value will fall.

$$\text{PV of investment} = \frac{1}{\text{Interest Rate}}$$

Thus, the investment risk affects the prices of securities like stocks, bonds, real estate, gold, puts, calls, and other investments as well.

ii. Purchasing power risk (Inflation risk)

It is the variability of return an investor suffers because of inflation. The rate of inflation is measured by consumer price index.

$$\text{Rate of inflation} = \frac{CPI_t - CPI_{t-1}}{CPI_{t-1}}$$

Where,

CPI_t = consumer price index in period t.

CPI_{t-1} = consumer price index in period t-1.

When inflation takes place, financial assets such as stocks, bonds, etc. may lose their ability to command the same amount of real goods and services they did in the past.

iii. Market risk

It is the risk that arises from the variability in market returns resulting from alternating bull and bear market forces. When a security index rises fairly consistent from low point, the upward trend (bull market) and downward trend bear market arises. During bearish period the price of the stocks falls but in the bullish market, it usually rises more than enough to compensate for the bear market lose. So, the alternating bull and bear market forces create a perennial source of investment risk.

iv. Default risk

Default risk results from changes in the financial integrity of the investment. In the other word, default risk is the variability of return that investors experience as a result of changes in the credit worthiness of a firm in which they invested. Investors losses from default risk usually result from the securities prices falling as the financial integrity of a firm weaken. So the market prices of the firm securities already decline near zero during the time bankruptcy.

v. Liquidity risk

It is variability of return which results from price discounts given or sales commission paid in order to sell the asset without delay. Perfectly liquid assets are

highly marketable and suffer no liquidation costs but liquid assets are not readily marketable. Hence, liquid assets required large price discounts and sales commission in order to affect a quick sell.

Diversification and portfolio analysis

Investment positions are undertaken with the goal of earning an estimated rate of return. Investors seek to minimize risk of portfolio. Diversification is essential for the creation of an efficient investment because it can reduce the variability of returns around the expected return. Diversification is one important mean that control portfolio risk. Investments are made in a wide variety of assets so that exposure to the risk of any particular security is limited. By placing one's egg in many baskets, overall portfolio risk actually may be less than the risk of any component security considered in isolation.

“Investment risk can be reduced by including more than one alternative or categories of assets in the portfolio and by including more than one asset from each category. Hence, diversification is essential to the creation of an efficient investment because it can reduce the variability of returns around the expected return. This diversification may significantly reduce risk without a corresponding reduction in the expected rate of return on the portfolio.” (Weston and Copeland; 2003: 366)

The objective of investment in portfolio is to reduce risk. By combining securities having a low risks with securities having a high risks, success can be achieved by an investor in making a choice of investment outlets.

Investment positions are undertaken with the goal of earning some expected rate of return. Diversification is essential to the creation of an efficient investment because it can reduce the variability of returns around the expected return. The objective of portfolio analysis is to develop a portfolio that has the maximum return at whatever level of risk the investor deems appropriate.

Some different diversification techniques for reducing portfolio's risk are as follows:

1. **Simple diversification:** Simple diversification can be defined as ‘not putting all the eggs in one basket’ or ‘spreading the risks’. The simple diversification would be able to reduce unsystematic or diversifiable risk. It is the random selection of

securities that are to be added to a portfolio. Simple diversification reduces a portfolio's total diversifiable risk to zero and only the undiversifiable risk remains.

2. **Diversification across industries:** Some investment counselors advocate selecting securities from different industries to achieve better diversification. It is certainly better to follow this advice than to select all the securities in a portfolio from one industry. But, empirical research has shown that diversifying across industries is not much better than simply selecting securities randomly. Studies of the rates of return from securities in many industries have shown that nearly all industries are highly co-related with one another. Such types of securities cannot be diversified away simply by selecting securities from different industries.
3. **Superfluous diversification:** Large number of assets spreading of the portfolio asset is superfluous diversification. It refers to the investors' spreading himself in so many investments on his portfolio.
4. **Simple diversification across quality rating categories:** Simple diversification reduces risk within categories of stocks that all have the same quality rating. The standard deviations of portfolio of different homogenous quality rating attained different levels of risk. The highest quality portfolio randomly diversified stocks, was able to achieve lower level of risk than the simply diversified portfolios of lower quality stocks. This result reflects the default risk is a part of total risk. The higher quality portfolios contain assets with less default risk. Portfolio managers can reduce portfolio risk to levels lower than those attainable with simple diversification by not diversifying across lower quality assets.

Portfolio risk of a risky and a risk free security

'A risk free security is one which has a zero variance or standard deviation consequently the covariance between the risk free securities and the risky security will be zero. Since the risk free security has a zero standard deviation and covariance between the risk free security and risky security is zero, when a risky asset is combined with a risk free asset, the product of standard deviation of risky asset and portfolio proportion invested in the risky asset.' (Bodie, Kane and Marcus; 2002:164)

Here,

$$\sigma_p = \sqrt{\sum W_j^2 \sigma_j^2}$$

Where,

σ_j = Standard deviation of risky securities.

W_j = Weight of risky securities in a portfolio.

The total risk of the portfolio can be partition into two parts. They are,

Undiversifiable risk / Market risk / Systematic risk

Diversification risk / company specific risk / Unsystematic risk / Unique risk

Systematic risk

Systematic risk is the portion of total variability in return caused by market factors that simultaneously affect the prices of all securities. The systematic nature of these price changes makes them immune to much of the risk reduction effects of diversification, thus systematic risk called undiversifiable risk. Changes in the economic, political and sociological environment that affects security market are the source of systematic risk. Systematic variability of return found in nearly all securities to varying degree because most securities tend to move together in a systematic manner. **Systematic risk is the market risk which could be avoidable. The systematic risk lies in the overall stock within market measured by beta (β).** The beta of the stock is the slope of the characteristics line between return for the stock and those for the market. Beta depicts the sensitivity of the security's excess return to that of the market portfolio. If the slope is one, it means that excess vary proportionately with excess return for the market as a whole. If the slope steeper than one means that the stock's excess return varies more than proportionately with the excess return of the market portfolio. In other words, it is more systematic risk than the market as whole. This type if stock often called aggressive stock and slope less than 1 called defensive stock.

The undiversifiable risk is caused by such factor which systematically affects all firms like war, inflations, recession, interest rates policy, corporate tax rate policy etc

Since all securities will tend to be negatively affected by these factors, systematic risk cannot be eliminated by diversification therefore, an investor will expect a compensation for bearing this risk.

Unsystematic risk

“Unsystematic risk or diversifiable risk is the portion of the total risk which is unexplained by overall market movements. Since it happens due to internal causes, it is diversifiable by increasing the efficiencies and effectiveness for the productivity of the organization. This kind of risk is diversifiable risk or avoidable risk. Unsystematic risk can be reduced as more and more securities are added to a portfolio. Various studies suggest that 15 to 20 securities selected randomly are sufficient to eliminate most of the unsystematic risk of a portfolio.” (Van Horne; 1998:55-69)

“Events such as labour strikes, management errors inventions, advertising, campaigns, shifts in consumer taste and lawsuits cause unsystematic variability in the value of a market asset. Since unsystematic security price movements are statistically independent from each other, and so they may be averaged to zero when different assets are combined to form a diversified portfolio. Therefore, unsystematic risk is also called diversifiable risk”. (Weston and Copeland; 2003: 366)

Market portfolio

“The market portfolio is the unanimously declarable portfolio consisting of all the securities where the proportion invested in each security corresponds to its relative market value. The relative market value of the security is divided by the sum of the aggregate market value of all securities. The return on the market portfolio is the weighted average return on all capital assets (Francis: 6th edition: 254). Since the market portfolio contains all risky assets in proportion to their market value, it is by definition, a perfectly diversified portfolio. The market portfolio is, therefore subject only to systematic or non diversifiable risk. The volatility of the market portfolio is due to macroeconomic factors that affect all risky assets and not to economy or industry specific factors. Volatility in return created by unsystematic risk, this risk can be diversified away by adding risky assets to a portfolio.” (Cheney and Moses; 1995: 690)

The market portfolio holds a special place in modern in theory and practices. It is central to CAPM, which assumes that the market portfolio lies on the efficient set and that all investors hold the market portfolio in combing with a desired amount of risk free borrowing and lending.

2.1.2 Review of legislative provision

In this section, literature related to legal aspects has been reviewed. The preamble of Nepal Rastra Bank Act, 2002 clearly states the need of commercial bank in Nepal. "In the absence of any bank in Nepal the economic progress of the country was being hampered causing inconvenience to the people and therefore with the objective of fulfilling that need by providing services to the people. For the betterment of the country this law is hereby promulgated for the established of the bank and operation." (Nepal Rastra Bank Act 2002,)

As mentioned in this act, commercial banks will help in baking business by opening its branches in the different parts of the country under the direction of NRB, The main function of commercial banks established under this act will be, exchange money, to accept deposits and give loan to commercial and business activities.

NRB rules regarding fund mobilization of commercial bank

To mobilize bank's deposit in different sectors of the different parts of the nation to prevent them from the financial problems, central bank (NRB) any establish a legal framework by formulating various rules and regulations (prudential norms). The directives must have direct or indirect impact while making decision to discuss those rules and regulation, which are formulated by NRB in terms of investment and credit to priority sector, deprived sector, other institution, single borrower limit, CRR, loan loss provision, capital adequacy ratio, interest spread, productive sector investment. A commercial bank is directly related to the fact how much fund must be collected as paid up capital, while being established at a certain place of the nation? How much fund is needed to expand the branch and counters? How much flexible and helpful the NRB rules are also important? But we discuss only those, which are related to investment function of commercial banks. The main provisions, established by NRB

in the form of prudential norms in above relevant area are briefly discussed here under.

1. Provision for investment in the deprived sector

Some rules, which are formulated by NRB, affect the areas of credit and investment extension to the deprived sector by the commercial bank. According to the new provision, with effect from the 4th quarter of FY 2011, investment in shares of the rural development bank by CBs, which used to be counted for the priority sector lending, only is now to be included under the deprived sector lending. The new provisions effective newer commercial banks are required to invest 3% of their total loans and advances to the deprived sector.

2. Provision for credit to the priority sector

NRB requires commercial banks to extend loan & advances, amounting at least to 3.05% of their total outstanding credit to the priority sector. Commercial banks credit to the deprived sector is also a part of priority sector credit. Under priority sector, credit to agriculture is taken.

3. Provision for the investment in productive sector

Nepal, being a developing country needs to develop infrastructure and other primary productive sectors like agriculture, industry etc. For this, NRB has directed commercial banks to extend at least 40% of their total credit to the productive sectors. Loans to priority sector, agriculture sector, and industrial sector have to be included in productive sector investment.

4. Provision for the single borrower credit limit

With the objective of lowering the risk of over concentration of bank loans to a few big borrowers and also to increase the access of small and middle size borrower to the bank loans. NRB directed CBs to set an upper limit on the amount of loan financed to an individual, firm, company or group of companies. According to this, CBs are required not to exceed the single borrower limit 25% in the case of fund-based credit and 50%, in the case of non-fund based credit. Such as the letter of credit, guarantee, acceptance letter, and commitment has been fixed is a proportion of capital funds of bank.

In the case of consortium financing, commercial banks are permitted to extend a maximum 30% credit. In addition, Nepal Oil-Corporation, Agriculture-inputs Corporation and Nepal Food Corporation for their impost petrol, diesel, kerosene, and fertilizer and food stuffs respectively have been removed from the restrictions of single borrower credit limit.

Besides this, following the BASEL Capital Adequacy Accord, NRB has directed commercial banks to maintain at least 6% capital adequacy ratio (CAR) of their risk weighted assets (RWA) and off-balance sheet transaction i.e. letter of credit, letter of acceptance, Bonds, Guarantee etc. They are further required to classify their capital requirement in to (1) core capital (Tier 1) and (2) supplementary capital (Tier 2) and maintain at least 10% of their total capital in the form of core capital. As per the provision, risk weighted assets (RWA) are to be calculated by classifying assets and giving them different risk weights.

5. Cash reserve requirements (CRR)

To ensure adequate liquidity in the commercial banks to meet the depositors demand for cash at anytime and to inject the confidence in depositors regarding the safety of their deposited funds. According to the NRB Regulation 5% CRR should be maintained.

6. Loan classification and loss provision

With a view to improving the quality of assets of commercial banks NRB has directed commercial banks to classify their out-standing loan and advances, investment and other assets into six categories. The classification is done in two ways. The loans of more than 10 million are to be classified as debt service charge ratio, repayment situation, financial condition of borrower, management efficiency, quality of collateral. The loans of less than 10 million have to be classified as per maturity period.

Furthermore, NRB has directed commercial banks to maintain certain reserves for loans so classified. The existing loan loss provisioning is as follows:

Table 1.1: Loan Loss Provision**(In Percentage)**

Loan Classification	Loan Loss Provisioning:
Pass	1
Sub Standard	25
Doubtful	50
Loss	100

Source: (NRB Directives, 2068)

LLP has affected banks capability to extend loans and made them risk averse in issuing newer loans, particularly to the private sector and priority sector where the loan default is high.

7. Directives regarding interest rate spread

The interest rate spread, the difference between interest charged on loan and advances and the interest paid to the depositors, has widened significantly in the aftermath of deregulation in interest rates which has caused lower financial intermediation. Therefore, NRB has required commercial banks to limit interest rate spread between deposit and lending rated to a maximum extent of 5%. NRB has also provided commercial banks with new calculation method of interest rate spread for a certain period recently.

2.1.3 Review of previous studies

This section is developed to the review of major related literature concerning portfolio in different countries. But in Nepal there are very few studies can be found in the topic of portfolio analysis on investment of commercial banks in Nepal. For this study, various books, journals, articles and past thesis are reviewed. It is reviewed from international context and Nepalese context.

A study entitled “Lending policy of Commercial Banks in Nepal” (Bhattra,1978) has tried to examine the lending policy of the commercial banks. The study concluded that efficient utilization of resources is more important that collection of the same. Lower investment means lower capital formulation that hampers economic development of the people and the country. Therefore, recommendation is that bank should give emphasis on efficient utilization of resources.

A study entitled, “A study on Investment Policy of Nepal Bank Ltd.” (Pradhan, 1980) emphasized that there is a greater relationship between deposits and loans and advances. The study concluded that through there is a greater relationship between deposits and loans and advances. The study concluded that through loan and advances as well and deposits are in increasing trend, their increase is not in a proportionate manner. Immense increase in the deposits had led to little increase in loans to grant the loan and advances without its lengthy process. The study suggested enhancing banking transactions up to rural sector of the kingdom.

