

CHAPTER - I

INTRODUCTION

1.1 Background of the Study

A South-Asian land locked country, Nepal, can't develop beside it has lot of natural resources. Nepal enlisted among least developed country and among the poorest nation of the world is trying to chase the way of economic development by economic growth rate and developing all sectors of economic. It has a lot of problems as well as prospects too. Lack of industry, unemployment is seemed to be the major problems of the country. Most of the Nepalese are engaged in traditional types of agriculture. Our economic development process depends upon various factors, however economist are now convinced that capital formation and its proper utilization pays a supreme role for rapid economic development. Hence investment portfolio is one such tool that helps for proper utilization of resources.

Private sector and public sectors both can pay the vital role for the growth of the economy of any country. Thus the concept of the Build, Own Operate and Transfer (BOOT) has been gradually developing in Nepal. Integrated and speedily development of the country is possible only when competitive banking service reaches nook and corners of the country. Development banks occupy an important place in the framework of every economy because they provide capital for the development for the industry, trade, business and other resources deficit sectors by investing the saving collected as deposits. All the economic activities of each and every country are greatly influenced by the development banking business of the country. The structure of financial assets/liabilities shows that development Bank loan holds more than 80 percent of total assets and liabilities of the financial system.

The relationship between bank and business activities are inter-dependence. The necessary part of the business activities are banks which are established to safeguard people's money and thereby using the money in making loans and investments. There are several development banks operating inside and outside the valley. Every banks

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. Human nature doesn't satisfy for whatever he/she has at present tends to have more than whatever he/she. So expecting the additional return he/she tends to sacrifice the current resources. Whenever we talk about the return risk too must not be avoided, because in every step and step of return risk is involved. So we can say 'no' risk can gain 'no' return.

The network of a well-organization financial system of the country has great bearing in 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 development banks have become that 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 DBs formulate sound investment policies which help maximize quality of investment and eventually contribute to the economic growth of a country.

A portfolio is usually defined as a combination of assets. It is collection of securities, Portfolio provides the highest possible return for any specified degree of risk. Portfolio simply represents the practice among the investment of having their funds in more than one asset. Successful formulation and effective implementation of investment policy is the prime requisite for the successful performance of banks. Good investment policy has a positive impact on economic development of the country and vice-versa. A good investment policy attracts both borrower and lenders which helps the investment operation of the bank to be efficient and profitable by minimizing the inherent risk. A key factor in the development in the country is the mobilizing of domestic resources and their investment for productive use to the various sectors by development banks. Investment portfolio is one which the income of 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. Investment portfolio means to reduce risk and divided the investment in different sectors by the

means of risk. Portfolio analysis considers the determination of future risk and return in holding various blends of individual securities.

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 assets.

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; 1982:245).

Portfolio means a collection or group of assets. (Gitman; 1990:243) investment portfolio refers to an investment that combines several assets. It is a collection of securities. Portfolio means the lists of holdings in securities owned by an investor or institution. (Oxford Dictionary; 1997:173) portfolio is a collection of investment securities for example, if you owned some of Nabil Bank stocks, some Alliance insurance co. ltd. stock, some Soaltee Hotel Ltd. stock, some united finance ltd. stock, some Salt trading ltd. stock, some Nepal liver ltd. stock, some Bottlers Nepal Ltd. stock you would be holding seven stock portfolios. Portfolio analysis considers the determination of future risk and return in holding various blends of individual securities. Portfolio expected return is a weighted average of the expected return of the individual securities. Investment portfolio is one which the income or profit of the banks depend upon directly. Hence, the banks should never invest its fund in those securities; difference may cause a great loss. It must not investment its funds into speculative businessman who may be bankrupt at once and who may earn millions in minute. The bank should accept that types of securities which are commercial, durable, marketable stable, transferable and high market prices. A bank can minimize its volume of wealth through maximize its volume of wealth through maximization of return on their investment and lending. So they must invest their funds where they gain maximum profit. The profit of DB's mainly depends on the interest rate, volume, return of loan and nature of investment in different securities. While investing excess funds in different securities or at the lending period, the bank should keep in mind that the people deposit money at the banks in different account with confidence that the banks will repay their money on demand. Similarly a bank should not lay all its eggs

on the same basket i.e. to minimize risk: a bank must diversify its investment on different sectors. Diversification of loan or investment helps to sustain loss according to the law of average because if securities of a company deprived, there may be appreciation in the securities of other companies.

1.1.1 Brief introduction of Sample Development Banks

1.1.1.1 City Development Banks Limited (CDBL)

City development is a certified development bank as per the bank and financial organization Act 2063 and company Act 2063 from Nepal Rasta bank as "kha" graded. People involved in industries business, education, health engineering banking, financial organization, British Gurkha, development project management and social service are promoters of the bank. The bank is committed to fulfill all the financial requirement of the people from different walk of lives very simply, fast and in a straightforward manner. Located in the financial hub of the iconic beauty, Pokhara city's Chipledhunga, this bank is a combination of human skill and modern technologies which will provide modern banking facilities in a safe and sound way.

All services will leading to satisfy customers and give them optimum outcome. Therefore that role will be focused on being a dependable and reliable financial mediator to their wealth. It is that strong conviction that secures capital and productive use of it is the way of creating wealthy society growth of the country.

The objectives of the banks are:

-) Providing international quality banking services to the corporate society and individuals
-) Enhancing the market share
-) Not only providing employment opportunities but also career development plan for employees of the bank
-) Mobilizing the saving and development of the capital
-) Maximizing the market value of share and ensuring internal stability along with internal strengths.

Major Services of the Bank

Deposit

Beside regular deposit products like Current, Saving and Fixed deposits accounts, City Development Banks offers special deposit schemes like Nari saving, Bir Gorkha saving, Jestha Nagarik Samman saving, Nari premium saving, pay Roll saving and City saving account. This account holders enjoy higher interest rates and other dally saving city balbalika saving, muskan saving supper city saving, sunaulo saving, city saving account and stockholder saving account.

Personal Lending

City development Bank is committed to provide its customer the highest standards of services when it comes to their personal financial needs. House loan and Auto loan provides.

ATM'S

City development bank serves its customers 24 hours through ATMs in the Pokhara valley Chipledhunga, Taxi chok Bagar and Amarsing Chok. The ATMs services 365 days a years. City ATMs also accept SCT network card.

Any Branch Banking Services (ABBS)

The costumer can enjoy true freedom of anywhere anytime banking with instant fund transfers across the cities, collection of Cheques, deposit of funds, instant access to account statements and other exclusive banking services.

Safe Deposit Lockers

City Bank offers complete safety of customer's valuables (documents, jewelry etc) through its safe deposit lockers and nominal service charge. This facility is available from Head office Chipledhunga Pokhara.

SMS Banking

City development bank is a sms based banking service. Relying on this service one can perform many of the banking activities just by using your mobile phone. This service is applicable for Nepal Telecom Mobile users. Once can make enquiry about

their account balance, enquiry of transaction of account, changed PIN number and list of all service codes.

Remittance Product

City development bank has been committed to provide top-notch services to its customers through its remittance products:

-) Western Union Money Transfer
-) Prabhu Money Transfer
-) Nabil Remit
-) Himal Remit
-) Global Remit
-) Everest Remit
-) IME
-) Money Gram
-) City Express
-) Good Will Remit
-) Sewa Express

There are various departments concerned to providing these services to the customers. The department work harmoniously in order to serve the customers.

1.1.1.2 Garima Bikas Bank Limited (GBBL)

Garima Bikas bank limited was established by a group of enthusiastic, dedicated and successful professionals and entrepreneurs from different fields including business, teaching, engineering, banking, accounting, management etc. The management team also consists of experienced, qualified and devoted professionals. The bank was incorporated under company Act on 2064-04-22 on 2064-06-24, it acquired licence from Nepal Rastra Bank to perform its financial transactions which was approved by the company registrar's office on 2064.07.18 from Waling-3 Syanga. However in the third AGM it was decided to shift the head office to Pokhara. This step was taken to speed up the expansion plan and also to facilitate the upgrading the bank to a national level development bank. Garima Bikas Bank ltds are committed to offer the best of services to customers and to be their first choice.

Major Services of the Bank

Deposit

Beside regular deposit products like Current saving and Fixed deposits accounts, Garima bikas bank offers special deposit schemes like 'Supper Saving Account'. The accountholders of Supper Saving enjoy higher interest rates and other staff saving, kalyankari Savings, Ex. Army simple saving, Garima women's saving, Garima Swarnim saving, public saving and shareholders saving account.

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1.2 Statement of Problem

Nepalese economy is facing serious problem due to imbalance between resource mobilization and expenditure saving and investment, import and export and lock of control over population growth. Various development banks have been established to assist the process of economic development of our country. Development bank has been playing role by accepting deposit and providing various type of loans and investing in different sectors. There are many commercial banks, development banks, finance companies and many more co-operative societies in existence with in Pokhara valley as well. An organization can not accomplish it's goals and objectives without efficient and proper planning in investment in the tough competitive environment. Therefore, this study attempt to deal with the following problems:

-) What is the pattern of investment portfolio of CDBL and GBB?
-) What is the relationship of investment loan and advance with total deposit, net profit after tax of CDBL and GBBS?
-) How CDBL and GBBL manage their risk and return in investment?
-) How development banks CDBL and GBBL manage their risk and return on investment using portfolio concept?
-) How they perform investment portfolio?

1.3 Objective of the Study

The general objective of this study is to identify the current situation of investment portfolio of CDBL and GBBL. The specific objectives are as follows:

-) To analyze the investment portfolio of CDBL and GBBL
-) To identify the relationship of investment, loan and advances with total deposited, net profit after tax of CDBL and GBBL.
-) To explain how CDBL and GBBL manage their risk and return in investment using portfolio concept
-) To evaluate the risk and return on individual investment and loan and advances of CDBL and GBBL.
-) To examine the investment portfolio performance using popular model.

1.4 Significance of the Study

This study is significant to various aspect of the economy. This study helps the organization to know about all its financial indicators and the trend in their fluctuation. It also helps the organization to have a clear picture regarding its efficiencies and the performance deviations as well. The outcome of the overall research will help the organization to innovate way to solve problems if any. The study will also make an aid to the entire banking industry. The tool can be used to almost all the banks and a comparative study can also be done. It ultimately helps to know about the soundness of the banking sector.

1.5 Limitation of the Study

Each study is conducted under some constraints and limitation. Likewise this study is conducted under some constraints and limitations. This study is based on the fundamental analysis of investment portfolio pattern of development banks of the Nepal. The limitations of the study are as follows:

-) Only secondary data have been used to analysis of portfolio.
-) The study focused on the portfolio analysis CDBL and GBBL.
-) Due to lack of the adequate portfolio management information project may limit the scope of the study.
-) Accuracy depends on the information provided.
-) The study is limited to the time constraints.

1.6 Organization of the Study

Chapter–One: Introduction

The first chapter in this report discusses about the introduction of investment portfolio. It summarizes the investment pattern of the reference bank that has undertaken for this study. It highlights the scenario of the development bank in this regards. As a whole, the chapter is through a light about investment pattern of CDBL and GBBL.

Chapter –Two: Review of Literature

The second chapter is discusses about the literature review. It is describe about the investment operations of the development bank, investment portfolio analysis and loan and advances portfolio analysis. The history regarding the evolution of the concepts, its impacts and the way of analysis will also discussed.

Chapter – Three: Research Methodology

The third chapter is comprises of the research methodology adopted by the entire study using the past five year's data of the two banks. It is also discuss on research design, population and sampling procedures, sources of data collection, data collection techniques, and processing procedure.

Chapter - Four: Analysis and Presentation of Data

The fourth chapter is consists of the presentation and analysis of the data in a systematic manner using various statistical diagrams like bar-diagram, pie-chart and trend line and so on.

Chapter – Five: Summary, Conclusion and Recommendation

The fifth chapter is comprises of the summary and conclusions. It also includes the further recommendations that could be made.

Bibliography and appendix are also including at the end of the study.

CHAPTER – II

REVIEW OF LITERATURE

This chapter focuses on the review of literature, research studies and other pertinent preposition in the related field study, textbooks and reference books relevant to the investment portfolio analysis of development bank in Nepal particularly different journals, Article, Annual reports and some research paper related with the topic. This chapter is arranged in to the following manner.