2.1.4 Review from international context

In international context, several studies have been done in the field of portfolio analysis. Among them some studies are reviewed as follows.

The Harry M. Markowitz’s Study (1952)

Markowitz entitled the portfolios theory establishes a relationship between a portfolios expected return and its level of risk as the criterion for selecting the optimum portfolio. So as to find the efficient set of portfolios and select the most effecting one, the portfolio manager need to know the expected returns and the risk of these returns for the individual securities. The portfolio model developed by Markowitz is based on the following assumptions. (Markowitz; 1952:77-91)

-) The risk of an individual asset or portfolio is based on the variability of returns (standard deviation or variance)
-) Investors depend solely on their estimates of return and risk in making their investment decisions. This means that an investor’s utility (indifference) curves are only a function of expected return and risk.
-) Investors adhere to the dominance principal. That is, for only given level of risk, investors prefer assets with a highest expected return to assets with lower expected return.
-) The expected return of the portfolio is the weighted average of the expected returns of the individual assets in the portfolio. The weights are defined as the portion of the investor’s wealth invested in a particular asset.

The Markowitz has presented the risk of the portfolio consists of the riskiness of the individual securities and the covariance between the returns of the securities among all possible combinations of them. Thus, portfolio risk can be calculated as follows:-

The portfolio risk

$$\sigma_p^2 = X_1^2 \sigma_1^2 + X_2^2 \sigma_2^2 + 2X_1X_2 r_{12} \sigma_1 \sigma_2$$

Where,

X_1 = proportion of funds invested in security 1.

X_2 = proportion of funds invested in security 2.

σ_1^2, σ_2^2 = variance of the returns on securities 1 and 2.

r_{12} = correlation between the return of 1 and 2.

The Edward J. Kane and Stephen A. Buser's Study (1979)

The study of the Edward J. Kane and Stephen A. Buser in the title "Portfolio diversification at Commercial Banks" (Kane and Buser; 1979:19-31) deals how a firm performs a useful function by holding a portfolio of efficiently priced securities.

It is the rational for a firm to engage round of asset diversification on behalf of its shareholder's even when all assets are priced efficiently and available for direct purchase by shareholders. As a way of testing their perspective empirically, they estimates regression model designed to explain the number of distinct of U.S. treasury and federal agency debt held in a time series of cross section of large U.S. commercial Banks. They interpret the systematic pattern of the diversification observed for large U.S. commercial banks as evidence that banks stockholder from relatively uniform diversification clientele. For firm, marginal benefits from diversification takes reduction in the cost equity funds offered by its specific clientele of stockholders. To maximize the value of the firm, these benefits must be weight against the explicit and implicit marginal cost of diversification.

According to E.J. Kane and S.A. Buser:

-) Even wealthy investors should be sensitive to administrative costs associated with selecting, evaluating, managing and continually keeping track of a large number of securities.
-) Investors with even modest resources, the stock of financial institutions should be relatively less attractive than the stock of that avoid extensive diversification costs by engaging in specialized activities.

Review of journals and articles

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

Shrestha (1998) has given a short glimpse on article entitled “*Portfolio Management in Commercial Banks; Theory and Practices*”. (Nepal Bank Patrika; 1998). The article highlighted the followings issues:

-) The portfolio management is a important issue both for individual and institutional investors.

He further suggested that:

-) Do not hold any single security i.e. try to have a portfolio of different securities.
-) Choose such portfolio of securities, which ensure maximum return with minimum risk or less return for wealth maximizing objectives.

He has mention short transitory view on portfolio management in Nepalese commercial banks. Nowadays number of banks and financial institution are operating in this sector are having greater networks and access to national and international markets. They have to go with their portfolio management very seriously and superiority, to get success to increase their regular income as well as to enrich the quality service to their clients. In this competitive and market oriented open economy, each commercial banks and financial institution has to play a determining role by widening various opportunities for the sake of expanding provision of best service to their customers.

In this context he had presented two types of investment analysis techniques i.e. fundamentals analysis to consider any securities such as equity, debenture or bond and other money and capital market instrument. He has suggested that the banks having international joint venture network can also offer admittance to global financial markets. He has pointed out the requirement of skilled labors, proper management information system in joint venture banks and financial institution to get success in portfolio management and customer assurance.

On the basis of his article, the portfolio management activities of Nepalese commercial banks at present is in nascent stage. However, on the other hand most of the banks are doing such activities so far because of following reasons. Such as unawareness of the client about the service available, hesitation of taking risk by the client to use such facilities, lack of proper techniques to run such activities in the best and successful manner, less development of capital market and availability of few financial investment in the financial market.

He has given the following conclusion for smooth running and operation of commercial banks and financial institution.

-) For surviving commercial banks should depend upon their own financial health and various activities.
-) In order to develop and expand the portfolio management activities successfully, the investment management methodology of portfolio manger should reflect high standards and give their clients the benefits of global strengths, local insights and product philosophy.
-) With the discipline and systematic approval to the selection of appropriate countries, financial assets and management of various risks the portfolio manager could enhance the opportunity for each investor to earn supervisor returns over time.
-) The Nepalese banks having greater network and access to national and international capital market have to go for portfolio management activities for the increment of their fee based income as well as to enrich the client base and contribute to the national economy.

Timilsina (1999) has published an article on “*Managing Investment Portfolio.*” He is however, confronted with problems of managing investment portfolio particularly in times of economic slowdown like ours. A rational investor would like to diversify his investments in different classes of assets so as to minimize risks and earn a reasonable rate of return.

Commercial banks have continuously been reducing interest rates on deposits. Many depositors are exposed to the increasing risk of non-refund of their deposits because of the mismanagement in some of the banks and finance institutions and accumulation of huge non-performing assets with them.

Few depositors of cooperative societies lost their deposits because some of these cooperatives were closed down because of their inability to refund public deposits. An investor in days of crisis has to make an effort to minimize the risk and at least earn a reasonable rate of return on his aggregate investment.

An investment in equity share can earn dividend income as well as capital gain, in the form of bonus share and right share until an investor holds it and capital profit when he sells it in the stock market. As returns from equity investments have fluctuated within a very wide range, investors feel it much difficulty to balance risk and reward in their equity portfolio. As a matter of fact, investors in equity shares should invest for a reasonable long time frame in order to manage the risk.

Making investment in fixed deposits with commercial banks is a normal practice among the common people. Normally fixed deposits with banks are considered risk-less, but they also are not 100 percent risk free. You should select a bank to put your deposit therein, which has sound financial health and high credibility in banking business. In times of crisis if you select a sick bank deposit your money there is high probability that your money could be returned back.

An investor may have option of making investment in government bonds or debentures. In history we have examples that a government can nationalize the private property of its citizens, cancel out old currency notes, and can convert the new investment into some conditional instrument. But in democracy there is no probability

that the government would default to repay money back. This is comparatively risk free investment, but yields low return.

An investor has to evaluate the risk and return of each of the investment alternatives and select an alternative, which has lower degree of risk and offer at least reasonable rate of return. One can draw a safe side conclusion to invest all the money he has only in government securities, but this is not a rational decision. An investor who doesn't try to maximize return by minimizing the possible risk is not a rational investor. On the other hand, one can place over-confidence on equity investment and assume high risk by investing the whole money in equity shares. Stock market these days is much dwindling and notoriously unpredictable; therefore this too is not a wise decision. Therefore, a portfolio, which consists of only one class of financial assets, is not a good portfolio.

2.1.5 Review of unpublished thesis

Bajracharya (2000) conduct a study on “*Investment of Commercial Banks in Priority Sector*”. The major finding of the study is that the target of 12% investment of total outstanding liabilities in priority sector and 3% out of which has been invested in deprived sector.

Mahandhar (2003) in her thesis entitled “*Analysis of Risk and Return on Common Stock Investment of Commercial Bank in Nepal*” has been done in 2003. The findings of the study is

stocks have greater volatility risk than other investment, which takes a random and unpredictable path. Stock market is risky in the short term and it is necessary to prepare the investors for it.

- Stock of all banks in this study are said to be under priced. These companies' common stocks are worth to purchase, as their expected return is greater than required rate of return.
- Portfolio return is greater than portfolio risk of two banks (i.e. NBBL and HBL)

2.2 Theoretical Framework

2.2.1 Concept of investment

When people earn money; they either consume them or save them. Saving can be either hoarded which does not provide any yield to the saver or it can be used for investment to earn some return. The investment is a commitment of fund to some assets which takes place at present in an expectation to receive some direct benefits from those assets or to increase the value of those assets which takes place in the future. Although, savings are a major source of investment, investments can also be made from borrowings. (*Manandhar, Gautam & Lamichhane; 2066:2*)

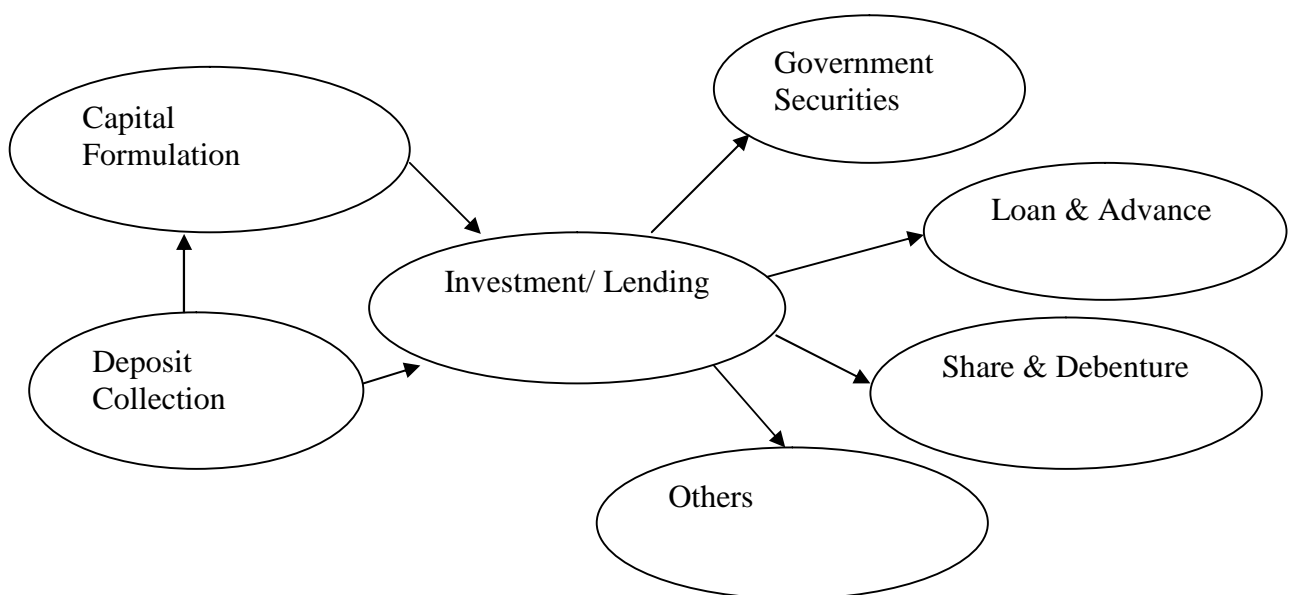


Figure 2.1 Investment Cycle

Figure 2.1 depicts that investment is made either from deposit made or capital formulation or both and investment contributes capital formation which may result investment in different securities and instrument.

Some of scholar definitions of investment are as follows:

“Investment, in its broadest sense, means the sacrifice of current dollars for future dollars. Two different attributes are generally involved: time and risk. The sacrifice takes place in the present and is certain. The reward comes later, if at all, and the magnitude is generally uncertain.” (Sharpe, 2002, p. 123)

“An investment is a commitment of funds made in expectation of some positive rate of return. If the investment is properly undertaken, the return will be commensurate with the risk the investor assumes.” (Fisher & Ronald; 2000:345-346).

CHAPTER III

RESEARCH METHODOLOGY

A systematic research study requires following a proper methodology to achieve the set of objectives. Research Methodology is a systematic approach of finding solution of a particular problem. It is systematic collection, recording, analysis, interpretation and reporting of data and information.

This chapter aims to present a basic framework of the research work. This chapter contains the research design, sample size, time frame, instrument of data collection, validity and reliability, data processing tools and techniques, variables etc.

Research design is used to control variance (Wolff and Pant; 2002:51). It includes different dependent and independent variables, types of research design, research questions and hypothesis sample, data collection activities, technique of analysis etc.

3.1 Research Design

Research design is an overall framework or plan for the activities to be undertaken during the course of a research study. Research design is the plan, structure and strategy of investigations considered so as to obtain answers to research questions and to control variances. The present study is mainly based on two type of research design: descriptive and analytical. Descriptive research design describes phenomena and explores the existing situation of the particular situation. Analytical research design analysis and evaluate the situation on the basis of gathered facts and information.

3.2 Description of the Population and Sample

The study is limited within the A class commercial banks of Nepal. There are basically three types of banks: 1. promoted by GON, 2. domestic investors, and 3. joint venture. At present there are 32 licensed commercial banks operating their business in Nepal. All 32 licensed Nepalese CBs are considered as total population. But, only 5 banks are selected as a sample.

Sampling size and techniques

Sample size is determined considering time and resources available for the study. Five banks are selected for the study. Stratified and quota sampling method is used while selecting sample from the population. In the population frame only 15 banks are eligible out of 32 banks. It is because the study needs at least five fiscal year data. Bank established before 2006 are selected in the sampling frame. Only 17 banks were eligible for the study but 2 giant banks also excluded from the study. Rest of 15 banks are divided in two strata: 100 per cent domestic investment bank (10) and joint venture bank (5). 33% of population has selected as a sample using random sampling method from each strata. Out of 10 banks, 2 banks are selected and out of 5 banks, 1 bank is selected.

Name of all banks were written in different piece of paper and closed the name of the bank by folding the paper where 5 papers were drawn randomly. The method of sampling is simple random sampling method,

Following 5 banks have been selected as sample bank for the study of the research project.