1. Conceptual Review
2. Review of Related study:
 -) Review of international journals and Articles
 -) Review of Nepalese journals and Articles
 -) Review of previous thesis

2.1 Conceptual Review

Conceptual review provides the fundamental theoretical frame work and foundation to the present study. Hence books, research paper etc. dealing with theoretical aspects of investment and portfolio analysis are taken in to consideration.

2.1.1 Definition of Investment

Investment usually means the sacrifice of the current money for future money. The sacrifice takes place in the present and the reward comes later, if at all, and the magnitude is generally uncertain. However, investment as utilization of saving for something that is expected to produce profit or benefits. Investment is employment of funds to achieve added income or growth in value. It involves the commitment of resources put off from current consumption with hope of capitalizing some benefits in future. It includes both real asset and financial assets. Real assets investment denotes the tangible assets like

building, land, machinery, factory and the like. On the other hand, financial assets investment indicates papers representing an indirect claim to real asset held by someone else. Nevertheless, Real assets are less liquid than financial asset.

“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 & Joehnk; 1990:265)

“Investment is the current commitment of fund for a period of time to derive a future flow of funds that will compensate that 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 & Reilly; 1972:299)

The above definitions infer that an investment is the allocation and mobilization of funds for a certain time period to acquire some extra benefit or extra attachment with mobilized fund.

2.1.2 Portfolio Management

Portfolio management is basically concerned with efficient management of portfolio investment in financial assets including shares and debentures of companies. Portfolio management assumes periodic supervision of the security in the portfolio. Buy and hold philosophy in the present competitive society and in view of the fluctuations of the stock market is not a very prudent. There has to be national planning of action for sound portfolio management. The management may be professionals or by individuals themselves. Portfolio of an individual or a corporate unit is the holding of securities and investment in financial assets holding are the result of individual’s preferences and decision regarding risk and return. The process of portfolio management is closely and directly linked with the process of decision making.

The basic problem of portfolio management is to establish an investment objective or goal and then decide the best ways to reach the goal with the securities available. This has been stated as an attempt by the investor to obtain the maximum return with minimum risk. The process of portfolio management involves a logical set of steps common to any decision planning, implementation and monitoring.

“Portfolio management is the art of handling a pool of funds so that it not only preserves its original worth but also overtime appreciates in value and yields an adequate return consistent with the level of risk assumed” (Cohen, Edward & Arthur 1977:157).

2.1.3 Investment Portfolio

A portfolio usually defined as a combination of assets. It is a collection of securities. Portfolio means the lists of holding in securities owned by an investor or institution. A portfolio is a collection of investment securities. Example, if you hold some stocks of Nepal investment Bank Ltd., some of Bottlers Nepal companies, some of Radisson Hotel and some of standard chartered Bank Ltd. Your investment portfolio consists of the stocks of these four different companies. Portfolios analysis considers the determination of future risk; and return is a weighted average of the expected return of the individual securities.

Portfolio theory deals with the selection of optimal portfolio i.e. the portfolio that provides the highest possible return for any specified degree of risk or the lowest possible risk for any specified rate of return. Portfolio theory has been developed for the financial assets. Thus making investment from the selected optimal portfolio i.e. the portfolio that provides the highest rate of return with least possible amount of risk is the real investment portfolio.

“A portfolio simply represents the practice among the investors of having their funds in more than one asset. The combination of investment assets is called a portfolio (Weston & Brigham, 1982)”.

An investor who has been paying someone or actively manages his or her portfolio has every right to insist on knowing what sort of performance was obtained. Such information can be used to alter either the constraint placed on the manager, the investment objective given to the manager, to the amount of money allocated to manager. Perhaps more importantly, by evaluating performance in specified ways a client can forcefully communicates his/her interest to the investment manager and in all likelihood, affect the way in which his or her portfolio is managed in the future. Moreover, an investment manager, by evaluating his or her own performance, can identify sources of strengths or weakness.

2.1.4 Investment Alternatives

There are various alternatives for investors.

| | | |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| 1. Equity securities |) Common Stock) Preferred Stock | |
| 2. Short term debt securities |) Negotiable certificates of deposit) Commercial paper) Banker's acceptances) Treasury Bills | |
| 3. Intermediate and Long Term Debt Securities |) Government securities | ➤ Treasury Notes ➤ Treasury Bonds ➤ Saving Bonds |
| |) Agency securities | |
| |) Municipal Securities | ➤ Revenue Bonds ➤ General obligation Bonds |
| |) Corporate Bonds | |
| 4. Hybrid Securities |) Convertible preferred stock) Convertible Bonds | |
| 5. Derivative Securities |) Options) Community futures) Financial futures) Options in futures) Rights) Warrants | |
| 6. Real Assets |) Precious Metal) Real State) Collectibles | |
| 7. International investment |) Multinational Corporations) Foreign stocks traded on all local exchange) American Depository Receipts (ADRs) | |
| 8. Other Investment Alternative |) Pension Funds) Mutual Funds) Closed and companies | |

(Source: Elton & martin; 2001)

2.1.5 Investment Uncertainty (Risk)

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

2.1.5.1 Interest Rate Risk

It is defined as the potential variability of return caused by changes in the market interest rates. In more general terms, if market interest rates rise. Then investment values and market prices will fall, and vice versa. The variability of return is the result of change in interest rate. This interest rate risk affects the prices of bonds, stock real estate, gold, puts, calls, future contracts and other investment as well.

2.1.5.2 Purchasing Power Risk

It is the variability of return an investor suffers because of inflation. The rate of inflation is measured by using a consumer price index (CPI). The percentage change in the CPU is a widely followed measure of the rate of inflation.

2.1.5.3 Bull –Bear Market Risk

Bull-Bear market risk arises from the variability in market return resulting from alternating bull bear market forces. When a security index rises fairly consistently from a low point called a trough, for a period of time, this upward trend is called a bull market. The bull market ends when the market index reaches a peak and starts a downward trend. The period during which the market declines to the next trough is called bear market.

2.1.5.4 Default Risk

It is the portion of an investment's total risk that results from changes in the financial integrity of the investment. Default risk is the variability of return that investors experience as a result of changes in the creditworthiness of a firm in which they invest. Investor losses from default risk usually result from security price falling as the financial integrity of a firm weakness. By the time an actual bankruptcy occurs, the market price of the troubled firm's securities will already have declined to near zero.

2.1.5.5 Liquidity Risk

It is that portion of an asset's total variability which results from price discounts given or sales commissions paid in order to sell the asset without delay. Perfectly liquid are highly marketable and suffer no liquidation costs. Liquid assets are not readily marketable either price discounts must be given or sales commissions must be paid, or both of these costs must be incurred by the seller. Hence, the more liquid an asset is, the larger the price discounts and or commissions which must be given up by the seller in order to affect a quick sale.

2.1.5.6 Callability Risk

Some bonds and preferred stocks are issued with a provision that allows the issuer to call them in for repurchase. The portion of a security's total variability of return that derives from the possibility that the issue may be called is the callability risk. Callability risk command a risk premium that comes the form of slightly higher average rate of return. This additional return should increase as the risk that the issue will be called increase.

2.1.5.7 Convertibility Risk

Convertibility risk is that portion of the variability of return from a convertible bond or a convertible preferred stock that reflects the possibility that the investment may be converted into the issuer's common stock.

2.1.5.8 Political Risk

The portion of an assets total variability of return cased by changes in the political environment that affect the asset's market value. Whether the changes that cause political risk are sought by economic interests, the resulting variability of return is called political risk.

2.1.5.9 Industry Risk

In industry may be viewed as a group of companies that compete with each other in a market of homogenous product. Industry risk is that portion of an investment's total

variability of return caused by events that affect the products and firms that make up an industry. The stage of the industry's life cycle, international tariffs and/or quotas on the products produced by an industry, product or industry related taxes; industry related taxes; industry wide labor union problems, environmental restrictions, raw material availability, and similar factors interact and affect all the firms in an industry simultaneously. As a result of these commonalities, the process of securities issued by competing firms tends to rise and fall together.

2.1.6 Diversification and Portfolio Analysis

Investment positions are undertaken with the goal of earning the expected rate of return. Investors seek to minimize inefficient deviations from this expected rate of return. Diversification is essential for the creation of an efficient investment because it can reduce the variability of returns around the expected return.

Diversification is the one important means 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.

The objective of portfolio analysis is to reduce risk. By combining securities of low risks with securities of 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 (Francis, 2003). Some different diversification techniques for reducing portfolio's risk are follows:

2.1.6.1 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 diversification 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 un diversifiable risk remains.

2.1.6.2 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 correlated with one another in diversifiable cannot be diversified away simply by selecting securities from different industries.

2.1.6.3 Superfluous Diversification

Larger no. of assets spreading of the portfolio's assets is superfluous diversification. It refers to the investors spreading himself in so many investments on his portfolio. Superfluous diversification will usually result in the following portfolio management problems:

-) Impossibility of good portfolio management: if the portfolio contains dozens of different assets, the portfolio's management cannot consider the status of all of them simultaneously.
-) Purchase of lackluster performers: The search for numerous different assets it buys will ultimately lead to the ill-informed purchase of investment that will not yield an adequate rate of return for the risk they bear.
-) High search cost: As the number of candidate securities for a portfolio increase, it will be more costly to do the necessary security analysis.
-) High transaction costs: Frequent purchase of small quantities of share will result in larger broker's commission.

More money is spent to manage a superfluously diversified portfolio, there will most likely to be no concurrent improvement in the portfolio performance. The superfluous

diversification may lower the net return to portfolio's owner after the portfolio's management expenses are deducted.

2.1.6.4 Simple Diversification across Quality Rating Categories

Simple diversification reduces risk within categories of stock that all have the same quality ratings. The standard deviations of portfolios of different homogenous quality rating attained different level of risk. The highest quality portfolio randomly diversified stocks was able to achieve lower levels of risk than the simply diversified portfolios of lower quality stock. The result reflects the fact that default risk is 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.

2.1.6.5 Markowitz Diversification

Markowitz diversification is the combination of assets which are less than perfectly correlated in order to reduce portfolio risk without sacrificing portfolio returns. It can sometimes reduce risk below the undiversifiable level. Markowitz diversification is more analytical than simple diversification and considers assets correlations. The lower the correlation between assets, the more that Markowitz diversification will be able to reduce the portfolio's risk.

Markowitz diversification can lower risk below the in diversifiable level if the securities analyst can find securities whose rat of returns have low enough correlations. Unfortunately, there are only a precious few securities that have low correlations. Therefore, using Markowitz diversification requires a data bank of financial statistics for many securities, a computer and some econometric analysis.

Applying Markowitz diversification to collection of potential investment assets with a computer is called Markowitz portfolio analysis. It is a scientific way to manage a portfolio, and its results are quite interesting. Since Markowitz portfolio analysis considers both the risk and return of dozens or hundreds of thousands of different

securities simultaneously, it is a more powerful method of analyzing portfolio than using intuition or selecting investments by committee.

According to the Markowitz “the portfolio theory establishes a relationship between portfolios expected return and its level of risk as the criterion for selecting the optimum portfolio”. Thus Markowitz suggested following two measure for evaluating the merits of a portfolio:

-) The expected return from the portfolio
-) Level of risk exposure associated with the portfolio

So as to find the efficient set of portfolios and select the most efficient one the portfolio manager will need to know the expected returns and the risk of these returns for the individual’s securities.

The portfolio model developed by Markowitz is based on the following reasonable assumption:

-) The expected return from an asset is the mean value of a probability distribution of future returns over some holding period.
-) The risk of an individual asset of portfolio is based on the variability of returns (i.e. standard deviation or variance)
-) Investors depend solely on their estimates of return and risk in making their investment decision. This means that investor utility (indifference) curves are only a function of expected return and risk.
-) Investors adhere to the dominance principle. That is, for any given level of risk, investors prefer assets with a higher expected return investors prefer lower to higher risk.

According to the Markowitz, the expected return of the portfolio is the weighted average of the expected return of the individual assets in the portfolio. The weights are defined as the portion of the investor’s wealth invested in particular asset. Alongside the expected return to the portfolio manager must also consider the risk associated with the portfolio. According to the Markowitz, 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 (Pandey 1997:143).