From 100 percent domestic investment group:

1. Nepal Investment Bank Ltd. (in short – NIBL)
2. Kumari Bank Limited (in short – KUMARI)
3. Nabil Bank Limited (in short- NABIL)

From joint venture with foreign investment group:

4. Himalayan Bank Limited (in short – HBL)
5. Everest Bank Limited (in short – EBL)

Description of the sample banks:

I. Nabil Bank Limited

Nabil Bank Limited, the first foreign joint venture bank of Nepal, started operations in July 1984. Nabil was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, Nabil provides a full range of commercial banking services through its 47

points of representation across the country and over 170 reputed correspondent banks across the globe.

Nabil, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business.

Paid up capital is reached to Rs. 2,029 million and total equity reached to Rs. 4144 million.

II. Everest Bank Limited

Everest Bank Limited (EBL) started its operations in 1994 with a view and objective of extending professionalized and efficient banking services to various segments of the society. The bank is providing customer-friendly services through its Branch Network. All the branches of the bank are connected through Anywhere Branch Banking System (ABBS), which enables customers for operational transactions from any branches.

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

Punjab National Bank (PNB), our joint venture partner (holding 20% equity in the bank) is the largest nationalized bank in India. With its presence virtually in all the important centers at India, Punjab National Bank offers a wide variety of banking services which include corporate and personal banking, industrial finance, agricultural finance, financing of trade and international banking. Among the clients of the Bank are Indian conglomerates, medium and small industrial units, exporters, non-resident Indians and multinational companies.

III. Kumari Bank Limited,

Kumari Bank Limited, came into existence as the fifteenth commercial bank of Nepal by starting its banking operations from Chaitra 21, 2057 B.S (April 03, 2001) with an objective of providing competitive and modern banking services in the Nepalese financial market. The bank has paid up capital of Rs. 1,485,000,000 of which 70% is contributed from promoters and remaining from public.

Kumari Bank Ltd has been providing wide - range of modern banking services through 28 points of representations located in various urban and semi urban part of the country, 19 outside and 9 inside the valley. The bank is pioneer in providing some of the latest / lucrative banking services like E-Banking and SMS Banking services in Nepal.

IV. Himalayan Bank Ltd.

Himalayan Bank was established in 1993 in joint venture with Habib Bank Limited of Pakistan. Despite the cut-throat competition in the Nepalese Banking sector, Himalayan Bank has been able to maintain a lead in the primary banking activities- Loans and Deposits.

Legacy of Himalayan lives on in an institution that's known throughout Nepal for its innovative approaches to merchandising and customer service. Products such as Premium Savings Account, HBL Proprietary Card and Millionaire Deposit Scheme besides services such as ATMs and Tele-banking were first introduced by HBL. Other financial institutions in the country have been following our lead by introducing similar products and services. Therefore, we stand for the innovations that we bring about in this country to help our Customers besides modernizing the banking sector. With the highest deposit base and loan portfolio amongst private sector banks and extending guarantees to correspondent banks covering exposure of other local banks under our credit standing with foreign correspondent banks, we believe we obviously lead the banking sector of Nepal. The most recent rating of HBL by Bankers' Almanac as country's number 1 Bank easily confirms our claim.

V. Nepal Investment Bank Ltd.

Nepal Investment Bank Ltd. (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one the largest banking group in the world.

With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen, had acquired on

April 2002 the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd.

The name of the bank has been changed to Nepal Investment Bank Ltd. upon approval of bank's Annual General Meeting, Nepal Rastra Bank and Company Registrar's office with the following shareholding structure.

-) A group of companies holding 50% of the capital
-) Rashtriya Banijya Bank holding 15% of the Capital.
-) Rastriya Beema Sansthan holding the same percentage.
-) The remaining 20% being held by the General Public (which means that NIBL is a Company listed on the Nepal Stock Exchange).

3.3 Instrumentation

To collect the information data secondary data source was used. Financial statements of five banks for five fiscal years obtained from official websites and publications of concerned banks which can be easily got from the corporate office or searching the internet.

3.4 Data Collection Procedure and Time Frame

I used official websites of above organization, their annual report and occasional publications as the secondary data sources. This study mainly based on secondary source data of concerned banks, Nepal Rastra Bank, SEBO, and different library are the providers of the data. Data has been collected from Nepal Rasra Bank, Ministry of Finance, NEPSE, SEBO and their respective publications similarly the required micro level data derived from annual reports of selected banks, SEBO and NEPSE. In addition to above, supplementary data and information were collected from different organization;

Although, the study mainly used secondary data, high level of efforts and more time was paid to get data. Official publications like Economic Survey, Annual Reports, Banking and Non-Banking Financial Statistics, Economic Bulletin etc. were obtained from respective offices. Mainly most of the data are taken from the library of SEBO. To some extent, informal interview was scheduled and conducted to obtain more

information and reality about the various published data, investment policies of the banks, portfolio concept in the field of investment etc.

Due to poor data base, the data obtained from the various sources cannot be directly used in their original form. Further they need to be verified and simplified for the purpose of analysis. Hence, in this study the available data, information, figures and facts were checked, rechecked, edited and tabulated for computation. Similarly, according to the need and objectives, the secondary data were compiled, processed tabulated and graphed if necessary for the better presentation.

3.5 Validity and Reliability

Measurement experts (and many educators) believe that every measurement device should possess certain qualities. Perhaps the two most common technical concepts in measurement are reliability and validity. Any kind of assessment, whether traditional or "authentic," must be developed in a way that gives the assessor accurate information about the performance of the individual. At one extreme, we wouldn't have an individual paint a picture if we wanted to assess writing skills.

3.5.1 Reliability

Reliability means degree of consistency between two measures of the same thing (Mehrens and Lehman, 1987). Reliability of the information was examined by different methods. Data was collected by secondary sources basically from annual report of the organization downloaded from the official websites. The data has been cross checked with the data obtained from Nepal Rastra Bank. Both sources of information to be coincided. On the basis of the result it can be said that there is high degree of reliability in the information collected for this study.

3.5.2 Validity

For a test to be valid, or truthful, it must first be reliable. The findings should be accurate or exact. There are three types of validity: Content, Criterion and construct validity. Validity of the data is tested on the basis of different theory. Generally, return of risky assets is higher than return of less risky assets. Same result has been obtained from this study.

3.6 Analysis Plan

In this study, various financial and statistical tools were used. To measure the return arithmetic mean is used, to measure the risk standard deviation; variance and coefficient of variation are used. To find out the financial performance of the organization different ratio are used. Return on Assets, Return on Investment, profit margin, ratio between deposit and loan and investment, ratio between assets and deposit are calculated.

Financial performance measurement tools

Several tools are applied in order to analyze the performance of CBs. But the following main financial tools are used to analyze.

I. Ratio analysis

The relationship between two accounting figures expressed in quantitative figure mathematically is known as ratio. Ratio analysis is used to compare a firm's financial performance and status so that of other firms or to itself on time (Gitman; 1990:275). Likewise, ratio refers to the numerical or quantitative relationship between two items or variables. It is one number expressed in term of another and can be worked out by dividing the number to the other i.e. it is calculated by dividing one items of the relationship with the other (Munakarmi;2002:204). In financial analysis, ratio is used as an index of yardstick for evaluating the financial position and performance of the firms. Since, this study mainly moves around investment portfolio of CBs. Only such ratios which are related to investment of CBs are taken here. Hence, in this study the following ratios are calculated and analyzed.

1. Total investment to total deposit ratios

Investment is one of the major credits created to earn income. This implies the utilization of firms deposit on investment in government securities. This ratio can be obtained by dividing total investment by total deposit. This can be mentioned as:

$$\frac{\text{Total Investment}}{\text{Total Deposit}}$$

2. Loan and advances to total deposit ratio

This ratio assesses to what extent the banks are able to utilize the depositor's funds to earn profit by providing loan and advances. It is computed by dividing the total amounts of loans and advances by total deposited funds. The formula used to compute this ratio is as

$$\frac{\text{Loan and Advances}}{\text{Total Deposit}}$$

High ratio is the symptom of higher/ proper utilization of funds and low ratio is the single of balance remained unutilized/ idle.

3. Net profit to total assets ratio

This ratio is very much crucial for measuring the profitability of funds invested in the banks assets. It measures the return on assets. It is computed by dividing the net profit after tax by total assets. The formula used for computing this ratio is as

$$\frac{\text{Net Profit after Tax}}{\text{Total Assets}}$$

4. Return on government securities

This ratio indicates how efficiently the bank has employed its resources to earn good return from government securities. This ratio is computed by dividing interest income on government securities by government securities. This can be expressed as;

$$\frac{\text{Interest income on government securities}}{\text{Government securities}}$$

5. Return on loan and advances

This ratio indicates how efficiently the bank has employed its resources to earn good return from provided loan and advances. This ratio is computed by dividing interest income on loan and advances by loan and advances. This can be expressed as;

$$\frac{\text{Interest income on loan and advances}}{\text{Loan and Advances}}$$

6. Return on share and debentures

The return on share and debenture considers dividend yield and capital gain yield. The dividend yield is only a partial indication of the return hence, return on share and

debenture significantly depends on the change in its share price. It is calculated as follows:

$$\text{Return on share and debenture } fR_s AX \frac{P_t Z P_{tZ} \Gamma D_t}{P_{tZ}}$$

II. Risk on individual assets

The riskiness of assets depends on the variability of rates of return, which is defined as the extent of the deviation of individual rates of return from the average rate of return. Risk on individual assets can be calculated as;

$$\dagger X \sqrt{\frac{fR Z \bar{R} \hat{A}}{n Z 1}}$$

Where

† X Standard deviation or risk

\bar{R} = average rate of return on individual assets

R = rate of return on individual assets

n = no. of years

III. Return on portfolio

The return of a portfolio is the weighted average of the returns of the individual assets in the portfolio. The weights are proportion of the investors wealth invested in each asset, and sum of the weights must be equal one.

$$\text{Portfolio return } fR_p AX W_A R_A \Gamma W_B R_B \Gamma \dots \Gamma W_N R_N$$

Where,

R_p = Portfolio return

W_A = Weight of investment invested in stock ‘A’

W_B = Weight of investment invested in stock ‘B’

R_A = Return for stock ‘A’

R_B = Return for stock ‘B’

IV. Risk on portfolio

The portfolio risk is measured by either variance or standard deviation of returns. The portfolio risk is affected by the variance of return as well as the covariance between the return of individual assets included in the portfolio and respective weights.

The portfolio risk can be calculated in term of its standard deviation as;

$$\sigma_p = \sqrt{W_A^2 \sigma_A^2 + W_B^2 \sigma_B^2 + W_C^2 \sigma_C^2 + 2W_A W_B \text{Cov}_{AB} + 2W_A W_C \text{Cov}_{AC} + 2W_B W_C \text{Cov}_{BC}}$$

Where,

W_A, W_B, W_C = Weight of assets A, B and C in a portfolio

$\sigma_A, \sigma_B, \sigma_C$ = Standard deviation of return of A, B and C in a portfolio

Cov_{AB} = Co-variance between assets A and B

Cov_{BC} = Co-variance between assets B and C

Cov_{AC} = Co-variance between assets A and C

V. Co-variance

The covariance measure how two variables co-vary. It is a measure of the absolute association between two variables. How the returns of individual stocks and market co-vary measured by covariance between the return of individual stocks and market return. If two variables are independent, their covariance will zero. It computed as;

Symbolically

$$\text{Cov.}(j \& m) = \sigma_j \sigma_m \rho_{j,m}$$

VI. Coefficient of variation

We know that standard deviation is the absolute measure of dispersion of rate of return. The relative measure of dispersion based on the standard deviation is known as the coefficient of standard deviation.

$$\text{C.V.} = \frac{\sigma_j}{\bar{R}_j}$$

Where,

σ_j = Standard deviation of securities j.

\bar{R}_j = Average return on securities j.

The CV thus defines the risk associated with each dollar of expected return in terms of ratio of the standard deviation of return to the expected return. (Pradhan; 2000:250).

b) Statistical tools

The process of analyzing and evaluating various data statistical tools has been used. In this study, statistical tools such as standard deviation, mean, coefficient of variation, coefficient of correlation between different variables are as follows;

I. Karl Person's Coefficient of Correlation

Correlation Coefficient is statistical tools to measure the relative association between two variables series; it describes how much linear co-movement exists between two variables. Karl Person's measure, known as Pearson's correlation coefficient between two variables (series) X and Y usually denoted by $r(X,Y)$ or r_{xy} or simply r can be obtained as;

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

The value of correlation coefficient 'r' lies between -1 to +1

If $r = 1$ there is perfect positive relationship

$r = -1$ there is perfect negative relationship

$r = 0$ there is no correlation at all

The closer the value of 'r' is 1 or -1, the closer the relationship between the variables and the closer 'r' is to 0, the less close relationship..

II. Mean

It can also be denoted by AM or simply a mean of a set of observations is the sum of all the observation divided by the number of observations. Arithmetic mean is also known as the arithmetic average. AM is the most popular one among the different measures of the averages. e.g., the AM of x of N observation $x_1, x_2, x_3, \dots, x_n$ is given by

$$\bar{X} = \frac{1}{N} \sum_{i=1}^n x_i$$

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

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

4.1 Presentation of the Result

The main theme of this chapter is to analyze and interpret the data by using financial and statistical tools. In this chapter, the concern is given in the presentation and analysis part of data in detail. As data presentation and analysis is the crucial part of any research, the purpose is to organize the collected data so that it can be used for interpretation whereas analysis of the data is to convert it from a crude form to an easy and understandable form.

There are a number of methods which can be used to simplify the data. It is being felt that the easiest way to understand the data is by examining it through charts, tables and graphs. Necessary tables and figures are personated to achieve the objectives of the study. Here, relevant data are collected from the annual report, official website of banks, journals and newspapers.

The investment portfolio of CBs is analyzed with the help of following tools;

-) Risk and return (mean, standard deviation and coefficient of variation) on individual investment assets and investment portfolio
-) Ratio analysis
-) Correlation analysis

4.1.1 Risk and return on individual investment assets and investment portfolio

Risk is an important element since investment with greater risk requires a higher return than investment with lower risk. The relationship between risk and returns is described by individual perception about risk and their demand for compensation. In this section, standard deviation and coefficient of variation are taken as the measuring tools of risk and mean return is taken as to measure realized return.

Risk and return on government securities

Government securities are the fixed income securities issued by the government of Nepal. These securities are least risky among the various investment alternatives. The risk and return on government securities such as treasury bills, development bonds, national saving bond etc. can be calculated as follows:

The return on government securities is computed by dividing interest income on government by total investment on government securities. i.e.

$$\text{Average Rate of return on Government Securities} = \frac{\sum_{t=1}^n R_g}{n}$$

Now, Risk on government securities is denoted by \dagger_g and can be calculated by using following formula.

$$\dagger_g = \sqrt{\frac{\sum_{t=1}^n (R_g - \bar{R}_g)^2}{N}}$$

$$\text{Coefficient of variation (CV}_g) = \frac{\dagger_g}{R_g} \times 100$$

Where, n = no.of historical year (period)

Table 4.1: Calculation of Risk and Return on Government Securities

(in Percentage)

FY	NABIL	EBL	KBL	HBL	NIBL
2006/2007	6.31	2.74	4.32	3.35	3.27
2007/2008	3.16	2.73	3.46	2.97	2.41
2008/2009	4.27	3.74	3.17	2.69	3.17
2009/2010	7.26	5.63	8.20	8.43	5.56
2010/2011	4.17	5.49	4.63	4.81	4.04
Mean	5.03	4.07	4.75	4.45	3.69
Variance	2.86	2.03	4.06	5.61	1.42
S.D.	1.69	1.42	2.02	2.37	1.19
C.V	0.34	0.35	0.42	0.53	0.32

Source: Calculation from primary source, annexure 'A'

Table 4.2: Calculation of Risk and Return on Govt. Securities of CBs

(Rs. in millions)

FY	Government Securities		Return on Investment (%)
	Interest income	Investment	
2006/2007	545.16	14631.02	3.73
2007/2008	595.53	20519.12	2.90
2008/2009	726.55	21564.26	3.37
2009/2010	1143.14	16675.85	6.86
2010/2011	1034.59	22693.08	4.56
Average		4.28	
S.D.		1.56	
C.V.		0.36	

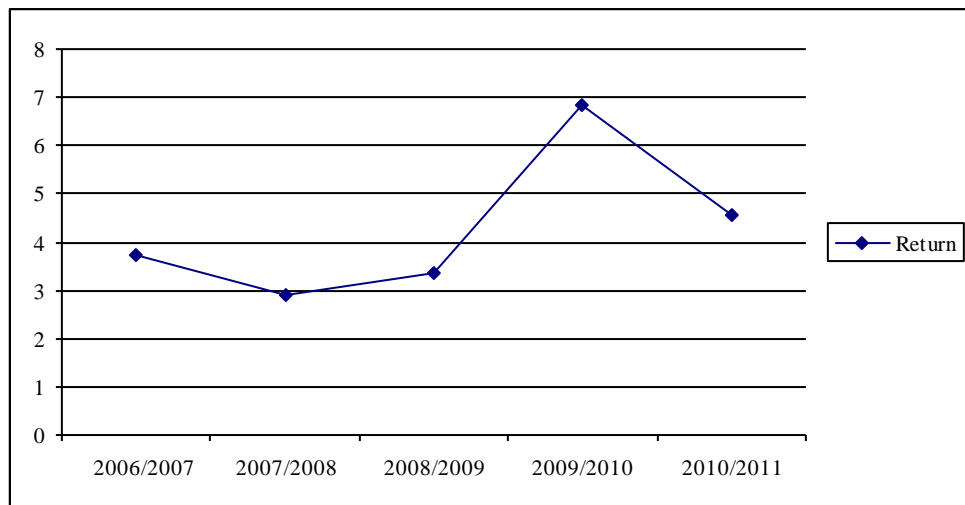
Source: Calculation from primary source, annexure A

) Return

The table no.4.1 shows that the return on investment on government securities was fluctuated over the period. Similarly, there is no constant return on government securities and interest income from government securities. During the study period, the highest return was 6.86% in 2009/2010 and lowest return was 2.90% in 2007/2008. The return trend of the study period i.e. from FY 2006/2007 to FY 2010/2011 is ups and down. In an average, the return is 4.28% which shows that in an average the commercial banks generate 4.28% returns on government securities.

) Risk (Standard deviation)

Similarly, the standard deviation of the return on government securities for 5 years period is 1.56 and CV is 0.36 which shows the riskiness of return of government securities. The lower variability on returns on government securities is due to proper investment on various securities i.e. balanced allocation of funds on various government securities such as treasury bills, national saving bonds, development bonds etc. The same result is also presented by figure 4.1.

Figure 4.1: Return on Government Securities

Fiscal Year	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
Return	3.73	2.9	3.37	6.86	4.56

Risk and return on loan and advance

The major portion short term investment of commercial banks is the loan and advance in various sectors. Commercial banks provide loans and advances from the money i.e. the money it reserves by the way of the persons against the personal security of the borrowers or against the security of the borrowers or against the security of the movable and immovable properties. Mainly the commercial banks are providing their funds to the various sectors like agriculture, industry, commercial sectors etc.

The risk and return on investment in the form of loan and advance can be calculated as follows:

$$\text{Return on Loan and Advance (R}_1\text{)} = \frac{\text{Interest income from loan \& advances}}{\text{Total Investment on loan \& advances}}$$

$$\text{Average Rate of Return on Loan and Advance } (\bar{R}_1) = \frac{\sum_{i=1}^n R_1}{n}$$

Now, Risk on loan and advances are denoted by \dagger_1 and can be calculated by using following formula.

$$\dagger_l = \sqrt{\frac{n}{\sum R_l} \frac{(R_l - \bar{R}_l)^2}{N}}$$

$$\text{Coefficient of variation (CV}_l) = \frac{\dagger_l}{R_l} \times 100$$

Where, n = no.of historical year (period)

Table 4.3: Calculation of Risk and Return on Loan and Advances

(In percentage)

FY	NABIL	EBL	KBL	HBL	NIBL
2006/2007	7.79	7.89	7.85	7.92	7.65
2007/2008	7.63	7.10	7.78	7.38	7.65
2008/2009	7.07	7.26	7.79	7.50	7.17
2009/2010	7.96	7.79	8.52	7.51	8.13
2010/2011	10.44	10.17	11.95	10.15	10.56
Mean	8.18	8.04	8.78	8.09	8.23
S.D.	1.31	1.23	1.80	1.17	1.35
C.V	0.160	0.154	0.205	0.144	0.164

Source: Calculation from primary source, annexure 'B'

Table No. 4.3 shows the risk and return on loans and advance by the various commercial banks. The return on loans and advances is calculated by the ratio of the interest income from the loans and advances and investment on loans and advances during the fiscal years. Out of the five commercial banks KBL has the highest return on loans and advances i.e. 8.78% while, the EBL has the lowest return i.e. 8.04%, Similarly HBL, and EBL have the lowest risk i.e. C.V (0.144, 0.154) while the KBL has the highest risk i.e. C.V. (0.205)

Table 4.4: Calculation of Risk and Return on Loan and Advances of CBs

(Rs. millions)

FY	Loan and Advance		Ratio (%)
	Interest income	Investment	
2006/2007	4398.31	56262.99	7.82
2007/2008	5370.55	71649.95	7.50
2008/2009	7054.46	96607.57	7.30
2009/2010	10035.42	126221.41	7.95
2010/2011	15011.70	142717.51	10.52
Average		8.22	
S.D.		1.31	
C.V.		16%	

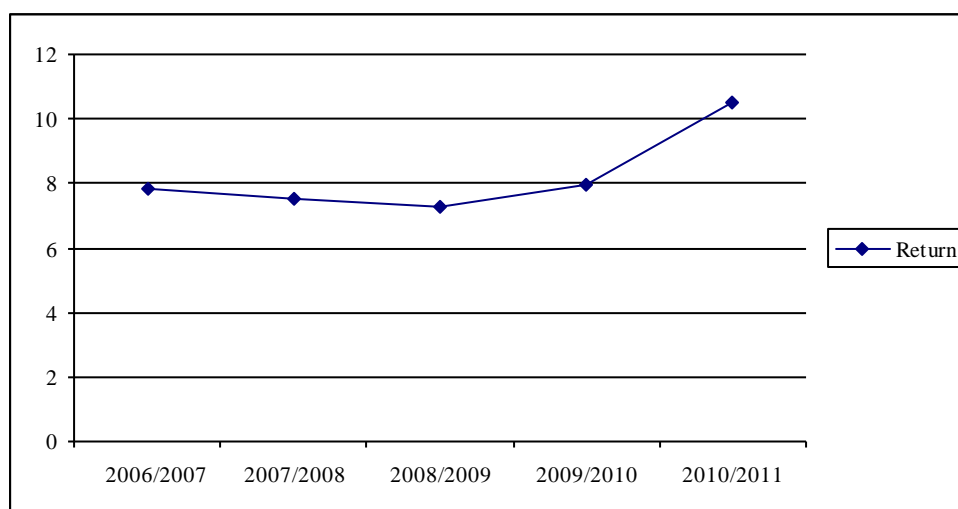
Source: Calculation from primary source, annexure 'B'

) Return

Table No.4.4 shows the risk and return of average commercial banks. The average return is 8.22%. Combining table 4.3 and table no.4.4 we find that KBL and HBL provide the return above the average industry while, the rest provide return below the average industry.

) Risk (Standard deviation)

The standard deviation and C.V. of CBs are 1.31 and 16% comparing the riskiness of the returns; EBL and HBL are less risky as they have C.Vs below the average, while the remaining two banks have C,Vs more than average.

Figure 4.2: Return on Loan and Advance

Fiscal Year	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
Return	7.82	7.5	7.3	7.95	10.52

Risk and return on share and debentures

The return on share and debenture considers dividend yield and capital gain yield (change in market price) or return is the combination of capital gain yield and dividend yield. Capital gain (loss) yield can be calculated by difference between this year price and last year price with respect to the last year price. Dividend yield is calculated by dividend per share divided by market price per share. Market return is the mean return of the selected companies which is represented by the market return of the study. Standard deviation (S.D.) measures risk that is very essential to study. Standard deviation helps the investor to take the decision on the investment. Market return and standard deviation are the most important factors to analyze the risk and return. For that purpose 15 different companies are taken into consideration from listed companies in NEPSE. These selected companies are taken from different sector like banking sector, manufacturing companies, trading companies, service sector and hotels etc.

The risk and return on investment in share and debenture of the commercial banks can be calculated as follows:

Return on share and debenture (R_s) = Capital gain yield + Dividend yield

$$= \frac{P_t - P_{t-1}}{P_{t-1}} + \frac{D_t}{P_t}$$

$$\text{Risk on Share and Debenture (S.D.) } (\sigma_s) = \sqrt{\frac{(R_{s1} - \bar{R}_s)^2}{N}}$$

$$\text{Average return on share and debenture } (\bar{R}_s) = \frac{\sum R_s}{N}$$

$$\text{Coefficient of variation (C.V}_s) = \frac{\sigma_s}{\bar{R}_s} \times 100$$

Where

P_t = Average closing price of year 't'

P_{t-1} = Average closing price of t-1 or previous year

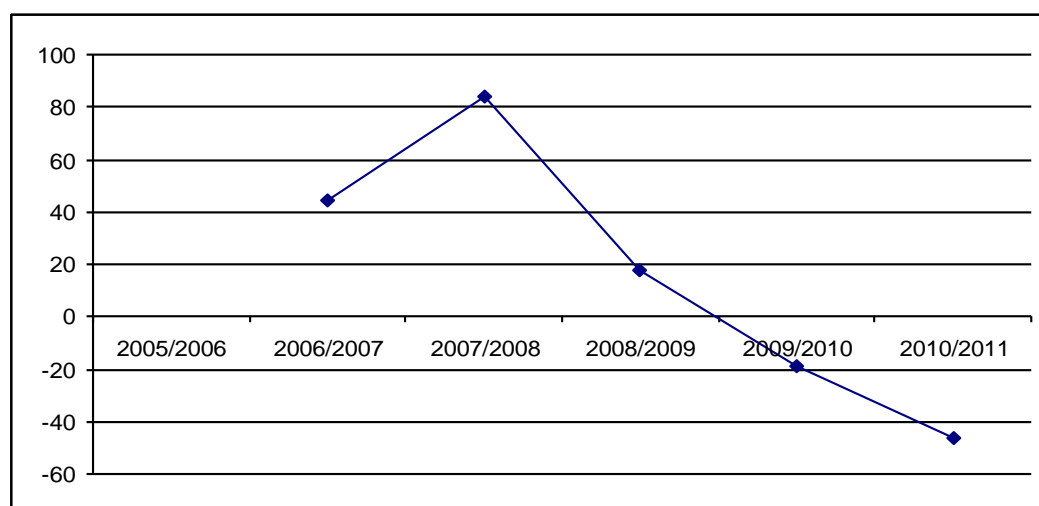
Table 4.5: Calculation of average Risk and Return investment on Share and Debenture of 5 Commercial Banks

(In Percentage)

FY	Closing Price at the end of Ashad	Average Capital Gain Yield	Average Dividend Yield	Return on Share and Debenture
2005/2006	893			
2006/2007	1284	43.78%	0.50%	44.29
2007/2008	2360	83.80%	0.22%	84.02
2008/2009	2768	17.29%	0.16%	17.45
2009/2010	2240	-19.08%	0.17%	-18.90
2010/2011	1201	-46.38%	0.36%	-46.02
Mean		16.17		
S.D.		51.22		
C.V.		3.17		

Source: Calculation from primary source, annexure 'C'

Figure 4.2: Return on Share & Debenture



Fiscal Year	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011
Return	44.29	84.02	17.45	-18.90	-46.02

J Returns

The table no.4.5 and figure no. 4.3 above reveals that return on share and debenture of commercial banks shows wide fluctuation i.e. 44.29% in 2006/2007 and -46.02% in 2010/2011 respectively. These fluctuations in returns are caused mainly by the volatility of the share price in the market. The changes in dividends also contribute to the variability of the shares returns in some extent. Dividend yield is less than 1%

throughout the period so return of share is dominated by capital gain. The return of investment on share and debenture is more than other sector of investment.

J Risk (Standard Deviation)

Standard deviation 51.22% and coefficient of variation 13.17 show high degree of risk of return on share and debenture. It is greater than that of government securities and loan and advance. So it is clear that investment on share and debenture is a riskier investment alternative for commercial banks in Nepal.