2.1.7 Capital Asset Pricing Model (CAPM)

CAPM is a model based on the presentation that the required rate of return on any stock is equal to the risk free rate of return plus its risk premium, where risk is measured by the beta coefficient. The CAPM is a relationship in which the expected rate of return of the asset is a linear function of that asset's systematic risk. The CAPM represents the trade-off between systematic risk for the returns that investors expect to receive. The CAPM explains the behavior of security prices. It further explains how the prices and interest rate on risky financial assets are determined in the capital market. CAPM combines the principles of portfolio theory with certain assumptions regarding investor's expectations and market characteristics.

2.1.7.1 Assumptions

-) Individual are risk averse.
-) Individual can borrow and lend free at risk free rate of interest.
-) Individual have homogenous expectations regarding risk and returns of securities.
-) The market is perfect and competitive.
-) There are no transaction costs and taxes.
-) Securities are divisible.

The CAPM equation is written as follows:

$$(R_j) = R_f + (R_m - R_f) j$$

Where,

(R_j) = Expected return on assets

R_f = Risk free rate of return

R_m = Market return

j = Coefficient of Beta

2.1.7.2 Total Risk

The total variation of the rate of return for an individual security is measured by the standard deviation or variance of the rate of return. There are two kinds of risk which are as follows:

-) Market risk or Undiversifiable risk of Systematic risk measured by its beta and
-) Company risk or Diversifiable risk divided into two parts. They are unsystematic and systematic risk.

Total risk = systematic Risk + unsystematic Risk

2.1.8 Portfolio Risk and Return

Each asset's expected return and risk along with the expected return and risk for other asset's and their interrelationship are important inputs in portfolio selection. In order to construct efficient portfolios, the investment must be able to quantify the portfolios expected return and risk (Cheney & Mosses, 1992:139)

From an investor's standpoint the fact that a particular stock goes up or down is not very important. What is important is the return on his/her portfolio, and portfolio's risk. Logically, then the risk and return characteristics of an investment should not be evaluated in isolation: rather, the risk and return of an individual security should be analyzed in terms of how the security affects the risk and return of the portfolio in which it is held(Cheney & Mosses, 1992:133).

2.1.8.1 Portfolio Return

The expected return of a portfolio is the weight average of the expected returns of the individual assets in the portfolio. The weights are the proportions of the investor's wealth invested in each asset and the sum of the weight must equal to one (Cheney & Mosses, 147)

The expected return on portfolio depends upon the amount of funds invested in each security, given expected return on the individual securities. The portfolio expected return is defined in equation as follows:

$$\text{Portfolio return } \bar{R}_p = W_A \bar{R}_A + W_B \bar{R}_B + \dots + W_N \bar{R}_N$$

Where,

$$\bar{R}_p = \text{Return on portfolio}$$

$$W_A = \text{Weight or proportion of Assets 'A'}$$

$$\bar{R}_A = \text{Expected Return of Assets 'A'}$$

$$\bar{R}_p = W_A \bar{R}_A + W_B \bar{R}_B + \dots + W_N \bar{R}_N$$

$$W_B = \text{Weight or proportion of Assets 'B'}$$

$$\bar{R}_B = \text{Expected Return of Assets 'B'}$$

2.1.8.2 Portfolio Risk

The calculation of a portfolio risk is not as 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 assets in the portfolio and their relative weights but also to the extent to which the assets return move together. We measure the risk of an individual asset by the variance of returns or its square root, the standard deviation. The degree to which the asset's return move together is measured by the covariance or correlation coefficient. By combining the measures of individual asset risk (variance or standard deviation), relative asset weights, and the co-movement assets (covariance or correlation), the risk of the portfolio can be estimated. Total risk is measured by either the variance or its square root, the standard deviation of returns (Cheney & Mosses 1992)

2.1.9 Covariance, Correlation Coefficient and Portfolio Risk

"Portfolio risk can be measured by using covariance of return securities in portfolio. Covariance is a statistical measure of the relationship between two random variables. A positive value for covariance indicates that the securities returns tend to move in the same direction and the negative value indicates that returns of two securities move in opposite side. If the value of covariance is zero, the square root of the coefficient of determination

is called correlation Coefficient (ρ). It is defined as the covariance between dependent there is little or no relationship between the returns for two securities." (Share, Alexander & Bailey, 2001:180) and independent variables divided by the product of their standard deviation (Weston & Copeland, 1992:372)

$$\rho_{AB} = \frac{\text{Cov}_{AB}}{u_A u_B}$$

Where,

ρ_{AB} = Correlation Coefficient between securities A and B

Cov_{AB} = Covariance of return between securities A and B

u_A = Standard deviation of return of security A

u_B = Standard deviation of return for security B

Correlation Coefficient always lies between -1 and +1. A value of -1 represent perfect negative correlation and a value of +1 represents positive correlation. (Sharp, Alexander and Bailey: 2001:180).

If the correlation is perfectly positive (+1), the portfolio cannot reduced by any level of risk. On the contrary, if the correlation is perfectly negative (-1), the proper combination of the two securities can reduce unsystematic risk up to zero. Hence, the positive correlation between securities return is not so beneficial and vice versa. A zero coefficient means two variables are unrelated to each other. Hence changes in one variable are independent of changes in other. On the other hand, when securities in portfolio are perfectly negatively correlated, all risk can be diversified away. When securities are perfectly positively correlated, diversification does not do good whatsoever. In the typical case, correlation among individual stocks is positive but less than +1, some, but not all risk can be eliminated (Weston & Brigham, 1992:127)

2.1.10 Market Portfolio

The market portfolio contains every asset 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 company or industry specific factors. Volatility in returns created by unsystematic risk, this can be diversified away by adding risky assets to a portfolio. A portfolio total risk is equal to the sum of its systematic risk and unsystematic risk. In the case of the market portfolio, there is no unsystematic or diversifiable risk, and total risk is equal systematic risk. Since it is possible to eliminate all unsystematic risk through perfect diversification, the capital makers do not reward investors for facing unsystematic risk (Cheney & Mosses, 1992).

The market portfolio is the unanimously desirable portfolio containing all securities in exactly the proportions in which they are supplied. The return of the market portfolio is the weighted average return on all capital on assets. In reality, it is possible to obtain only estimates of the market portfolio. However, the market portfolio is a useful theoretical construct since the return of market portfolio is the return estimated by the Dow Jones Averages, S and P's indexes. The NYSE index and similar indexes (Francis, 2003)

2.1.11 Feature of Sound Lending and Investment Policy

The income and profit of the bank depends upon its lending procedures, lending policy and investment of its funds in different securities. A sound lending and investment policy is not only the prerequisite for bank's profitability, but must consider explained as follows:

a. Safety and Security

The bank should never invest its fund in those securities which are subject to too much depreciation and fluctuation because a little difference causes a great loss. It must not invest its fund into speculative businessman who may be bankrupt. Thus the banks

should accept such types of securities which are commercial, durable, marketable and high market prices.

b. Profitability

A development bank can only maximize its volume of wealth if it maximizes the return on investment and lending. So the bank must invest their fund where they gain maximum profits.

c. Liquidity

Liquidity is the ability of a firm to repay the money when needed. People deposit money in the bank in different accounts with the confidence that the bank will repay the money where needed. To maintain such confidence of the depositors, the bank must keep this point in mind while investing its excess funds in different securities if at the time of lending so that it can meet current or short term obligation when they become due for payment.

d. Diversification

A bank should not lay all eggs on the same basket. This saying is very much important to the bank and it should always careful not to grant loan in only one sector. To minimizing risk, a bank must diversify its investment on different sectors.

e. Legality

Illegal securities will bring out many problems for the investor. A commercial bank must follow the rules and regulation as well as different directions issued by the NRB, ministry of finance and other while mobilizing its funds.

2.2 Review of Journal and Articles

Sherestha (1995) A study on “Portfolio behaviour of commercial banks in Nepal” has made remarkable efforts to examine various portfolio behaviour of development bank in Nepal such as investment portfolio, liability portfolio, assets portfolio etc. In the study,

investment of development banks when analyzed individually, were observed in Nepalese domestic bank invest in government securities, national saving bond, debentures and company's shares. On the basis of this study the author found that the supply of bank credit was expected to depend on total deposit, lending rate, bank rate, lagged variables and the dummy variables, similarly demand of bank credit was assure to be affected by national income, lending rate, treasury bill rate and other variables. The resources of development banks were expected to be related with variables like total deposits, cash reserve requirement, bank rate and lending rate. The following were the findings of the study.

-) The relationship of bank portfolio variables as found to be best explained by log linear equations.
-) Demand of deposit for Development banks in Nepal is positively affected by the GDP from non agricultural and the deposit rate and lending rate of interest.
-) The investment of development banks on government securities has been observed to be affected by total deposit, cash reserve requirement, and treasury bills rates and lending rates.
-) The investment of development banks in shares and securities is normal and nor found to have strategic decisions towards investment in shares and securities.
-) The loan loss rate has been found to increase with low recovery of loan.

Sharma (1998) the article "joint venture banks in Nepal co-existing or growing out" it would be definitely unwise for Nepal not to let the DBs operate in the country and not to take advantage of them as additional means of resources mobilization. So far one should admit frankly no different treatment has been extended to the domestic and DBs at least from the government side, which is commendable. If Nepal government keeps on the stance of treating the domestic and DBs equally and if the DBs also show their alacrity to come forward to share the trials and tribulations of this poor country, both types of banks will coalesce and co-exist complementing each other and contributing to the nation's accelerated development. On the contrary, if the DBs use their strength against trading into the number, some path of development along with domestic bans and the government, they will eventually grow out the domestic banks from the more profitable

urban areas and lucrative urban sectors unless remedying by the determination of the government.

Shrestha (2055) an article entitled “portfolio management in development Bank, theory and practice” mentioned that the portfolio management becomes very important for both individuals as well as institutional investors; investors would like to select a best mix of investment assets subject to the followings aspects.

-) Higher return which is comparable with alternative opportunities available according to the risk class of investors.
-) Good liquidity with adequate safety of investment.
-) Certain capital gains.
-) Maximum tax concession
-) Flexible investment
-) Economic, efficient and effective investment mix

In the view of above aspects, following strategies are adopted.

-) Do not hold any single security i.e. try to have a portfolio of different securities.
-) Do not put all the eggs in one basket i.e. to have diversified investment. (Making investment in different sectors)
-) Choose such portfolio of securities, which ensures maximum return with minimum risk or lower of return but with added objective of wealth maximization.

However, Author has also attempted the following approaches to be adopted for designing a good portfolio and its management.

-) To find out the invisible assets (generally securities) having scope for better returns depending upon individual characteristics like age, health, need, disposition, liquidity, tax liability etc.
-) To find out the risk of securities depending upon the attitude of investor towards risk.

-) To develop alternative investment strategies for selecting a better portfolio that will ensure a trade-off between risk and return to attach the primary objective of wealth maximization at lowest risk.
-) To identify securities for investment to reduce volatility of return and risk.

Regarding the development banks, they are very eager to provide such services but because of above mentioned problems, very limited opportunity are available to the banks for exercising the portfolio management. Even considering the attraction of deposits development banks are facing problems since investors have not developed full confidence of putting money in fixed time deposit certificated of various maturing and sizes.

The author has drawn following conclusion for smooth running and operation of banks and financial institutions.

-) The survival of the banks depends upon its own financial health and various activities
-) In order to develop and expand the portfolio management activated successfully the investment management methodology of a portfolio manager should reflect high standards and give their clients the benefits of global strengths, local insights and products philosophy.
-) With the discipline and systematic approval with the selection of appropriate countries, financial assets and the management of various risks, the portfolio manager could enhance the opportunity for each investor (client) to earn superior returns overtimes.
-) The Nepalese banks having greater network and access to national and international capital markets have to go for portfolio management activities for the increment of their fee based income as well as to enrich the client base and to contribute in national economy.

In this context, the author has presented two types of investment analysis techniques and fundamental analysis and technical analysis to consider any securities such as equity, debentures or bond and other money and capital market instruments. The author has also

pointed out the required skilled manpower research and analysis and proper manage Information system (MIS) in any type of commercial banks to get success in portfolio management and customer's confidence.

Thapa (2003) published an article "Managing a banking Risk" stating the subsequent issues. Banking and financial service are among the fastest growing industries in the developing world and are also emerging as cornerstone for the other developing and underdeveloped nations are well. According to him, the primary function of a bank is trade risk. Risk cannot be avoided by the bank but can only be managed. There are different types of risk. Among them interest rate risk is one of the common risk the banks facing owing to the volatility of the interest rate in the market.

Another risk banks commonly face is the trading risk or market risk. Banks have to productively manage their excess liquidity by investing in various securities in foreign currencies and in other assets like swaps, options etc.

Credit risk is another significant risk which the banks particular in the under developed country like Nepal because our financial system is mostly dependent on banks. Hence it is crucial that the bankers should manage such risks prudently since it not only hampers the particular banks in concern but also badly affects the growth prospects of the entire economy. Credit risks are of two types; diversifiable risk and undiversifiable risk.

Off bank risk, owing to the creation of contingent liabilities should be managed by a prudent analysis of bank officials materializing such contingent contacts. Similarly, technological changes are frequently faced by banks. Therefore, for the smooth operation banks should adopt technological up gradation from time to time.

Maintaining proper liquidity is the most difficult problem as the demand of cash is uncertain. To avoid such risk, the central bank has initiated the regulation, whereby the banks need to maintain reserve in their vault and a certain specified percentage of the total deposit with the central bank.

He concludes that risk management of the bank is not only crucial for optimum trade off between risk and probability but is also one of the deciding factors for overall business investment leading to growth of economy. Managing risk not only needs sheer professionalism at the organizational level but appropriate environments also need to develop. Some of the major environmental problems of Nepalese banking sector are under government intervention, relatively weak regulatory frame, if we consider the international standard, major corporate governance and the biggest of all is the lack of professionalism, the only solution to mitigate the banking risk is to develop the badly needed commitment eradication of corrupt environment particularly in the disbursement of lending, and formulate prudent and conducive regulatory framework.

2.3 Review of Previous Thesis

Adhikari, (2008) carried out the study on the topics "Investment Analysis in commercial bank: A case study of Nepal Bangladesh bank Ltd". The basic objective of study were to find out the banks investment on priority sector, to analyze deposit utilization and its relationship with investment and net profit of the bank, to suggest measures to improve the investment policy of the bank, to find out the non performing assets position of the bank and to evaluate the portfolio management of the bank. During the study he found that the proportion of nonperforming assets on total loan and advance of the bank is more than the satisfactory level. It should be less than 5% to be graded as internationally A grade commercial bank for the Nepalese context also NPA should be in single digit to be considered as satisfactory. The NP A level of the bank is higher than this standards. The loan and advance portfolio of the bank is not satisfactory the leading is not properly diversified half loan from total portfolio is given to industrial sectors. Bank is unable to explore the new and profitable sector for the lending purpose so, the bank has very risky portfolio of loan and advance in industrial sector will not function properly its impact to the bank will be huge. Bank not fulfilling its priority sector investment requirement every years during the study period. In the course of fail are to fulfil the directive credit requirement, bank is subject to penalty which affects the profitability of the bank. The average priming sector lending of the bank is less than the required 12% landmark. The relation of total deposit is positive to total investment i.e. if total deposit increase, bank

loan and advance investment on government securities, share and debenture of bank investment in the form of loan and advances and other investment has not positive relation to total profit of the bank total profit is irrespective to it's total investment.

Shrestha, (2009) conducted her thesis on “Portfolio Analysis of Common stock of Commercial Banks in Nepal” with the general objective to find out the level of portfolio risk and return on stock of commercial bank investment. The specific objectives were;

-) To find out the trend of NEPSE index.
-) To analyze the risk and return of common stock of reviewed banks and
-) To find out the best portfolio from NEPSE.

The study was focused on portfolio analysis of commercial banks. The research findings are:

-) The expected return of HBL stock was the highest (54.68%) and that of NABIL the lowest (32.72%) among the banks under the study.
-) The risk of NBBL was the highest (93%) and SCBL had the lowest risk (55.42)
-) The correlation of stock, return and market that all of the banks stock were highly positive correlated with the market.
-) The correlation values of common stock of all banks with the markets were nearly equal to +1.
-) The stock prices of all four listed commercial banks were higher than NEPSE average price of stock. Likewise, the stock prices of these banks were in fluctuating trend than NEPSE index.

She concluded that the investment on common stocks is risky job. It does not guarantee both return and principal, so the investors should be well acquainted with the associated risk and work out their attitude towards the riskiness of various investment strategies.

Shrestha(2010) performed a research work “A study on investment portfolio of commercial bank in Nepal” with the general objective of identifying the current situation of investment portfolio of commercial bank in Nepal. The main objectives were

-) The analyze the investment portfolio of commercial banks;
-) To analyze the risk and return of the selected five commercial banks on investment using portfolio concept and
-) To forecast/examine the trend of investment for providing complementary measures.

His major findings from the analysis of risk and return were;

-) SCBL has more return from investment on government securities. Hence, it effectively mobilized its total deposits on them.
-) EBL and SBIN mostly mobilized their depositor's fund in loan and advances.
-) The return on share and debenture displayed a wide fluctuation particularly due to the volatility of share prices in the market as well as changes in dividends.
-) The portfolio risk on investment in government securities is lower than that in loan and advance or share and debenture.

He concluded that investment on government securities is quite safe. Hence, commercial banks should also mobilize depositor's fund on them.

Pathak (2011) carried out the study on topic investment portfolio of financial company comparative study on Annapurna finance and Pokhara finance ltd. This basic objectives of the study ware to analyze the company different sector of investment and their trends, to analyze the deposit mobilization and investment trend of the each company, to measure and compare the profitability position, to analyze risk and return of each company. During the study we found that the investment portfolios between two finance companies are diversified but not as much to absorb market alternative. The volume of investment is in high degree of both finance companies but they have diversified in different sector on an average Annapurna finance company ltd has high share of 98.18% of total loan and advance similarly in Pokhara finance ltd major portfolio is also dominated by loan and advances which is also dominated by loan and advances which is about 87.73%. This clarified that the risk factors of Annapurna finance ltd is higher than Pokhara finance ltd.

Joshi, Payal (2012) conduct a study of “portfolio analysis on investment with special reference to Nepalese commercial bank” the general objective of the study is to identify the current situation of investment portfolio of commercial banks in Nepal. The specific objectives are;

-) To analyze the current situation of the portfolio management of commercial banks.
-) To evaluate the financial performance of commercial bank investment strategies.
-) To see its trend of investment in different portfolios.
-) To analyze the way commercial bank management of risk and return on investment through portfolio concept.

Her major findings were:

-) Return on the government securities is low but it has lower risk. In the similar manner. The loan and advance give more return than the government securities.
-) The total investment to total deposit ratio of SCBL is found to be the highest in comparison to the other four sample commercial banks. It absorbed a major portion of its on government investment securities.
-) The analysis indicates that commercial banks invested very nominal percentage of total outside investment on share and debenture of the other companies.
-) Investment on various assets, like government securities, loan and advances and share and debenture are increasing trend.

Manandhar (2012) in the thesis entitled “Analysis of the risk and Return on common stock investment of commercial banks in Nepal” has been done in 2010. The main objective of the study is to analyze the risk and return on common stock investment on CBs and other objectives are as follows:

-) To examine risk and return on common stock of NABIL, HBL, NBBL, NIBL.
-) To calculate risk and return of their portfolio
-) To identify whether stock of selected companies are overpriced, underpriced and equilibrium priced.

Focusing on risk and return pattern, of the sample taken from the listed companies, researchers used financial tools to calculate the financial factors like MPS, DPS. The major financial tools like HPR, expected rate or return, beta coefficient to measure systematic risk along with other statistical measures are used. To draw the conclusion, researcher has used Hypothesis test of satisfy the Null Hypothesis.

Her major findings were:

- J NABIL is the best bank among while compared to NIBL on the basis of mobilization of its deposits in the field of investment. It seems NABIL is more focusing on Domestic and Foreign investments rather than loan and advances. NABIL is also successful to exploitation of resources in the field of govt. Securities and other investments. On the basis of Sand D also NABIL is the best bank.
- J On the basis of investment amount, the CBs gives first priority of invest their resources on loan and advance, then to govt. Securities and other investments and lastly to share and debentures. Therefore CBs invest highest part of the resources to loan and advances.

2.4 Research Gap

Portfolio investment refers to an investment that combines several assets. Commercial banks cannot utilize entire fund raised through deposit and borrowing into loan and advances to fulfill the gap between borrowing and lending banks rather prefer investment. On the basis of the review of the previous thesis, it is observed that the precious researchers had focus in other aspects of investment rather than analysis the financial performance of commercial banks in terms of investment strategies.

Few research works exists in the topic, in-depth specific researches have yet to continue. All previous researches on portfolio management have focused on the risk and return analysis of investment by commercial banks particularly in common stock. However, there is void (insufficiency/gap) in research program concentrating on investment in the government securities, loan and advance, share and debenture etc. Over the time period, several new options for investment have been introduced. Furthermore, the previous research has been outdated. Hence, the research has endeavored to analyze the present

portfolio management situation to analyze the present portfolio management situation, portfolio return on investment sharps portfolio performance measure of GBBL and CDBL within the frame work of available recent data. This research /study is also new to analyze and compare investment portfolio of these two sample development banks within the time interval between 2064/065 to 2068/069.

CHAPTER - III

RESEARCH METHODOLOGY

Introduction

Research methodology is the process of arriving at the solution of the problem through planned and systematic dealing with the collection, analysis and interpretation of facts and figures. Research is a systematic method of finding right solution for the problem whereas research methodology refers to the various sequential steps to adopt by a researcher in studying a problem with certain objective in view. In other words research methodology refers to the various methods of practices applied by the researcher in the entire aspect of the study. It is the plane, structure and strategy of investigations conceived to answer the research question or test the research hypothesis. Research design is used to control variance (Wolff and Pant, 2002:51).

It includes different dependent and independent variable, types of research design, research questions and hypothesis sample, data collection activities, techniques of analysis etc.

3.1 Research Design

The present study is mainly based on two types of research design i.e. descriptive and analytical. Descriptive research design describes the general pattern of the Nepalese investors, business structures, problem of portfolio management etc. the analytical research design makes analysis of the gathered facts and information and makes a critical evaluation of it. Finally research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research question and to control variances. To achieve this study descriptive and analytical research designs have been used.

3.2 Population and Sampling Procedure

According to the report of NRB (Banking and Financial Statistics, Mid-July 2012), there are 32 commercial banks, 88 development banks, 69 finance companies and 24 microfinance in Nepal. In due course of thesis study, we can say that entire banking industry was the population and among all those banks and financial institution of the entire study is focused towards the performance evaluation pattern in development banks. Therefore, development banks could be considered as the concentrated population for the study. As researcher could not make the study of all the development banks, as it would make the study lengthy and it will also be inappropriate. So, researcher has chosen the sample as Garima Bikash Banks and City Development Bank Limited. It will focus on the review part where the evaluation will be made as per the rapid growth of the bank in recent time and its achievements.

3.3 Data Collection Techniques

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 SEBON. 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.

3.4 Source of Data

Data are the foundations for any statistical investigation. If data cannot be collected properly then the investigation worthless so should be very careful in collecting the data. In due course of this study, secondary has been used.

i Secondary Data

Those data which are collected by one agency, organization or person but used by other agencies, organization or persons are called secondary data or secondary sources. It refers to those which are for already gathered by others. Secondary are often in the form of published data. However, the unpublished data such as the records, reports or statistics gathered or compiled by others prior to our study are also called secondary data.

Collection of secondary data is comparatively cheaper than the collection of primary data but the secondary data may not be in the form that the investigator needs.

In context of this study, the major sources of the secondary data are as follows:

-) Annual reports of the organizations
-) Published journals and newsletters
-) Website of Nepal Rastra Bank etc.

3.5 Data Processing Procedures

After data have been collected, the researcher shifts his center of their analysis. Analysis of data involves a numbers of closely related operations that are performed with the purpose of summarizing the collected data and organizing those in such a manner that they will yield answers to the research to the research answers.

Some writers on research methods affect a clear distinction between analysis of data and the processing of data. For example, Johan Galtung defines the two phases of research operations as under:

-) Processing of data refers to concentrating, recasting and dealing with data such that they become as amenable to analysis as possible as possible.

) For Gaulting analysis may be considered as having a reference to the process of viewing the data in the light of hypothesis research questions.

But other writers like Seltiz, Jahoda do not make such a precise differentiation. For them analysis of data, as a comprehensive process involves processing.