4.1.2 Risk and Return on Investment Portfolio

Investment Portfolio Return

The expected return on a portfolio (R_p) is simply the weighted average of the expected returns on the individual assets in the portfolio with the weight being the fraction of the total portfolio in each asset. In this study, investment portfolio is calculated by investment on government securities, loan and advances and share and debenture. The weight of the investment on various assets is calculated and average rate of returns are presented as follows:

Here for three assets

$$\begin{aligned} \text{Portfolio Return } (\bar{R}_p) &= X_g \bar{R}_g + X_l \bar{R}_l + X_s \bar{R}_s \\ &= (0.1676 \times 4.28 + 0.8279 \times 8.22 + 0.0045 \times 16.17) \\ &= 7.60\% \end{aligned}$$

Where X_g = weight of government securities

R_g = return of government securities

X_l = weight of loan and advance

R_l = return of loan and advance

X_s = weight of share and debenture

R_s = return of share and debenture

Table No. 4.6: Calculation of Weight of the Investment on Various Assets

S.N	Assets	Investment Amount (In Rs. Millions)	Proportion Weight (X)	Average Rate of Return (%)
1	Government Securities	109135.77	0.1676	4.28
2	Loan And Advance	539136.07	0.8279	8.22
3	Share and Debenture	2942.95	0.0045	16.17
	Total	651214.79	1.0000	

Investment portfolio risk

Expected risk on a portfolio is function of the proportion invested in the components, the riskiness of the components and correlation of returns on the components securities. It is measured by standard deviation. The standard deviation of portfolio is not simply the weighted average of standard deviation of individual securities. The portfolio risk is affected by the association of movement of returns of two securities. The degree to which the assets return move together is measured by the covariance. Hence, by combining the measures of individual asset risk, relative asset weights and co-movement of asset returns (covariance) the risk of the portfolio can be estimated. Here, firstly covariance between two assets can be calculated and then portfolio risk can be calculated as:

$$r_{ij} = \frac{\sum_{i=1}^n R_i R_j - \sum_{i=1}^n R_i \sum_{j=1}^n R_j}{\sqrt{\sum_{i=1}^n R_i^2 - \left(\sum_{i=1}^n R_i\right)^2} \sqrt{\sum_{j=1}^n R_j^2 - \left(\sum_{j=1}^n R_j\right)^2}}$$

From the calculation shown in Annex 4 we get,

Correlation between R_g and R_l (r_{gl}) = 0.24

Correlation between R_l and R_s (r_{ls}) = -0.73

Correlation between R_g and R_s (r_{gs}) = -0.65

\dagger_g	1.56	W_g	0.1676	rgl	0.24
\dagger_l	1.31	W_l	0.8279	rls	-0.73
\dagger_s	51.22	W_s	0.0045	rgs	-0.65

Now,

The Standard deviation of portfolio investment (σ_p) for three assets can be calculated as follows:

$$\sigma_p = \sqrt{W_g^2 \sigma_g^2 + W_l^2 \sigma_l^2 + W_s^2 \sigma_s^2 + 2W_g W_l r_{gl} \sigma_g \sigma_l + 2W_g W_s r_{gs} \sigma_g \sigma_s + 2W_l W_s r_{ls} \sigma_l \sigma_s}$$

$$\sigma_p = \sqrt{0.9905}$$

$$\sigma_p = 0.9952$$

Overview of Individual with Portfolio

Securities	Weight	Returns	S.D.	C.V.
Government Securities	0.1676	4.28	1.56	0.36
Loan & Advances	0.8279	8.22	1.31	0.16
Share and Debenture	0.0045	16.17	51.22	3.17
Portfolio	1.0000	7.6	0.99	0.13

Returns

Returns on Government securities are lower than other securities i.e. Loan & Advance and Share and Debenture. Government securities are a risk free security that's why the returns of government securities is very low. In the comparison between remaining two risky assets, loan & advance and share & debenture, share and debenture is showing high rate of average returns. Comparatively share & debenture is high risky than the loan and advance. So high risk high return and vice-versa. Portfolio return is weighted average return of the securities; it is 7.6 percent which is normally higher than government securities and lower than the other two securities.

Risk (S.D. and C.V.)

In the sense of risk, among three securities share and debenture showing the highest risk. Actually the share and debenture includes two types of risk i.e. capital gain risk and dividend risk. Capital gain risk is risk that occurs when the price of securities fluctuates. And dividend risk is normal risk depends upon the performance and profitability of the institutions. Here in the research share and debenture showing the highest risk i.e. C.V. of CBs is 3.17

4.1.3 Analysis of ratio

A ratio is calculated by dividing one item of relationship with other. As a tool of financial analysis, ratio can be expressed in terms of percentage. Ratio analysis is a very important tool of financial analysis. From the help of ratio analysis, the qualitative judgment can be done very easily and timely regarding financial performance of the firm. The purpose of this chapter is to evaluate and analyze the financial position and performance of the different commercial banks. In this section only those major ratios which are mainly related to the investment mechanism of commercial banks are calculated and analyzed.

Returns to Total Assets Ratio

This ratio is calculated by dividing net profit after tax by total assets of the bank. Thus, it measures the profitability of the banks' with respect to the total assets. It seems to be vital for measuring financial performance of the firm or shows the efficiency of bank using its resources. The higher ratio indicates the effective utilization of resources and yields higher returns for the banks it is calculated as:

Table No.4.7: Calculation of Returns to Total Assets Ratio

(In Percentage)

FY	NABIL	EBL	KBL	HBL	NIBL	Average
2006/2007	2.84	1.49	1.15	1.54	1.64	1.82
2007/2008	2.47	1.38	1.43	1.47	1.82	1.75
2008/2009	2.01	1.66	1.16	1.76	1.79	1.75
2009/2010	2.35	1.73	1.41	1.91	1.70	1.87
2010/2011	2.19	2.01	1.54	1.19	2.37	1.93
Mean	2.37	1.65	1.34	1.57	1.87	1.83
S.D.	0.32	0.24	0.17	0.28	0.29	0.08
C.V	0.133	0.146	0.130	0.176	0.157	0.043

Source: Calculation from primary source, annexure 'E'

Table no. 4.7 shows that the commercial banks have a mixed trend on their return on total assets ratio. During the study period, FY 2006/2007 to 2010/2011 Nabil bank has earned the highest ratio compared to other commercial banks. While examining the mean ratio Nabil bank has the highest ratio of 2.37% and KBL has the lowest ratio of 1.34% among the five commercial banks (average ratio of CBs 1.83%).

While analyzing the riskiness of the returns on the total assets of the commercial banks, HBL has the highest C.V. (0.176) reflecting highest risk for each unit of return among the other commercial banks. KBL has the lowest C.V. (0.130). The lowest C.V. of KBL 0.130 shows that the return on total assets of KBL is the most consistent among the five commercial banks.

Therefore, it can be concluded that Nabil bank provides the highest return on its total assets among the five commercial banks while, the risk on these returns are lower for KBL. This means though Nabil provides higher returns on their assets, the risk associated with them are not less. Nabil provides greater returns on their assets however; the returns are more consistent for KBL among five commercial banks. Figure no. 4.4 depicts the returns on total assets of the selected commercial banks.

Figure 4.4



Total investment to total deposit ratio

The calculated results of this ratio measure the magnitude to which the banks are successful in mobilizing the total deposit on investment or not. Total investment to total deposit ratio is calculated by dividing investment by total deposits. In general, high ratio indicates high success to mobilize the funds of banks as investment and vice-versa. It is computed as:

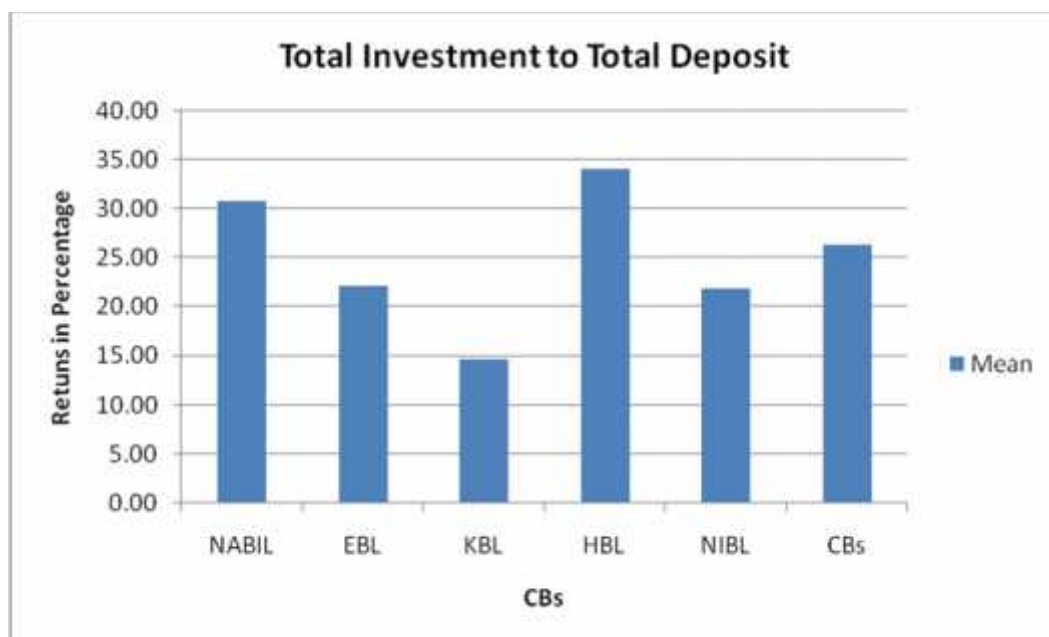
Table No. 4.8: Calculation of Total Investment to Total Deposit Ratio

FY	NABIL	EBL	KBL	HBL	NIBL	CBs
2006/2007	31.93	30.43	17.96	41.10	29.60	32.74
2007/2008	38.32	27.41	15.90	39.35	26.57	31.83
2008/2009	31.14	21.10	16.74	41.89	19.95	27.68
2009/2010	28.99	17.85	9.62	25.12	15.85	20.50
2010/2011	22.99	13.56	13.18	22.45	17.24	18.60
Mean	30.68	22.07	14.68	33.98	21.84	26.27
S.D.	5.53	6.88	3.33	9.40	5.98	6.46
C.V	0.180	0.312	0.227	0.277	0.274	0.246

Source: Calculation from primary source, annexure 'F'

The comparative table no. 4.8 reveals that the ratios of investment to total deposits of commercial banks are in fluctuating trend throughout the study period i.e. from 2006/2007 to 2010/2011. At beginning of the study period, the ratio of HBL of higher at 33.98% which has fluctuated over the years and come to 22.45 in the FY 2010/2011. While KBL had the least ratio among the five commercial banks in the first year with 17.96%, however the ratio has further decline in the later year and reached 9.62% in FY 2009/2010 and again increases to 13.18 in FY 2010/2011. HBL has the highest average ratio with 33.98% and KBL has the lowest average ratio with 14.68% among the five commercial banks having an average ratio 26.27%. HBL and Nabil have higher ratio than average ratio of CBs while, NIBL, EBL and KBL have ratios below the average ratio of CBs. Similarly; Nabil has lower CV than average CV of the commercial banks reflecting that any other CBs. It can also be presented in fig no. 4.5

Figure No. 4.5



Government securities to total deposit ratio

Government securities to total deposit ratio explain as to what extent the banks are able to invest depositor's fund on government securities. This ratio is calculated by dividing total investment on government by total deposit. The high ratio represents the efficiency of the firm in utilizing collected deposit to government securities and vice-versa. It is computed as:

Table No. 4.9: Government Securities to Total Deposit Ratio

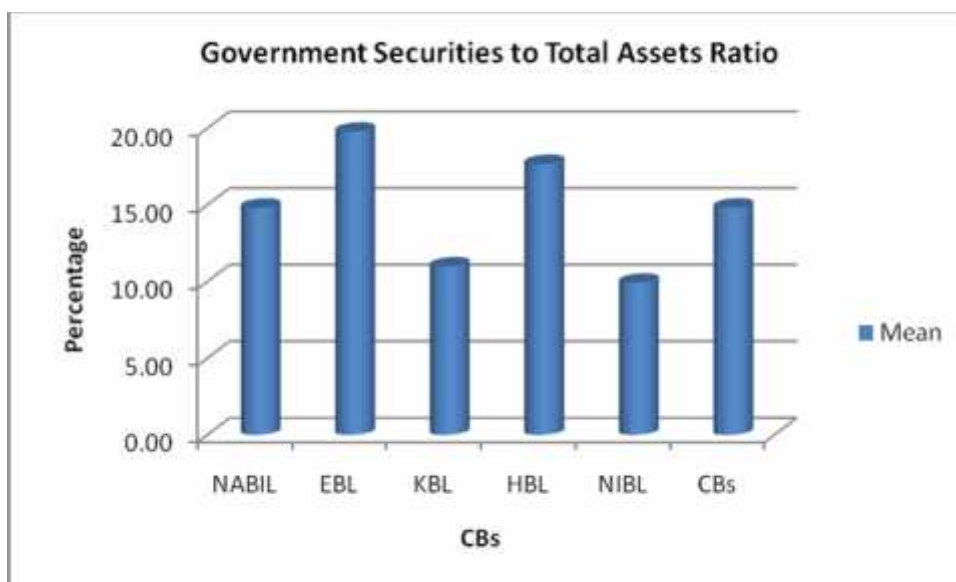
(In Percentage)

FY	NABIL	EBL	KBL	HBL	NIBL	CBs
2006/2007	11.90	25.71	14.34	19.42	13.33	16.95
2007/2008	20.60	25.85	12.29	21.48	13.30	19.24
2008/2009	14.56	20.11	11.50	23.46	9.16	15.98
2009/2010	9.92	15.44	6.87	12.15	5.42	9.94
2010/2011	17.11	11.79	9.92	11.87	8.39	12.04
Mean	14.82	19.78	10.99	17.68	9.92	14.83
S.D.	4.22	6.22	2.80	5.37	3.40	3.77
C.V	0.285	0.314	0.254	0.304	0.343	0.255

Source: Calculation from primary source, annexure 'G'

The table no. 4.9 shows the ratio of investment on government securities to total deposit. Here, it is found that EBL has the highest mean of government securities to total deposit ratio i.e.19.78% and NIBL has lower investment on the securities i.e.9.92% among the five CBs over the study period. As compared to the average mean ratio of commercial banks i.e.14.83%, average mean of Nabil, KBL, NIBL are lower and average mean of EBL and HBL are higher. KBL also has the lowest CV among the commercial banks i.e. only 0.254 which reflects that KBLI is more consistent in the investment on government securities than any other commercial banks. The same thing is more clearly presented by figure no. 4.6

Figure No. 4.6



Loan and advance to total deposit ratio

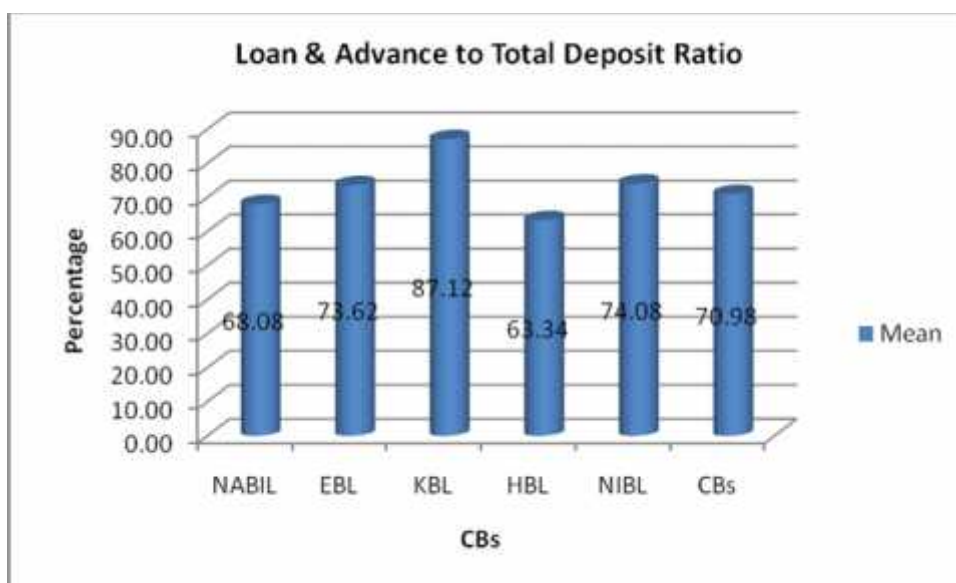
Loan and advances to total deposit ratio explains as to what extent the banks are able to mobilize depositors fund to profit by providing the funds to outsider in the form of loans and advances. This ratio is calculated by dividing loan and advances by total deposits to loan and advances and vice versa.

Table No. 4.10: Loan and Advances to Total Deposit Ratio

(in Percentage)

FY	NABIL	EBL	KBL	HBL	NIBL	CBs
2006/2007	65.55	70.79	87.54	54.34	66.64	65.17
2007/2008	65.57	74.91	84.09	56.02	69.46	67.20
2008/2009	66.30	76.40	88.10	60.48	77.26	71.58
2009/2010	73.45	71.37	92.15	71.46	76.55	75.24
2010/2011	69.53	74.61	83.71	74.39	80.48	75.72
Mean	68.08	73.62	87.12	63.34	74.08	70.98
S.D.	3.42	2.42	3.43	9.10	5.79	4.72
C.V	0.05	0.03	0.04	0.14	0.08	0.07

Source: Calculation from primary source, annexure 'H'

Figure 4.7

The table no. 4.10 shows the KBL has the highest ratio of investment on loans and advances from its total deposit and HBL has the lowest ratio of investment on loans and advances. The average ratio of CBs is 70.98%. KBL, EBL and NIBL are above of the average ratio of CBs while Nabil and HBL have ratio below the average of CBs. According to CV, Nabil, EBL and KBL have the lowest CVs and HBL and NIBL have higher CVs than the average CV of CBs which indicates that the investment on

loan and advance has been uniform in EBL that Nabil, HBL and NIBL. It can also be shown in figure 4.7

From the above analysis, it can be said that KBL has mobilized its total deposit more effectively on loan and advance than other 4 commercial banks. EBL has also mobilized in an effective way. Among five banks, HBL is the least effective to mobilize the deposits on loan and advances

Share and debenture to total deposit ratio

Investment on share and debenture to total deposit ratio shows that the portion of investment on share and debenture from total deposit fund. It explains as to utilize the depositor's fund to earn profit by investment of share and debenture by total deposits. The high ratio represents the efficiency of the firm in utilizing collected deposits to share and debenture and vice-versa

Table No.4.11: Share and Debenture to Total Deposit Ratio

(In Percentage)

FY	NABIL	EBL	KBL	HBL	NIBL	CBs
2006/2007	0.54	0.14	0.00	0.15	0.09	0.21
2007/2008	1.23	0.10	0.00	0.24	0.14	0.39
2008/2009	1.01	0.42	0.14	0.28	0.16	0.43
2009/2010	0.95	0.31	0.12	0.27	0.13	0.38
2010/2011	0.75	0.28	0.13	0.21	0.13	0.33
Mean	0.90	0.25	0.08	0.23	0.13	0.35
S.D.	0.26	0.13	0.07	0.05	0.02	0.09
C.V	0.29	0.52	0.88	0.24	0.18	0.25

Source: Calculation from primary source, annexure 'I'

The above table shows the share and debenture to total deposit ratio of CBs does not have fixed trend. Among the five CBs, Nabil has the highest investment on share and debenture from its total deposits i.e. 0.90% over the study period. On average CBs have ratio of 0.35% on shares and debenture. All the remaining CBs have lower ratio than average ratio of CBs. KBL have lowest share of only 0.08%. Similarly, NIBL and HBL have CV lower than the average CVs of CBs.

From the above analysis, it can be concluded that NABIL has greater investment in shares and debenture while, NIBL's investment on share and debenture are more

consistent than the other CBs. Figure no.4.8 shows the ratio of investment on share and debentures by commercial banks to their total deposits

Figure No. 4.8



4.2 Correlation Analysis

Under the correlation analysis, the intensity of linear relation between the following variable have been measured.

-) Total deposit and government securities
-) Total deposit and loans and advances
-) Total deposit and share and debenture

4.2.1 Total Deposit and government securities

Table No. 4.12: Correlation Analysis between Total Deposit and Total Investment on Government Securities (in Millions)

FY	Total Deposits (X)	Government Securities (Y)	XY	X ²	Y ²
2006/2007	86336.96	14631.02	1263197788	7454070662.04	214066746.2
2007/2008	106623.2	20519.12	2187815056	11368515308.10	421034285.6
2008/2009	134960.2	21564.26	2910317274	18214260982.45	465017309.3
2009/2010	167762.6	16675.85	2797583453	28144279893.00	278083973.2
2010/2011	188481.2	22693.08	4277218496	35525155214.19	514975879.9
Total	684164.2	96083.33	13436132068	100706282059.79	1893178194

Source: Calculation from primary source

From the calculations we get,

$$r = \frac{(5 \mid 13436132068) Z(684164.17 \mid 496083.33)}{\sqrt{5 \mid 100706282059.79} Z(684164.17)^2 \sqrt{5 \mid 1893178194} Z(96083.33)^2}$$

$$= 0.50$$

$$\text{P.E.} = 0.6745 \mid \frac{1 Z r^2}{\sqrt{n}}$$

$$= 0.6745 \mid \frac{1 Z 0.50^2}{\sqrt{5}}$$

$$= 0.226$$

From the table, we find the correlation coefficient and probable error of coefficient between total deposit and total investment on government securities are 0.50 and 0.226 respectively. Here, correlation coefficient is less than six times greater than probable error i.e. $0.50 < 6 \times 0.226$. It indicates that the correlation between total deposit and government securities are positively related but the correlation is not significant.

Thus, from the above analysis it can be concluded that an additional unit of deposit does not necessarily create a proportionate addition to the investment in Government securities. Therefore, commercial banks are not able to raise the volume of investment on government securities despite their volumes of total deposit have increased.

4.2.2 Total deposit and loan & advance

Total deposit and total investments on loan and advances variables of commercial banks for the different sampled period have been presented in following table no. 4.13.

Table.No.4.13: Correlation Analysis between Total Deposit and Total Loan & Advance (in Millions)

FY	Total Deposits (X)	Total Loan & Advance (Y)	XY	X ²	Y ²
2006/2007	86336.96	56262.99	4857575517	7454070662.04	3165524043.74
2007/2008	106623.24	71649.95	7639549815	11368515308.10	5133715335.00
2008/2009	134960.22	96607.57	13038178901	18214260982.45	9333022581.30
2009/2010	167762.57	126221.41	21175228131	28144279893.00	15931844342.39
2010/2011	188481.18	142717.51	26899564691	35525155214.19	20368287660.60
Total	684164.17	493459.43	73610097054.90	100706282059.79	53932393963.04

Source: Calculation from primary source

From the above calculation we got,

$$r = \frac{(5 \mid 73610097054.90) Z(684164.17 \mid 493459.43)}{\sqrt{5 \mid 100706282059.79} Z(684164.17)^2 \sqrt{5 \mid 53932393963.04} Z(493459.43)^2}$$

$$= 1.00$$

$$\begin{aligned} \text{P.E.} &= 0.6745 \mid \frac{1 Z r^2}{\sqrt{n}} \\ &= 0.6745 \mid \frac{1 Z 1.00^2}{\sqrt{5}} \\ &= 0 \end{aligned}$$

Above calculation shows that the correlation coefficient and probable error of coefficient between total deposit and total investments on loan and advances are 1 and 0 respectively. Here, correlation coefficient is perfectly positive. Thus, the correlation between total deposit and advances is perfectly positive. Therefore, commercial banks increase (decrease) their portion of investment on loan and advances with increase (decrease) of portfolio of total deposits over the study period.

4.2.3 Total deposit and share & debenture

Table No.4.14: Correlation Analysis between Total Deposit and Total Investment on Share and Debenture

(in Millions)

FY	Total Deposits (X)	Share and Debenture (Y)	XY	X ²	Y ²
2006/2007	86336.96	179.93	15534609.21	7454070662	32374.8049
2007/2008	106623.2	415.05	44253975.76	11368515308	172266.5025
2008/2009	134960.2	586.73	79185209.88	18214260982	344252.0929
2009/2010	167762.6	630.16	105717261.1	28144279893	397101.6256
2010/2011	188481.2	613.04	115546691.1	35525155214	375819.2677
Total	684164.17	2424.91	360237747.03	100706282059.79	1321814.29

Source: Calculation from primary source

$$r = \frac{(5 \mid 360237747) Z(684164.17 \mid 2424.91)}{\sqrt{5 \mid 100706282059.79} Z(684164.17)^2 \sqrt{5 \mid 1321814.29} Z(2424.91)^2}$$

$$= 0.88$$

$$P.E. = 0.6745 \mid \frac{1 Z r^2}{\sqrt{n}}$$

$$= 0.6745 \mid \frac{1 Z 0.88^2}{\sqrt{5}}$$

$$= 0.068$$

From Table No.4.13, we get the correlation coefficient and probable error of coefficient between total deposit and total investment on share and debenture to be 0.88 and 0.068 respectively. This indicates that the correlation between total deposit and total investment on share and debenture is significant ($0.88 > 6 \times 0.068$).

4.3 Major Finding of the Study

The major findings of the study are as follows:

Risk and Return Analysis

Major findings from the risk and return on various investment assets in which the commercial banks invest their funds and make portfolio from such investment assets are as follows:

- i. The average return on government securities is 4.28% and its standard deviation and CV is 1.56 & 0.36 respectively.
- ii. The average return, S.D. and CV of loan and advances are 8.22%, 1.31 and 0.16 respectively.
- iii. Average return, S.D. and CV of share and debenture of CBs are 16.17%, 51.22 & 3.17 respectively.

Analysis of Ratios

- i. The return on total assets shows that NABIL has the better position among the selected CBs. NABIL has greater mean return than CBs mean return i.e. 2.37% > 1.83% while KBL has the lowest return in the industry i.e. 1.34. The return on total assets for EBL, HBL and NIBL fell between the two extremes. KBL has the lowest C.V. i.e. 0.13 among the five commercial banks while HBL has the highest C.V. i.e. 0.176. The average C.V. of CBs is 0.043.
- ii. The ratio of investment to total deposit of CBs the ratio is in increasing trend over the study period despite the Rupees figure have increased. In the study, HBL has the highest ratio i.e. 33.98% and KBL has the lowest ratio i.e. 14.68%. The industry average is 26.27%. Similarly, NABIL has the lowest C.V. i.e. 0.18 and EBL has the highest C.V. i.e. 0.312
- iii. In case of investment on government securities to total deposit ratio, EBL has the highest ratio i.e. 19.78% and NIBL has the lowest ratio of 9.92%. The average

ratio of CBs is 14.83%. However, Nabil has the lowest C.V. i.e. 0.285 and NIBL has the highest C.V. i.e. 0.343, among the five commercial banks.

- iv. The investment on loans and advances by the average CBs has followed an increasing trend from FY 2006/07 to FY 2010/11. However, among the five commercial banks, KBL has the highest share of investment on loan and advances with 87.12% of the total deposits and HBL, has the lowest share of investment on loans and advances with only 63.34%. The industry average is 70.98%. Similarly, EBL has the lowest C.V. i.e. 0.03 and the HBL has the highest C.V i.e. 0.14.
- v. The investment on share and debenture has been minimal for the commercial banks in Nepal. The industry average of investments on share and debenture is 0.35%. Nabil has the highest investment ratio with 0.9% while, KBL has the lowest ratio with only 0.08%. However, KBL also has highest of C.Vs among the CBs reflecting less consistency in the investment. Among the five commercial banks, it is NIBL who has the highest consistency of investment on shares and debentures.

Correlation Analysis

- i. The correlation between total deposit and total investment on government securities is positively related but the correlation is less significant because the correlation coefficient is less than six times the probable error that is $0.50 > 6 \times 0.26$. Therefore, the investment on government securities do not increase in the same proportion as the increase in the deposit or, with the increase in deposit,
- ii. The correlation coefficient between total deposit and total loan and advances is 1. It indicates that the correlation is perfectly positive and correlation is much significant. Therefore, CBs are able to raise the volume of investment on loan and advances with rise in the volume of total deposit over the study period.
- iii. Commercial banks do not necessarily in the investment on government securities despite the fact that their investment increase proportionately to the increase in deposits.

- iv. The correlation coefficient is not greater than six times of probable error i.e. $0.88 > 6 \times 0.068$. It indicates that the correlation between total deposits and total investment on shares and debenture is significant.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter is an accomplished specific and indicative enclose which contains summary, major finding and conclusion of finding and recommendations. Brief introduction to all chapters of the study and genuine information of the present situation under the topic of the study is defined on summary. Conclusions and Findings are analysis of applicable data by using various financial and statistical tools, which presents strengths, weakness, opportunities and threats of the CBs. And suggestions are obtainable in recommendation, which is arranged on the based from finding and conclusions.