3.6 Data Analysis Tools

3.6.1 Analysis of Ratios

An arithmetical relationship between two figures is ratio. In other words, the relationship between two accounting figures expressed in mathematical terms is known as financial ratios. A ratio is always calculated by dividing one item of the relationship with other. As a tool of financial analysis, ratio can be expressed in terms of % ratio analysis is a very important tool of financial analysis.

Investment to Total Deposit Ratio

This ratio investment to Total Deposits is used to measure to which the banks are successful in mobilizing the total deposits on investment or not. Normally DBs are investing their funds in government securities such as treasury bills, finance companies, national saving bonds, special bonds etc. share to other companies. it is computed as:

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

High ratio is the indicator of high success to mobilize the banking funds as investment and vice-versa.

3.6.1.2 Loan and Advance to Total Deposit Ratio

This ratio measure extend to which bank are successful to mobilize their deposits fund to earn profit by providing fund to outsiders in the form of loan and advance. The higher ratio represents the greater efficiency of the firm in utilizing fund and vice-versa. This ratio is calculated by dividing loans and advance by total deposit. This can be stated as

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

3.6.1.3 Government Securities to Total Deposit Ratio

This ratio measure that how banks mobilize its deposit on government securities. The higher ratio represents the more secure investment of the firm in utilizing fund and vice-versa. This ratio is calculated by dividing investment in government securities by total deposit. This can be stated as

$$\frac{\text{Investment in government securities}}{\text{Total Deposit}}$$

Where, investment in government securities included purchasing of government bonds, treasury bills etc.

3.6.1.4 Return on Total Assets

This ratio measures the effectiveness of the banks in using its overall resources. It measured in terms of relationship between net profit and total assets. The higher the ratio represents the efficient of the bank utilizing its overall resources and vice-versa. This ratio is calculated by dividing net profit after tax by total assets. This can be state as

$$\frac{\text{Net profit after tax}}{\text{Total Assets}}$$

The net profit after tax represents that profit available to common stockholder and total assets includes the total assets of balance sheet items.

3.6.1.5 Investment on Share and Debenture to Total Outside Investment

The ratio between investment on share and debenture and total outside investment reflects the extent on which the banks are successful to mobilize their total outside investment on purchase of shares and debenture of other companies to generate income. The ratio is calculated by dividing total outside investment this can be stated as,

$$\frac{\text{Investment on share and debentures}}{\text{Total outside investment}}$$

Where, TOI = Loan and advances + Bill purchase and discounted + Investment

A higher ratio indicates more portion of investment on share and debentures out of total outside investment and vice-versa.

3.6.1.7 Investment on Government Securities to Total Outside Investment

This ratio is calculated by dividing by investment on government securities by total outside investment this can be stated as

$$\frac{\text{Investment on government securities}}{\text{Total outside investment}}$$

This ratio is very useful to know in which extent the DBs are successful in mobilizing their total outside investment on different types of government securities to maximize the income. Since government securities are highly liquid, to some extent, DBs seem to be interested to utilize their deposits by purchasing government securities.

A high ratio indicates better mobilization of fund as investment on government securities and vice-versa.

3.7 Portfolio Return on Investment

The return of a portfolio depends on

1. The expected rate of return of each security contained in the portfolio and
2. The amount invested in each security.

The portfolio return is the weight average expected return of the individual stock in the portfolio, with weights being the proportion of investment in each security in the portfolio equation. DBs invest their funds in government securities, share and debenture, other investment and loan and advance.

$$P(R_i) = \sum W_i R_i$$

Where,

$P(R_i)$ = Portfolio Return on Investment.

W = Proportion Weight

R = Average Rate of Return

$\phi W | R$ = Summation of Weight and Return

3.7.1 Sharp's Portfolio Performance Measure

Portfolio performance evaluations on the basis of return only will be insufficient; therefore, it is necessary to consider both risk and return. William F. Sharpe devised an

Index of portfolio performance denoted by S_1 which measures the slope of the line starting at risk less rate R and running out to asset is defined as below;

$$S_1 = \frac{\text{Risk Premium}}{\text{Total Risk}}$$

$$= \frac{\bar{r}_1 - R}{\sigma_1}$$

Where,

\bar{r}_1 = Average return of Assets

σ_1 = Standard Deviation of Returns

R = Risk less Rate of Return

S_1 = Sharp's Index of Portfolio Performance

The portfolio in investment is better than investment on other asset or not is determinant by the above model, which is used to test whether the portfolio in investment made by Nepalese DBs is appropriate or not.

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

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 presentation. It is so obvious that the presentation of the data and its analysis help us to draw valid conclusion.

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 all possible data are collected from Nepal Stock Exchange (NEPSE) and Security Board of Nepal (SEBON). Similarly, some of the data are also collected from internet, Journals and other concerned sources.

For the title of the thesis, the investment portfolio of DBs are analyzed with the help of following tools;

Investment operations of DBs

Risk and return analysis of individual securities and portfolio investment

4.1 Investment Operations of DBs

Investment is the most important functions of DBs because investment policy provides several inputs, through which banks can handle their investment operation efficiently and maximize return with, minimize risk which is the success path for the banks. DBs must mobilize it's funds to profitable, secured, and marketable sector, so that it can earn more

profit. DBs must fulfill the credit needs of various sectors of the economy including industry, commercial, social service, securities and agriculture sector.

The investments held by the Bank comprise following three categories:

4.1.1 Investments Held for Trading (HFT)

These are the marketable investments and held with the primary intention of resale over a short period of time. These investments are initially measured at cost and subsequently recognized at market value. Gain or losses arising from trading/revaluation are recognized in profit or loss account (Income Statement)

4.1.2 Investment Available for Sale (AFS)

These are the investments held with the primary intention to recover value of investments through sale rather than continuing to hold. These investments are initially measured at cost and subsequently recognized at market value. Gain or losses arising from sale/revaluation are recognized on Investments adjustment Reserve/Retained Earning. The investments, which are classified under this category however not listed in stock exchange, are carried at cost at the Balance Sheet. Amount equivalent to at least 2% of such investment are earmarked on investment Adjustment Reserve from the Retained Earnings in line with the requirement of NRB.

4.1.3 Investment Held till Maturity (HTM)

This investment are primarily intended to hold until the maturity and are stated at cost and carried at these values in the Balance Sheet until the maturity. Any impairment losses arising in such investment are provisioned and charged in the Profit or Loss Account (Income Statement). Premiums paid while acquiring HTM Investment is recognized as the part of initial cost and subsequently amortized as reversal of interest income on proportionate basis until the maturity. All investments are subject to periodic review as required by NRB Directives.

Nowadays most of the banks depend upon the investment strategies. By which the DBs are playing the vital role in the economic development of the country. This chapter

investment operation of DBs deals with the pinpointing analysis related to the investment of the DBs of Nepal in government securities, share and debenture, other investments and loan and advance prepared in various economic sectors.

4.1.4 Investment on Government Securities

The investment of the DBs on government securities includes the investment on treasury bills, development bonds, national savings bonds, insurance bond etc. in some extent all DBs seem to be interested to use their deposits by purchasing government securities. The Central Banks has also made mandatory provision to invest in government securities for Banks and Financial Institution. As per the new provision introduced through Monetary Policy 2010/11, commercial banks, development banks, financial companies and finance companies not authorized for operating current account deposits are required to maintain 15 percent, 11 percent, 10 percent and 6 percent Statutory Liquidity Ratio (SLR) respectively. In the context of permission granted to class “D” financial institutions for deposit mobilization, those who have already started deposit mobilization from general public are also required to maintain the 4 percent SLR. The investment on government security, cash in vault; deposit held with the NRB including cash reserve ratio of bank and financial institutions will be eligible for counting SLR. However, commercial banks, development banks and financial companies must maintain 5.5 percent cash reserve ratio whereas finance companies not accredited to operate current account must maintain 2 percent cash reserve ratio. Likewise, class “D” financial institutions that mobilize public deposits must also maintain 2 percent cash reserve ratio. The sample banks haven’t invested in government securities. That’s why; presentation of data analysis is not required here.

4.1.5 Investment on Share and Debenture

Development banks are interested to invest its funds on share and debenture of other companies. Development banks invest on share for strategic purpose, most of the DB’s are holding promoter shares of Micro Finance companies for fulfillment of their mandatory requirement to lending in deprived sector. There is a mandatory provision to lend 3 percent of their total lending portfolio in deprived sectors thus DBs fulfill this

mandatory provision indirectly by investing equity in Micro Finance companies. Some other companies whose shares are held by Development banks are Credit Information Centre Ltd, and Nepal Clearing House Ltd. etc. Some of the development Banks are also investing in debenture and bond. The common example is bond issued by Nepal Electricity Authority. The investment structure of development banks on share and debentures are shown in Table 4.1.

Table 4.1
Structure of Investment on Share and Debentures Held by DBs

(Rs. In '000')

| FY | CDBL | GBBL |
|----------------|---------------|-------------|
| 2064/65 | 0 | 0 |
| 2065/66 | 0 | 0 |
| 2066/67 | 0 | 0 |
| 2067/68 | 600 | 0 |
| 2068/69 | 4802 | 0 |
| Total | 5402 | 0 |
| Average | 1080.4 | 0 |

Source: Annual Reports of DBs from FY 2064/65 to 2068/69

The table 4.1 shows that GBBL has not invested on share and debenture but CDBL has invested on share and debenture since last 2 years but that is in very few amounts with mean 1080.4.

Table: 4.2
Yearly Return on Share and Debenture

(In %)

| FY | CDBL | GBBL |
|------------------------|-------------|-------------|
| 2064/65 | 0 | 0 |
| 2065/66 | 0 | 0 |
| 2066/67 | 0 | 0 |
| 2067/68 | 0 | 0 |
| 2068/69 | 1.98 | 0 |
| Expected Return | 0.4 | 0 |
| Risk | 3.14 | 0 |

Source:- Appendix 2

Bank of the CDBL and GBBL Yearly Return on Share and Debenture presented the following figure. 4.1.

Figure: 4.1
Trend of Yearly Return on Share and Debenture

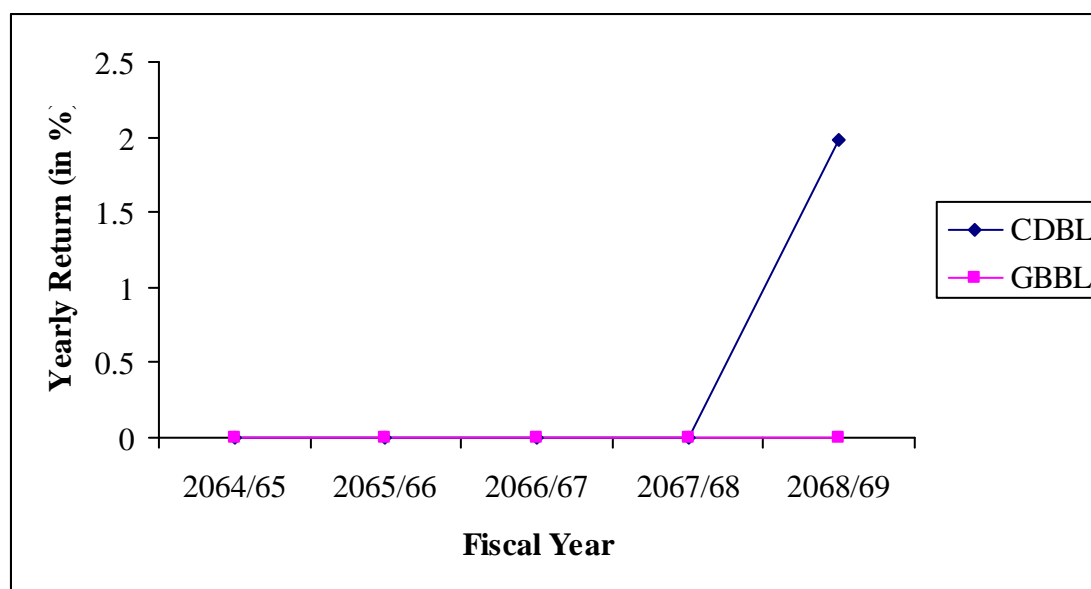


Table 4.2 and Figure 4.1 shows that the return on share and debenture of sample banks. The CDBL has invested since last 2 years. The return on share and debenture of CDBL is 1.98 percent in years 2068/69. But GBBL has not invested on share and debenture.