5.1 Summary

The process of the economic development depends upon various factors, however economists are now convinced that capital formation and its proper utilization plays a paramount role for rapid economic development. Banks are an essential part of the business activities which are established to safeguard. CBs collect scattered financial resources from the masses and invest in commercial and economical activities of the country. Besides financial supports, CBs provide technical and administrative assistance to industries, trade and business enterprises. CBs are defined as a bank is a financial institution, which performs widest range of economic and financial functions of any business firm in the economy. CBs plays vital role for development of a developing country. Banks provides internal resources for developing country's economy.

The evolution of the organized financial system in Nepal has a more recent history than in other countries of the world. In Nepalese context, the history of development of modern banks started from the establishment of Nepal bank limited in 1937 A.D. nowadays there are 31 CBs operating in Nepal financial market which is in increasing due to the country moved towards economic liberalization, financial scenario has changed, and foreign banks were invited to operate in Nepal. For the better performance of CBs, successful formulation and effective implementation of investment policy is the prime requisite. Nowadays there is a very high competition in

the banking industries but very less opportunity to make investment. The opportunities are hidden. Thus these CBs should take initiative action in search of the new opportunities. So, that they can easily survive in this competitive banking business world and earn profit. A bank manager its investment has a lot to do with the economic health of the country because the bank loans support the growth of new business and trade empowering the economic activities of the country.

Investment portfolio refers to an investment that combines several assets. Investment portfolio is one which the income or profit of the banks depend upon directly. Investment portfolio usually offers the advantage of reducing risk through diversification of risk from risky investment to less risky investment. The objective of portfolio is to develop a portfolio that has the maximum return at whatever level of risk. The investment portfolio is the tool which helps to reduce risk and maximize return. The banks should never invest its funds in those securities; difference may cause a great loss. The bank should accept that type of securities which are commercial, durable, marketable stable, transferable and high market price.

Generally the investment of the CBs include the investment on government securities, like treasury bills, development bonds, national saving bonds, foreign government securities, shares on government owned companies and non government companies and investment on debentures, similarly the CBs used their funds as loan and advances. Most of the banks are interested to invest their funds in more liquid and less risky sector. Nepalese CBs don't have their own clear vision towards investment portfolio. The investment planning of the CBs in Nepal heavily depend upon the rules and regulation provided by the central banks. The composition of asset portfolio of the banks is influenced by the policy of the central bank. NRB's directives, unsecured climate created by political situation, government policy, Maoists problems etc are the most important problem for banking sectors in investment.

The researcher has tried to explore investment of CBs in various assets, portfolio management and risk return, risk and return on assets, relationship between various factors of CBs with various investment assets, performance of CBs towards investment for the study of 'Investment portfolio analysis of Nepalese CBs'. For the fulfillments of the objectives of the study many analysis has been done such as operation of CBs, investment and loan and advance portfolio, risk and return analysis,

portfolio risk and return on investment, ratio analysis. For the analysis mainly secondary data are used, which is collected from concerned banks, NRB, NEPSE, SEBO and different library and different information also provided from there. Financial and statistical tools are used to reckoning and secondary data were compiled, processed, tabulated and graphed for better presentation from which various finding and conclusion have been drawn which are presented as below.

5.2 Conclusions

Commercial banks have been operating efficiently and have been successful in becoming the pillars of economic system of the country. These banks are performing as financial intermediaries, which provided a links between borrowers and lenders by mobilizing the scattered resources towards productive investments. It is not possible to achieve such goal without using portfolio concept on the investment strategies, which helps to reduce risk and increase return on investment. Most of the CBs are fascinated to invest their resources in more liquid and less risky sectors. CBs are unsuccessful to use the investment portfolio management to balanced investment opportunities.

From the analysis of risk and return of individual investment resources, it is conclude that the loan and advances is much better than investment on share and debentures and govt. securities. It is due to the fixed interest income on loan and advances. So that the CBs are eager to invest their maximum part of investment on loan and advances in different sectors due to return from loan and advances seems less explosive than other resources. The average rate of return and risk on share and debentures are advanced than other assets so that the CBs are invested very low portion of resources into share and debentures of other companies which terminate that the CBs are investment on less risky sectors by which CBs can reduced risk but reduced on return also. From the various ratios relating with the utilization of resources on investment it can be accomplished that SCBL is the bank which shows better performance on their investment strategies. While EBL, NIBL, NABIL imitate moderate performance in utilization of overall resources. And HBL is the weakest bank to mobilize its total resources in various investment assets among five CBs.

While comparing the investment portfolio weight set up by the CBs with directives given by the central banks, the banks have not followed the directives. Directives

direct not to invest more than 50% in one sector but most of the banks have invested more than 90% of their funds into one sector. From investment portfolio analysis, it is accomplished that the CBs are given first priority to invest their funds in the govt. sector due to less risky and second priority given to the share and debentures of other companies. And in the case of investment on loan and advances portfolio, CBs are concentrated in the private sector due to high return from them and given second priority to bills P & D and lastly on the govt. enterprises due to the less return from them. CBs flow their funds from higher level of return to lower level of return.

From the negative correlation coefficient between various investment assets, the CBs can reduce total risk at minimum level and increase profit at higher level. From the study it can be accomplished that CBs are not able to diversify their resources efficiently, which is proved by the financial performance test.

The trend analysis of the CBs accomplished that total investment, total deposit, investment on share and debentures, investment on loan and advances, investment on govt. securities are ever-increasing per year. NIBL is the best bank among five CBs on the basis of exploitation of resources in the field of govt. securities, on the basis of S&D, NABIL is the best bank among 5 CBs and EBL is the best bank among 5 banks on the basis of exploitation of resources in the field of loan and advances.

5.3 Recommendations

This study is basically conducted to analyze the portfolio risk and return of securities from the investor's point of view, and based on secondary and primary data analysis. On the basis of major findings of the study, following recommendations and suggestions are provided

-) Generally investors think that investment in share market is always beneficial. They believe that price of shares always increases. But in reality it is not always like that. Due to many economic and non-economic factors the shares can not provide attractive benefits and the share price do not increases. To take better advantage, the investors are recommended to make stock transactions on the basis of fundamental and technical analysis scientifically.
-) Investors should always think not only about the return but also risk. Investor's objective should be the minimization of risk and maximization of return. To

meet the objective, the investors should create well-diversified portfolio. Negatively correlated or low correlated stocks can reduce risk significantly.

-) All the selected commercial bank's stocks are under-priced. Investors are suggested to invest on under-priced stocks while making portfolio and to take short position for the over-priced stocks.
-) In Nepalese context, investors don't analyze related information carefully other than financial sectors. Information from other sector such as political, social and legal should also be considered before taking the investment decision.
-) Many investors are adopting passive investment strategy. They buy the securities and wait for dividend. To gain from the investment, they should actively participate.
-) It is necessary to establish a '**Information Center**' for investors. The investors should be provided right information timely. Updated and real statements should be published. Manipulated and window dressing information should not be published.
-) Government should play a vital role to improve the securities market and to promote the investors. Sometimes, the policies made by Nepal Rastra Bank and the rules made by NEPSE are seen as opponent of investors .The policies and rules should be more confidential and easier for investors.

BIBLIOGRAPHY

BOOKS

- Bank, NRB (2002). Nepal Rastra Bank Act 2002 .
- Bajracharaya, B.C., (2058), *Basic Statistics*, Kathmandu, M.K. Publishers and Distributor
- Bodie, Kane and Marcus, (2002), “*Investment*”, 5th Edition, Homewood, Richard D. Irwin.Cheney, John M. and Edward A. Moses, (1995), “*Fundamentals of Investments*”, 10th Edition, St. Paul, West Publishing Company
- Cheney, John M. and Edward A. Mosses. (1992). *Fundamental of Investment*. New York, USA: New York West Publishing Company, St. Paul.
- Elton, Edwin J. and Martin J. Gruber, (2001), “*Modern Portfolio Theory and Investment Analysis*”, 5th Edition, Singapore, John Wiley and Sons Inc.
- Fisher E. Donald and Ronald J. Jordan, (2000), “*Security Analysis and Portfolio Management*”, 6th Edition, New Delhi, Prentice Hall of India Pvt. Ltd.
- Frank and Reilly, (2004), “*Investment*”, 5th Edition, Chicago, The Dryden Press
- Frank, Jack Clark, (2006), “*Investment Analysis and Management*”, 6th Edition, New Delhi, Mc Grew Hill International
- Gitman L.J and Joehnk, (1990), “*Fundamentals of Investment*”, 9th Edition, New York, Mc-Grew Hill Publishing House
- Gitman, L.J., (1988), “*Principal of Management Finance*” 5th Edition, San Diego, San Diego State University
- Gupta, S.C., (1987), “*Fundamentals of Statistics*”, 5th Edition, Bombay, Himalayan Publishing House
- Kothari, C.R., (2004), “*Research Methodology Method and Techniques*”, 2nd Edition, New Delhi, Vikas Publishing House Pvt. Ltd.
- Maheshwari S.N. (1997). *Financial Management Principles and Practice*. New Delhi: Sultan Chanda and Son, Educational Publisher.
- Panday, I.M., (1997), “*Financial Management*” 7th Edition, New Delhi, Vikas Publishing House Pvt. Ltd.

- Pradhan, Surendra, (2058), “*Basics of Financial Management*” 2nd Edition,
Kathmandu, Educational Enterprise Pvt. Ltd.
- Shrestha, Sunity, (1995), “*Portfolio Behavior of Commercial Banks in Nepal*”,
Kathmandu, Mandala Book Point (Based on her Ph.D. thesis “Investment
Planning of Commercial Banks in Nepal”, 1993)
- Singh, Preeti, (1998), “*Investment Management*”, 3rd Edition, Bombay, Himalayan
Publishing House
- Van Horne, J.C., (1996), “*Financial Management and Policy*” 10th Edition, New
Delhi, Prentice Hall of India Pvt. Ltd.
- Weston, J. Fred and Eugene F. Brigham, (2005), “*Essentials of Managerial Finance*”,
9th Edition, Chicago, The Dryden Press
- Weston, J. Fred and Thomas E. Copeland, (2003), “*Managerial Finance*”, 9th Edition,
Chicago, The Dryden Press
- William F. Sharpe, Alexander J. Gordon, Baily V. Jeffery, (2004), “*Investment*”, 7th
Edition, New Delhi, Prentice Hall of India Pvt. Ltd.
- Wolff, H.K. and Pant P.R., (2002), “*Social Science Research and Thesis Writing*”,
Kathmandu, Buddha Academic Enterprises Pvt. Ltd.

JOURNALS AND PERIODICALS

- Bawa, Vijay S., Edwin J. Elton and Martin J. Gruber, (1979), “*Simple Rules for
Optimal Portfolio Selection in Stable Pertain Markets*”, Journal of Finance, 34
(4):1041-1047
- Berger, Paul D. and Zvi Bodie, (1985) “*Optimal Portfolio Selection in a Winner Take
all Environments*”, Journal of Finance, 34 (1): 233-236
- Gaumnitz, Jack E., (1970), “*Appraising Performance of Investment Portfolio*”,
Journal of Finance, 25 (6): 555-560

OFFICIAL PUBLICATIONS

Everest Bank Ltd., **Annual Report**, FY 2006/2007– 2010/11

HMG Ministry of Finance, **Economic Survey**, FY 2010/2011

Himalayan Bank Ltd., **Annual Report**, FY 2006/2007– 2010/11

Nepal Investment Bank Ltd., **Annual Report**, FY 2006/2007– 2010/11

NABIL Bank Ltd., **Annual Report**, FY 2006/2007– 2010/11

Research Department, NRB, **Economic Report**, FY 2011/2012

Standard Chartered Bank Ltd., **Annual Report**, FY 2006/2007– 2010/11

Research Department, NRB, **Macro Economic Indicators of Nepal**, FY 2010/2011

Web Sites

www.aaii.com

www.blackwell-synergy.com

www.business.com

www.emeraldinside.com

www.nepalstock.com.np

www.nrb.org.np

www.searchepnet.com

www.sebonp.com

www.teachmefinance.com

APPENDICES

Annex 'A'

I. Calculation of Return on Government Securities

Nabil Bank Ltd.

Everest Bank Ltd.

FY	Government Securities		Ratio (%)	FY	Government Securities		Ratio (%)
	Interest income	Investment			Interest income	Investment	
2006/2007	145.11	2301.46	6.31	2006/2007	97.27	3548.62	2.74
2007/2008	152.01	4808.34	3.16	2007/2008	128.57	4701.64	2.73
2008/2009	198.44	4646.89	4.27	2008/2009	180.22	4821.61	3.74
2009/2010	269.19	3706.10	7.26	2009/2010	289.76	5146.05	5.63
2010/2011	330.92	7941.56	4.17	2010/2011	238.99	4354.35	5.49

Kumari Bank Ltd.

Himalayan Bank Ltd.

FY	Government Securities		Ratio (%)	FY	Government Securities		Ratio (%)
	Interest income	Investment			Interest income	Investment	
2006/2007	48.12	1114.32	4.32	2006/2007	172.24	5144.32	3.35
2007/2008	44.90	1297.87	3.46	2007/2008	191.56	6454.87	2.97
2008/2009	46.59	1469.10	3.17	2008/2009	201.31	7471.66	2.69
2009/2010	88.54	1080.10	8.20	2009/2010	354.95	4212.30	8.43
2010/2011	80.06	1729.92	4.63	2010/2011	215.00	4465.40	4.81

Nepal Investment Bank Ltd.

Commercial Banks

FY	Government Securities		Ratio (%)	FY	Government Securities		Ratio (%)
	Interest income	Investment			Interest income	Investment	
2006/2007	82.42	2522.30	3.27	2006/2007	545.16	14631.02	3.73
2007/2008	78.49	3256.40	2.41	2007/2008	595.53	20519.12	2.90
2008/2009	99.99	3155.00	3.17	2008/2009	726.55	21564.26	3.37
2009/2010	140.70	2531.30	5.56	2009/2010	1143.14	16675.85	6.86
2010/2011	169.62	4201.85	4.04	2010/2011	1034.59	22693.08	4.56

Annex 'B'**2. Calculation of Return on Loan and Advances**

Nabil Bank Ltd.				Everest Bank Ltd.			
FY	Loan and Advance		Ratio (%)	FY	Loan and Advance		Ratio (%)
	Interest income	Investment			Interest income	Investment	
2006/2007	988.41	12681.67	7.79	2006/2007	770.83	9770.91	7.89
2007/2008	1167.26	15305.91	7.63	2007/2008	967.18	13623.69	7.10
2008/2009	1496.24	21159.85	7.07	2008/2009	1329.70	18317.17	7.26
2009/2010	2182.65	27431.77	7.96	2009/2010	1852.13	23782.35	7.79
2010/2011	3368.10	32268.87	10.44	2010/2011	2801.30	27556.36	10.17
Kumari Bank Ltd.				Himalayan Bank Ltd.			
FY	Loan and Advance		Ratio (%)	FY	Loan and Advance		Ratio (%)
	Interest income	Investment			Interest income	Investment	
2006/2007	533.69	6801.00	7.85	2006/2007	1140.69	14395.85	7.92
2007/2008	691.14	8878.01	7.78	2007/2008	1242.85	16831.88	7.38
2008/2009	877.01	11254.06	7.79	2008/2009	1444.25	19257.72	7.50
2009/2010	1233.55	14477.52	8.52	2009/2010	1861.04	24784.24	7.51
2010/2011	1744.00	14593.35	11.95	2010/2011	2838.90	27980.63	10.15
Nepal Investment Bank Ltd.				Commercial Banks			
FY	Loan and Advance		Ratio (%)	FY	Loan and Advance		Ratio (%)
	Interest income	Investment			Interest income	Investment	
2006/2007	964.69	12613.56	7.65	2006/2007	4398.31	56262.99	7.82
2007/2008	1302.12	17010.46	7.65	2007/2008	5370.55	71649.95	7.50
2008/2009	1907.26	26618.77	7.17	2008/2009	7054.46	96607.57	7.30
2009/2010	2906.05	35745.53	8.13	2009/2010	10035.42	126221.41	7.95
2010/2011	4259.40	40318.30	10.56	2010/2011	15011.70	142717.51	10.52

Annex 'C'

Closing Price and Dividend Payment of CBs

Banks	2005/2006	2006/2007			2007/2008			2008/2009			2009/2010			2010/2011		
	P _t	P _t	D _t	Dt/Pt	P _t	D _t	Dt/Pt	P _t	D _t	Dt/Pt	P _t	D _t	Dt/Pt	P _t	D _t	Dt/Pt
NABIL	1505.0	2240.0	85.0	3.79%	5050.0	100.0	1.98%	5275.0	60.0	1.14%	4899.0	35.00	0.71%	2384.0	30.0	1.26%
NIBL	800.0	1260.0	20.0	1.59%	1729.0	5.0	0.29%	2450.0	7.5	0.31%	1388.0	20.00	1.44%	705.0	25.0	3.55%
HBL	920.0	1100.0	30.0	2.73%	1760.0	15.0	0.85%	1980.0	25.0	1.26%	1760.0	12.00	0.68%	816.0	11.8	1.45%
EBL	870.0	1379.0	25.0	1.81%	2430.0	10.0	0.41%	3132.0	20.0	0.64%	2455.0	30.00	1.22%	1630.0	30.0	1.84%
KBL	369.0	443.0	1.1	0.24%	830.0	1.1	0.13%	1005.0	0.5	0.05%	700.0	0.55	0.08%	468.0	12.0	2.56%
Total	4464.0	6422.0	161.1	2.51%	11799.0	131.1	1.11%	13842.0	113.0	0.82%	11202.0	97.55	0.87%	6003.0	108.8	1.81%
Average	892.8	1284.4	32.2	0.50%	2359.8	26.2	0.22%	2768.4	22.6	0.16%	2240.4	19.51	0.17%	1200.6	21.8	0.36%

Investment In Share and Debenture

In Rs. Million

FY	Nabil	EBL	KBL	HBL	NIBL
2006/2007	104.19	19.08	0.35	38.57	17.74
2007/2008	286.95	19.08	0.35	73.42	35.25
2008/2009	323.23	101.16	18.23	89.56	54.55
2009/2010	354.93	102.04	18.35	93.88	60.97
2010/2011	346.86	102.4	21.92	78.88	63.35

Annex 'D'

FY	Return on Govt. Securities	Return on Loan & Advance	Return on share & debenture	$R_g R_l$	$R_g R_s$	$R_l R_s$	R_g^2	R_l^2	R_s^2
2006/2007	3.73	7.82	44.29	29.13	165.03	346.23	13.88	61.11	1961.60
2007/2008	2.90	7.50	84.02	21.75	243.85	629.78	8.42	56.18	7059.36
2008/2009	3.37	7.30	17.45	24.60	58.79	127.42	11.35	53.32	304.50
2009/2010	6.86	7.95	-18.9	54.50	-129.56	-150.27	46.99	63.21	357.21
2010/2011	4.56	10.52	-46.02	47.95	-209.81	-484.06	20.78	110.64	2117.84
Total	21.41	41.08	80.84	177.94	128.30	469.10	101.44	344.47	11800.52

$$r_{ij} X \frac{n R_i R_j Z R_i R_j}{\sqrt{n R_i^2 Z (R_i)^2} \sqrt{n R_j^2 Z (R_j)^2}}$$

Annex 'E'**Calculation of Return on Total Assets Ratio**

FY	Net Profit After Tax (NPAT)	Total Assets	Ratio (%)	FY	Net Profit After Tax (NPAT)	Total Assets	Ratio (%)
Nabil Bank Ltd.				Everest Bank Ltd.			
2006/2007	635.26	22329.97	2.84	2006/2007	237.29	15959.28	1.49
2007/2008	673.96	27253.39	2.47	2007/2008	296.41	21432.57	1.38
2008/2009	746.47	37132.76	2.01	2008/2009	451.22	27149.34	1.66
2009/2010	1031.05	43867.41	2.35	2009/2010	638.73	36916.87	1.73
2010/2011	1139.10	52079.73	2.19	2010/2011	831.65	41382.76	2.01
Kumari Bank Ltd.				Himalyan Bank Ltd.			
2006/2007	103.67	9010.27	1.15	2006/2007	457.46	29640.38	1.54
2007/2008	170.26	11918.31	1.43	2007/2008	491.82	33519.14	1.47
2008/2009	174.93	15026.60	1.16	2008/2009	635.87	36175.54	1.76
2009/2010	261.44	18538.55	1.41	2009/2010	752.83	39330.32	1.91
2010/2011	316.54	20522.47	1.54	2010/2011	508.80	42717.12	1.19
Nepal Investment Bank Ltd.				Commercial Banks			
2006/2007	350.54	21330.13	1.64	2006/2007	1784.21	98270.03	1.82
2007/2008	501.40	27590.85	1.82	2007/2008	2133.85	121714.26	1.75
2008/2009	696.73	38873.30	1.79	2008/2009	2705.22	154357.54	1.75
2009/2010	900.62	53010.79	1.70	2009/2010	3584.67	191663.94	1.87
2010/2011	1265.95	53305.41	2.37	2010/2011	4062.04	210007.49	1.93

Annex 'F'**Calculation of Total Investment to Total Deposit Ratio**

FY	Total Investment	Total Deposit	Ratio (%)	FY	Total Investment	Total Deposit	Ratio (%)
Nabil Bank Ltd.				Everest Bank Ltd.			
2006/2007	6178.53	19347.40	31.93	2006/2007	4200.52	13802.44	30.43
2007/2008	8945.31	23342.29	38.32	2007/2008	4984.31	18186.25	27.41
2008/2009	9939.77	31915.05	31.14	2008/2009	5059.56	23976.30	21.10
2009/2010	10826.38	37348.26	28.99	2009/2010	5948.48	33322.95	17.85
2010/2011	10670.92	46410.70	22.99	2010/2011	5008.31	36932.30	13.56
Kumari Bank Ltd.				Himalyan Bank Ltd.			
2006/2007	1394.95	7768.96	17.96	2006/2007	10889.03	26490.85	41.10
2007/2008	1678.42	10557.42	15.90	2007/2008	11822.98	30048.42	39.35
2008/2009	2138.80	12774.28	16.74	2008/2009	13340.18	31842.79	41.89
2009/2010	1510.82	15710.92	9.62	2009/2010	8710.69	34682.34	25.12
2010/2011	2296.87	17432.25	13.18	2010/2011	8444.91	37611.20	22.45
Nepal Investment Bank Ltd.				Commercial Banks			
2006/2007	5602.87	18927.31	29.60	2006/2007	28265.90	86336.96	32.74
2007/2008	6505.68	24488.86	26.57	2007/2008	33936.70	106623.24	31.83
2008/2009	6874.02	34451.80	19.95	2008/2009	37352.33	134960.22	27.68
2009/2010	7399.81	46698.10	15.85	2009/2010	34396.18	167762.57	20.50
2010/2011	8635.53	50094.73	17.24	2010/2011	35056.54	188481.18	18.60

Annex 'G'

Calculation of Government Securities to Total Deposit Ratio

FY	Investment on Govt. Sec	Total Deposit	Ratio (%)	FY	Investment on Govt. Sec	Total Deposit	Ratio (%)
Nabil Bank Ltd.				Everest Bank Ltd.			
2006/2007	2301.46	19347.40	11.90	2006/2007	3548.62	13802.44	25.71
2007/2008	4808.34	23342.29	20.60	2007/2008	4701.64	18186.25	25.85
2008/2009	4646.89	31915.05	14.56	2008/2009	4821.61	23976.30	20.11
2009/2010	3706.10	37348.26	9.92	2009/2010	5146.05	33322.95	15.44
2010/2011	7941.56	46410.70	17.11	2010/2011	4354.35	36932.30	11.79
Kumari Bank Ltd.				Himalyan Bank Ltd.			
2006/2007	1114.32	7768.96	14.34	2006/2007	5144.32	26490.85	19.42
2007/2008	1297.87	10557.42	12.29	2007/2008	6454.87	30048.42	21.48
2008/2009	1469.10	12774.28	11.50	2008/2009	7471.66	31842.79	23.46
2009/2010	1080.10	15710.92	6.87	2009/2010	4212.30	34682.34	12.15
2010/2011	1729.92	17432.25	9.92	2010/2011	4465.40	37611.20	11.87
Nepal Investment Bank Ltd.				Commercial Banks			
2006/2007	2522.30	18927.31	13.33	2006/2007	14631.02	86336.96	16.95
2007/2008	3256.40	24488.86	13.30	2007/2008	20519.12	106623.24	19.24
2008/2009	3155.00	34451.80	9.16	2008/2009	21564.26	134960.22	15.98
2009/2010	2531.30	46698.10	5.42	2009/2010	16675.85	167762.57	9.94
2010/2011	4201.85	50094.73	8.39	2010/2011	22693.08	188481.18	12.04

Annex 'H'

Calculation of Loan and Advances to Total Deposit Ratio

FY	Loan & Advance	Total Deposit	Ratio (%)	FY	Loan & Advance	Total Deposit	Ratio (%)
Nabil Bank Ltd.				Everest Bank Ltd.			
2006/2007	12681.67	19347.40	65.55	2006/2007	9770.91	13802.44	70.79
2007/2008	15305.91	23342.29	65.57	2007/2008	13623.69	18186.25	74.91
2008/2009	21159.85	31915.05	66.30	2008/2009	18317.17	23976.30	76.40
2009/2010	27431.77	37348.26	73.45	2009/2010	23782.35	33322.95	71.37
2010/2011	32268.87	46410.70	69.53	2010/2011	27556.36	36932.30	74.61
Kumari Bank Ltd.				Himalyan Bank Ltd.			
2006/2007	6801.00	7768.96	87.54	2006/2007	14395.85	26490.85	54.34
2007/2008	8878.01	10557.42	84.09	2007/2008	16831.88	30048.42	56.02
2008/2009	11254.06	12774.28	88.10	2008/2009	19257.72	31842.79	60.48
2009/2010	14477.52	15710.92	92.15	2009/2010	24784.24	34682.34	71.46
2010/2011	14593.35	17432.25	83.71	2010/2011	27980.63	37611.20	74.39
Nepal Investment Bank Ltd.				Commercial Banks			
2006/2007	12613.56	18927.31	66.64	2006/2007	56262.99	86336.96	65.17
2007/2008	17010.46	24488.86	69.46	2007/2008	71649.95	106623.24	67.20
2008/2009	26618.77	34451.80	77.26	2008/2009	96607.57	134960.22	71.58
2009/2010	35745.53	46698.10	76.55	2009/2010	126221.41	167762.57	75.24
2010/2011	40318.30	50094.73	80.48	2010/2011	142717.51	188481.18	75.72

Annex 'I'

Calculation of Share and Debenture to Total Deposit Ratio

FY	Share & Debenture	Total Deposit	Ratio (%)	FY	Share & Debenture	Total Deposit	Ratio (%)
Nabil Bank Ltd.				Everest Bank Ltd.			
2006/2007	104.19	19347.40	0.54	2006/2007	19.08	13802.44	0.14
2007/2008	286.95	23342.29	1.23	2007/2008	19.08	18186.25	0.10
2008/2009	323.23	31915.05	1.01	2008/2009	101.16	23976.30	0.42
2009/2010	354.93	37348.26	0.95	2009/2010	102.04	33322.95	0.31
2010/2011	346.86	46410.70	0.75	2010/2011	102.04	36932.30	0.28
Kumari Bank Ltd.				Himalyan Bank Ltd.			
2006/2007	0.35	7768.96	0.00	2006/2007	38.57	26490.85	0.15
2007/2008	0.35	10557.42	0.00	2007/2008	73.42	30048.42	0.24
2008/2009	18.23	12774.28	0.14	2008/2009	89.56	31842.79	0.28
2009/2010	18.34	15710.92	0.12	2009/2010	93.88	34682.34	0.27
2010/2011	21.92	17432.25	0.13	2010/2011	78.88	37611.20	0.21
Nepal Investment Bank Ltd.				Commercial Banks			
2006/2007	17.74	18927.31	0.09	2006/2007	179.93	86336.96	0.21
2007/2008	35.25	24488.86	0.14	2007/2008	415.05	106623.24	0.39
2008/2009	54.55	34451.80	0.16	2008/2009	586.73	134960.22	0.43
2009/2010	60.97	46698.10	0.13	2009/2010	630.16	167762.57	0.38
2010/2011	63.35	50094.73	0.13	2010/2011	613.04	188481.18	0.33