4.1.6 Investment other than Government Securities and Corporate Shares and Bond

Development banks also invest their fund to other sectors than government securities and corporate share and bond. The other investment sectors include investing on certificate of Deposit, Mutual Fund, Local licensed institutions and other Investment. The investment structure of development banks on other investments is shown in table.

Table: 4.3
Structure of Investment other than Government Securities and
Corporate Shares and Bond

(Rs. In '000')

| FY | CDBL | GBBL |
|----------------|--------------|---------------|
| 2064/65 | - | - |
| 2065/66 | - | - |
| 2066/67 | 10067 | 9674 |
| 2067/68 | 10033 | - |
| 2068/69 | 59580 | - |
| Total | 79680 | 9674 |
| Average | 15936 | 1934.8 |

Source: Annual Reports of DBs from FY 2064/65 to 2068/69.

Table: 4.4
Yearly Return on Other Investment

| FY | CDBL % | GBBL % |
|------------------------|---------------|---------------|
| 2064/65 | 0 | 0 |
| 2065/66 | 0 | 0 |
| 2066/67 | 3.86 | 4.13 |
| 2067/68 | 8.91 | 0 |
| 2068/69 | 3.46 | 0 |
| Expected Return | 3.25 | 0.83 |
| Risk | 3.66 | 1.85 |

Source: Appendix-2.

Bank of the CDBL and GBBL Yearly Return on Other Investment presented the following figure. 4.2.

Figure: 4.2
Trend of Yearly Return on other Investment

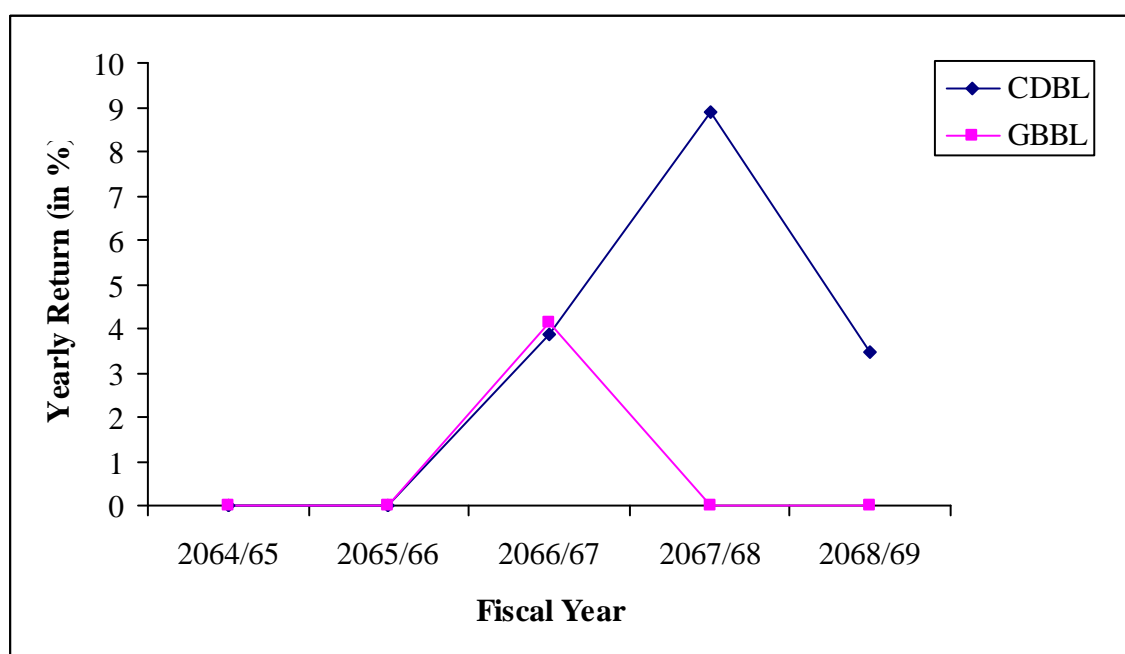


Table 4.4 and Figure 4.2 shows that the return on other investments of sample banks. The returns on other investments of CDBL and GBBL are fluctuating trend during the study period. The highest returns of CDBL and GBBL are 8.91 percent and 4.13 percent in the fiscal years 2067/78 and 2066/67 respectively. The GBBL has invested only fiscal year 2066/67. The CDBL has invested since last 3 years.

4.1.7 Investment on Loan and Advances

Development bank is financial institution that collects scattered savings of community and invests them into most desirable and high return sectors of economy. Pace of economic development is directly related to the quality and quantity of the credit. DBs are improving access to financial services to majority of population of Nepal and committed to help bring who are not in realm of financial services into mainstream economy. This is vital part of promoting economic growth and will help to bring people out of property.

Development banks invest their funds in various sectors like industry, agriculture, commercial sector etc. development banks should invest its collected funds as loan and advances. Loan and advances, Overdraft and bills purchased include direct finance provided to customers such as bank overdrafts, credit card, personal loans, term loans, hire purchase finance and loans to deprive sectors. All loans are subject to regular review and are graded according to the level of credit risk and classified as per Nepal Rastra Bank's directives. Development banks have diversified the loan portfolio with a mix of different sectors from personnel lending to small and medium enterprise lending. Investment structure of loan and advances of DBs are tabulated in Table

Table: 4.5
Structure of Investment on Loan and Advances Held by DBs

(Rs. In '000')

| FY | CDBL | GBBL |
|----------------|------------------|-----------------|
| 2064/65 | 303299 | 65396 |
| 2065/66 | 813224 | 544617 |
| 2066/67 | 1136574 | 910726 |
| 2067/68 | 1415610 | 1171587 |
| 2068/69 | 1819299 | 1673097 |
| Total | 5488006 | 4365423 |
| Average | 1097601.2 | 873084.6 |

Source: Annual Reports of DBs from FY 2064/65 to 2068/69

The above table reveals that the CDBL and GBBL has been consistently increase it's Loan and Advances. The investment in loan and advance is increasing trend each year than previous year of both banks. The investment of CDB is higher than the investment of GBB each year.

Table: 4.6
Return on Loans and Advances

| FY | CDBL (%) | GBBL (%) |
|------------------------|-----------------|-----------------|
| 2064/65 | 0.00 | -4.11 |
| 2065/66 | 1.33 | 1.07 |
| 2066/67 | 3.38 | 2.65 |
| 2067/68 | 1.70 | 3.52 |
| 2068/69 | 2.88 | 3.01 |
| Total | 9.29 | 6.14 |
| Expected Return | 1.86 | 1.23 |
| Risk | 1.33 | 3.12 |

Source: Appendix-2.

Bank of the CDBL and GBBL return on loans and advances presented the following figure. 4.3.

Figure: 4.3
Trend of Yearly Return on Loans and Advances

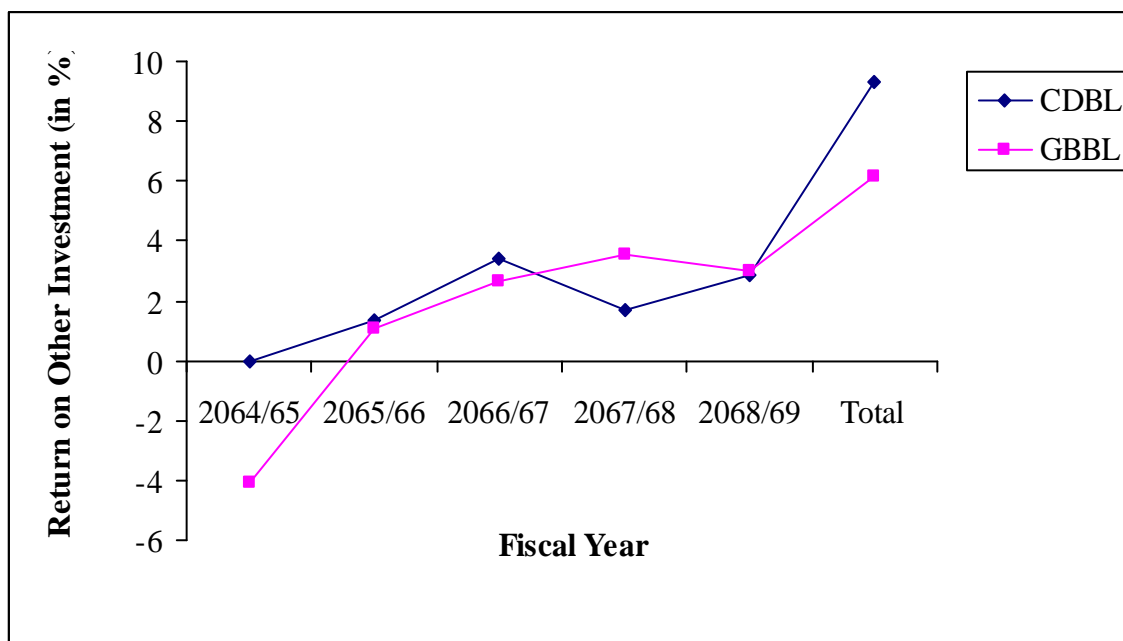


Table 4.6 and Figure 4.3 shows that the return on loans and advances of sample banks. The return on loans and advances of CDBL and GBBL is fluctuating trend during the study period. The highest return of CDBL and GBBL are 3.38% and 3.52% in the fiscal years 2066/67 and 2067/68 and that of lowest are 0.00% and -4.11% in the fiscal year 2064/65 respectively.

4.2 Investment Portfolio Analysis

Development banks cannot utilize whole of its fund raised through deposit and borrowings into loans and advance. In order to fulfill the gap between borrowings and lending banks rather goes for investment on such as government securities, share and debenture, NRB bond, other investment etc.

The portfolio of making investment by two development banks i.e. CDBL, GBBL has been analyzed in table

Table: 4.7
Investment Portfolio of CDBL

(Rs. In '000')

| Year | 2064/65 | 2065/66 | 2066/67 | 2067/68 | 2068/69 |
|-----------------------|---------------|---------------|----------------|----------------|----------------|
| Government securities | - | - | - | - | - |
| Share & Debenture | - | - | 600 | 4802 | 5402 |
| Other Investment | - | - | 10067 | 10033 | 59580 |
| Loan & Advance | 303299 | 813224 | 1136574 | 1415610 | 1819299 |
| Total | 303299 | 813224 | 1147241 | 1430445 | 1884281 |

Source: Appendix-2

Figure: 4.4

Investment Portfolio of CDBL

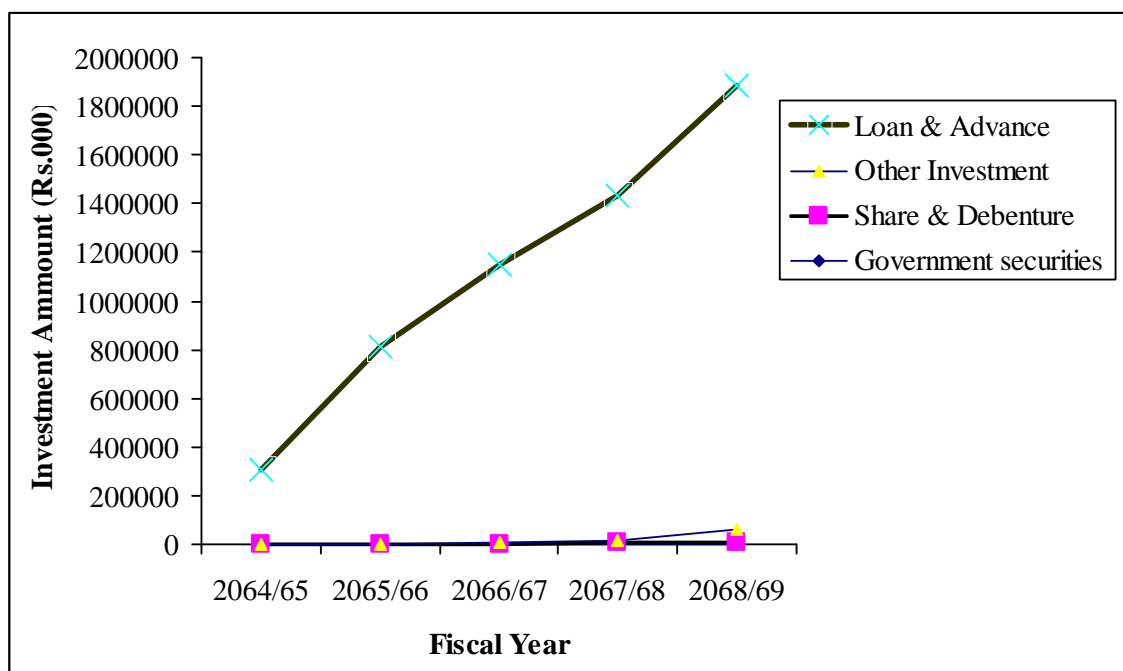


Table 4.7 and figure 4.4 shows the investment portfolio of City Development Bank, the total investment is in increasing trend each year during the study period. The items of total investments are government securities, share and debenture, other investment and loan and advance. The bank has more invested in loan and advance, other investment and share and debenture, but the bank has not invested in government securities.

Table: 4.8**Percentage of Each Item on Total Investment of CDBL Pattern**

| Year | 2064/65 | 2065/66 | 2066/67 | 2067/68 | 2068/69 |
|-----------------------|----------------|----------------|----------------|----------------|----------------|
| Government securities | 0 | 0 | 0 | 0 | 0 |
| Share & Debenture | 0 | 0 | 0.0004 | 0.003 | 0.003 |
| Other Investment | 0 | 0 | 0.0088 | 0.007 | 0.032 |
| Loan & Advance | 100 | 100 | 99.9908 | 99.99 | 99.965 |
| Total | 100 | 100 | 100 | 100 | 100 |

Source: Appendix-2

Table 4.8 shows the proportion of each item on total investment. The highest proportion in total investment is loan and advance and the lowest or not invested proportion of government securities.

Table: 4.9**Investment Pattern of GBBL**

(Rs. In '000')

| Year | 2064/65 | 2065/66 | 2066/67 | 2067/68 | 2068/69 |
|-----------------------|----------------|----------------|----------------|----------------|----------------|
| Government securities | - | - | - | - | - |
| Share & Debenture | - | - | - | - | - |
| Other Investment | - | - | 9673 | - | - |
| Loan & Advance | 65396 | 544617 | 910726 | 1171585 | 1673097 |
| Total | 65396 | 544617 | 920399 | 1171585 | 1673097 |

Source: Appendix-2.

Figure: 4.5
Investment Pattern of GBBL

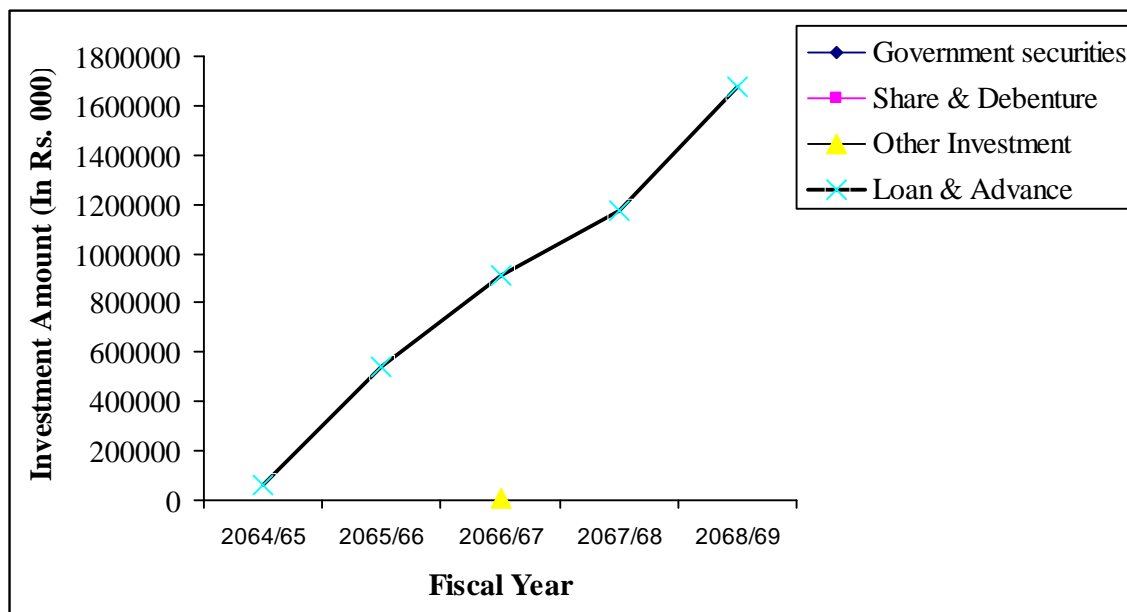


Table 4.9 and figure 4.5 shows the investment portfolio of GBBL. The total investment is in increasing trend each year during the study period. The items of total investment are government securities, share and debenture, other investment and loan and advance. The bank has invested in only loan and advance and other investment.

Table: 4.10

Percentage of Each Item on Total Investment of GBBL

| Year | 2064/65 | 2065/66 | 2066/67 | 2067/68 | 2068/69 |
|-----------------------|------------|------------|------------|------------|------------|
| Government securities | 0 | 0 | 0 | 0 | 0 |
| Share & Debenture | 0 | 0 | 0 | 0 | 0 |
| Other Investment | 0 | 0 | 0.01 | 0 | 0 |
| Loan & Advance | 100 | 100 | 99.99 | 100 | 100 |
| Total | 100 | 100 | 100 | 100 | 100 |

Source: Appendix-2.

Table 4.10 shows the proportion of each item on total investment. The highest proportion in total investment is loan and advance and the lowest or not invested in government securities.

An arithmetical relationship between two figures is ratio. In other words, the relationship between two accounting figures expressed in mathematical terms is known as financial ratios. A ratio is always calculated by dividing one item of the relationship with other. As a tool of financial analysis, ratio can be expressed in terms of percentages and times. 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. It establishes the significant relationship between the times of financial statements to provide a meaningful understanding of the performance and financial position of a firm. Ratio analysis serves as a stepping stone for an inter-firm comparison to take remedial measures. In this chapter only important ratios are analyzed.

4.3 Investment to Total Deposit Ratio

This ratio Investment to Total Deposits is used to measure to which the banks are successful in mobilizing the total deposits on investment or not. DBs may mobilize its bank deposit by investing its fund in different securities issued by government and other financial or non financial companies. Normally DBs are investing their funds in govt. securities such as treasury bills, development bonds, national saving bonds, special bonds etc. shares to other companies. It is computed as;

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

High ratio is the indicator of high success to mobilize the banking funds as investment and vice-versa. The ratio of investment to total deposit of CDBL, GBBL are shown in table.

Table: 4.11
Investment to Total Deposits Ratio (%)

(Rs '000')

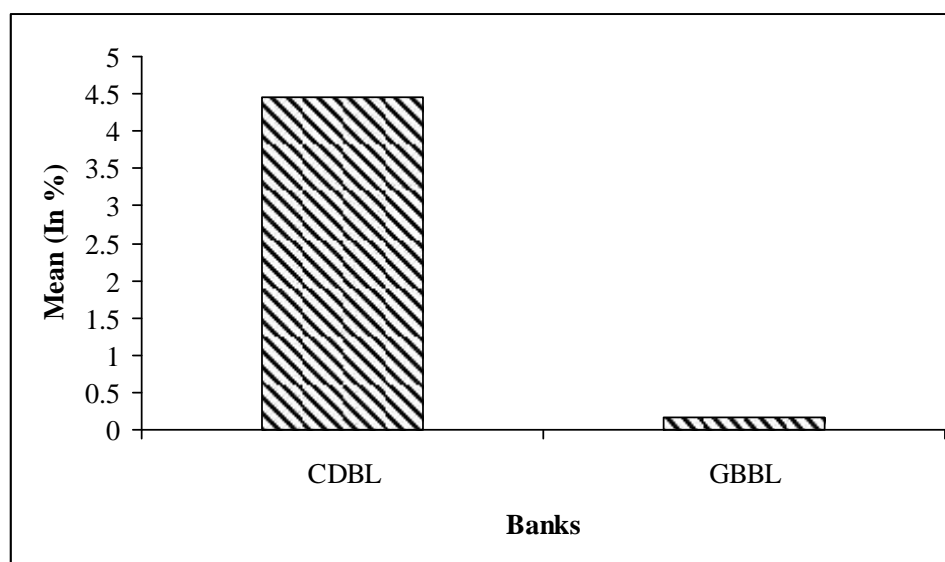
| FY | Total Investment (A) | | Total Deposit (B) | | A/B | |
|---------|----------------------|------|-------------------|---------|----------|----------|
| | CDBL | GBBL | CDBL | GBBL | CDBL (%) | GBBL (%) |
| 2064/65 | 5000 | - | 393549 | 108565 | 1.27 | 0 |
| 2065/66 | 80000 | - | 1025287 | 688839 | 7.80 | 0 |
| 2066/67 | 120067 | 9673 | 1426128 | 1221044 | 8.42 | 0.79 |
| 2067/68 | 35263 | - | 1709808 | 1437980 | 2.06 | 0 |
| 2068/79 | 64382 | - | 2340154 | 2150952 | 2.71 | 0 |
| Mean | | | | | 4.45 | 0.16 |
| S.D. | | | | | 3.39 | 0.69 |
| C.V. | | | | | 0.76 | 4.31 |

Source: Appendix-1 (d, e)

Bank of the GBBL and CDBL total investment to total deposits ratio presented the following figure. 4.6.

Figure: 4.6

Total Investment to Total Deposits Ratio



From the point of view of average ratio it can be said that the CDBL has capacity to mobilize its deposit on investment is better than other because it's mean ratios are higher than average ratio. On the other hand GBBL mobilized their deposit on investment is not so good as compare to CDBL. Unlikely, the CV of GBBL is the higher i.e. 4.31 indicates more inconsistent among other. CDBL have CV i.e. 0.76 indicates inconsistent mobilization of its deposits in investment portfolio. However CDBL moderate in utilizing its resources on investment to some extent.

4.3.1 Loan and Advance to Total Deposit Ratio

The loan and advance is also one of major sectors of an investment. This ratio measures extend to which bank are successful to mobilize their deposits fund to earn profit by providing fund to outsiders in the form of loan and advances. The higher ratio represents the greater efficiency of the firm in utilizing fund and vice-versa. This ratio calculated by dividing loans and advance by total deposit. This can be stated as:

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

Where, loan and advances included loans to government enterprises, private sectors, foreign bills purchase and discount. Total deposit included current deposit, fixed deposit, saving deposit, money at call deposit and other deposit.

Table: 4.12
Loan and Advance to Total Deposits Ratio (%)

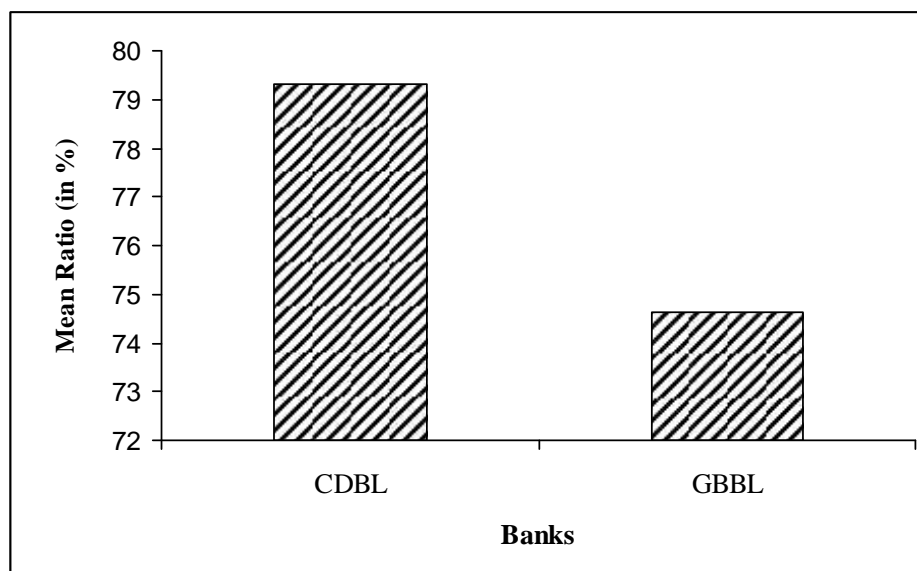
(Rs “000”)

| FY | Loan and advances (A) | | Total Deposit (B) | | A/B | |
|---------|-----------------------|---------|-------------------|---------|----------|----------|
| | CDBL | GBBL | CDBL | GBBL | CDBL (%) | GBBL (%) |
| 2064/65 | 303299 | 65396 | 393549 | 108565 | 77.07 | 60.24 |
| 2065/66 | 813224 | 544617 | 1025287 | 688839 | 79.32 | 79.06 |
| 2066/67 | 1136574 | 910726 | 1426128 | 1221044 | 79.70 | 74.59 |
| 2067/68 | 1415610 | 1171587 | 1709808 | 1437980 | 82.79 | 81.47 |
| 2068/79 | 1819299 | 1673097 | 2340154 | 2150952 | 77.74 | 77.78 |
| Mean | | | | | 79.32 | 74.63 |
| S.D. | | | | | 2.22 | 8.47 |
| C.V. | | | | | 0.03 | 0.11 |

Source: Appendix-1(c, e).

Bank of the GBBL and CDBL Loan and Advance to Total Deposits Ratio presented the following figure. 4.7.

Figure: 4.7
Loan and Advance to Total Deposits Ratio



In table 4.12 and figure 4.7 the mean of loans and advances to total deposit ratio of CDBL is highest i.e. 79.32% and GBBL is lowest ratio i.e. 74.63% between two development banks. The CV ratio of CDBL is lowest i.e. 0.03 which indicates that the investment as CDBL is the most uniform. GBBL has the highest CV ratio i.e. 0.11, it indicates that the investment is more fluctuated.

4.3.2 Government Securities to Total Deposit Ratio

The government securities are also one of major sectors of an investment. This ratio measures that how banks has mobilize its deposit on government securities. Though investment in government securities yields less return but it is considered as more secure investment. The higher ratio represents the more secure investment of the firm in utilizing fund and vice-versa. NRB has made mandatory provision to invest minimum of 8 percent of their total deposit in Government securities. This ratio is calculated by dividing investment in government securities by total deposit. This can be stated as

$$\frac{\text{Investment in government securities}}{\text{Total Deposit}}$$

Where investment in government securities included purchasing of government bonds, treasury bills etc. The sample bank has not invests in government securities. So we can't present here.

4.3.3 Return on Total Assets

This ratio measures the effectiveness of the banks in using its overall resources. It measured in terms of relationship between net profit and total assets. The higher the ratio represents the efficient of the bank utilizing its overall resources and vice-versa. The ratio is calculated by dividing net profit after tax by total assets. This can be stated as

$$\frac{\text{Net profit after tax}}{\text{Total assets}}$$

The net profit after tax represents the profit available to common stockholder and total assets includes the total assets of balance sheet item.

The table shows the ratios of net profit after tax to total assets ratio of two DBs.

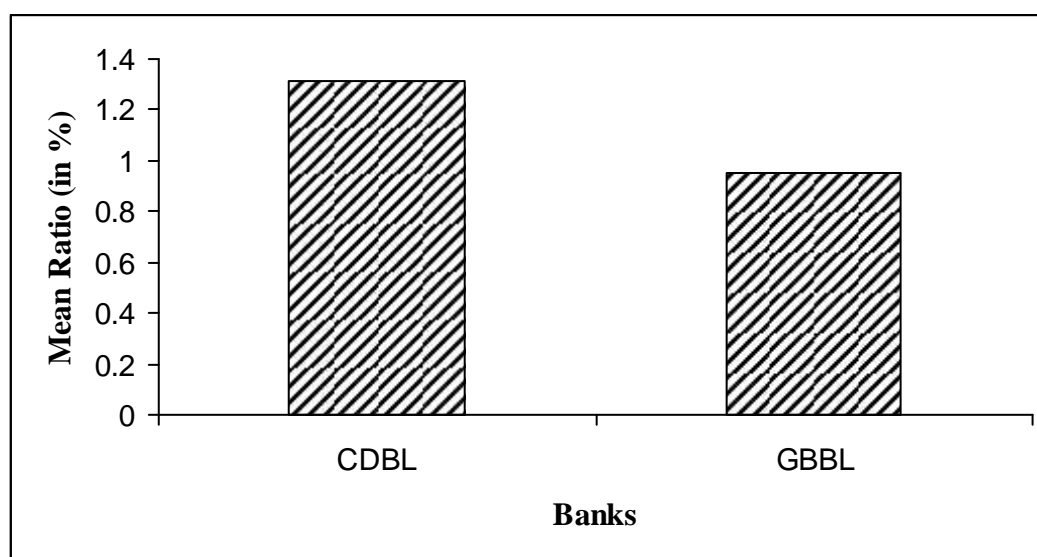
Table: 4.13
Return on Total Assets (%)

| FY | Net Profit After Tax (A) | | Total Assets (B) | | A/B | A/B |
|---------|-----------------------------|--------|------------------|---------|-------------|-------------|
| | CDBL | GBBL | CDBL | GBBL | CDBL (%) | GBBL (%) |
| 2064/65 | 1422 | (2690) | 524735 | 133228 | 0.27 | (2.02) |
| 2065/66 | 10817 | 5796 | 1185936 | 812091 | 0.91 | 0.71 |
| 2066/67 | 38433 | 24114 | 1698602 | 1416913 | 2.26 | 1.70 |
| 2067/68 | 42091 | 41283 | 2036707 | 1757774 | 1.18 | 2.35 |
| 2068/69 | 52364 | 50296 | 2695984 | 2489982 | 1.94 | 2.02 |
| Mean | | | | | 1.31 | 0.95 |
| S.D. | | | | | 0.8 | 1.77 |
| C.V. | | | | | 0.61 | 1.86 |

Source: Appendix-1(f, g)

Bank of the GBBL and CDBL Return on Total Assets presented the following figure. 4.8.

Figure: 4.8
Return on Total Assets Ratio



The comparative table 4.13 And figure 4.8 shows that Development banks has mixed trend on their return to total assets ratio. CDBL has the higher mean return on total assets i.e. 1.31 percent. The overall average mean from fiscal years 2064/65 to 2068/69 of DBs is 1.31 percent. However CDBL also has mean return above average mean of DBs i.e. 1.31 percent.

4.3.4 Investment on Share and Debenture to Total outside Investment

The ratio between investment on share and debenture and total outside investment reflects the extent on which the banks are successful to mobilize their total outside investment on purchase of shares and debenture of other companies to generate income.

The ratio is calculated by dividing total outside investment this can be stated as;

$$\frac{\text{Investment on share and debentures}}{\text{Total outside investment}}$$

Where, TOI = loan and advances + Bill purchase and discount + Investment

A high ratio indicates more portion of investment on share and debenture out of total outside investment and vice-versa. The table shows the ratios of investment on share and debentures to total outside investment ratio.

Table: 4.14

Investment on Share and Debenture to Total Outsides Investment Ratio (%)

(Rs “000”)

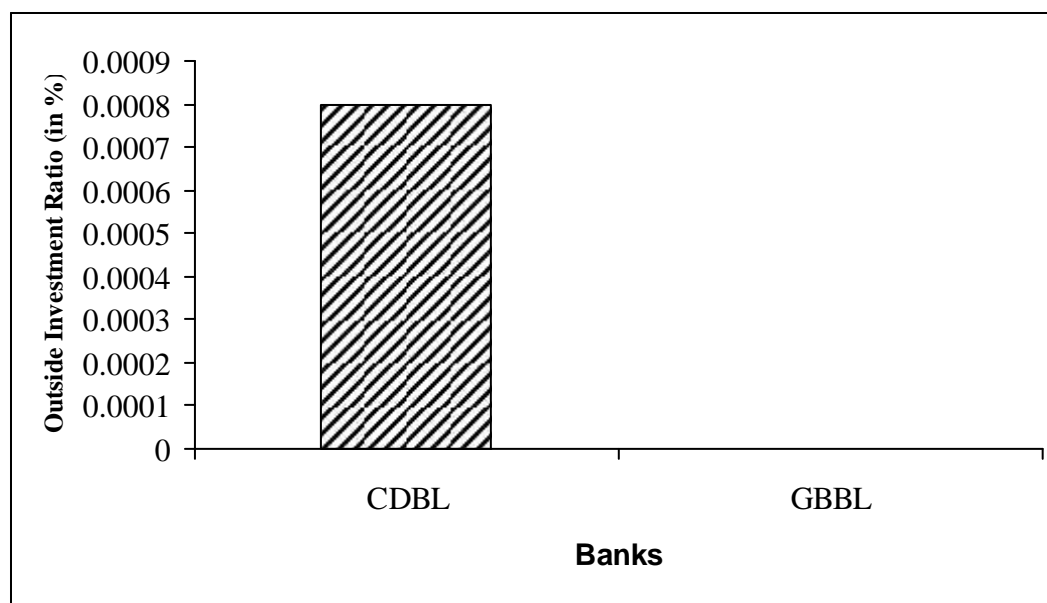
| | Investment on Share & Debenture (A) | | Total Outside Investment (B) | | A/B | A/B |
|---------|-------------------------------------|------|------------------------------|---------|----------|----------|
| FY | CDBL | GBBL | CDBL | GBBL | CDBL (%) | GBBL (%) |
| 2064/65 | 0 | 0 | 303229 | 65396 | 0 | 0 |
| 2065/66 | 0 | 0 | 813224 | 544617 | 0 | 0 |
| 2066/67 | 0 | 0 | 1147241 | 920399 | 0 | 0 |
| 2067/68 | 600 | 0 | 1430445 | 1171585 | 0.001 | 0 |
| 2068/79 | 4802 | 0 | 1884281 | 1673097 | 0.003 | 0 |
| Mean | | | | | 0.0008 | 0 |
| S.D. | | | | | 0.000002 | 0 |
| C.V. | | | | | 0.0013 | 0 |

Source: Appendix-1(a, h).

Bank of the GBBL and CDBL Investment on Share and Debenture to Total Outsides Investment Ratio presented the following figure. 4.8.

Figure: 4.9

Investment on Share and Debenture to Total Outside Investment



The table 4.14 and figure 4.9 shows that CDBL has fluctuating trend on their investment on share and debentures to total outside investment. In share and debenture very low portion of the total outside investment has invested by CDBL. But GBBL has not invested in share and debenture.

It is concluded that the DBs are not successful to mobilize their resources in the field of share and debenture of other companies. CDBL invests last 2 years certain amount in share and debenture.

4.3.5 Investment on Government Securities to Total Outside Investment

This ratio is very useful to known in which extent the DBs are successful in mobilizing their total outside investment on different types of government securities to maximize the income. Since government securities are highly liquid, to some extent, DBs seem to be interested to utilize their deposits by purchasing government securities.

The ratio is calculated by dividing investment on government securities by total outside investment this can be stated as

$$\frac{\text{Investment on government securities}}{\text{Total outside investment}}$$

A high ratio indicates better mobilization of fund as investment on government securities and vice-versa.

The table shows the ratios of investment on government securities to total outside investment ratio.

Table: 4.15

Investment on Government Securities to Total Outside Investment Ratio (%)

(Rs “000”)

| FY | Investment on Government Securities (A) | | Total Outside Investment (B) | | A/B | A/B |
|---------|-----------------------------------------|------|------------------------------|---------|----------|----------|
| | CDBL | GBBL | CDBL | GBBL | CDBL (%) | GBBL (%) |
| 2064/65 | 0 | 0 | 303229 | 65396 | 0 | 0 |
| 2065/66 | 0 | 0 | 813224 | 544617 | 0 | 0 |
| 2066/67 | 0 | 0 | 1147241 | 920399 | 0 | 0 |
| 2067/68 | 0 | 0 | 1430445 | 1171585 | 0 | 0 |
| 2068/79 | 0 | 0 | 1884281 | 1673097 | 0 | 0 |
| Mean | | | | | 0 | 0 |
| S.D. | | | | | 0 | 0 |
| C.V. | | | | | 0 | 0 |

The sample bank has not invested in government securities.

4.4 Investment Portfolio Risk and Return Analysis of DBs

Risk and Return are two crucial phenomena in world of investment. There is always linear relationship between risk and return. Nobody will take to invest in risky assets unless he is assured of adequate compensation for the assumption of risk. Generally in a market, higher risk will command higher premium.

The main purpose of risk and return analysis is to appraise investment performance and to explore combinations of investments that maximize returns, minimize risk or achieve both. The risk minimization, in particular is not possible to minimize risk is the diversification of investments. Therefore, the analysis of risk of an investment in isolation is not very meaningful for understanding the risk minimization process. Risk plays a central role in the analysis of investments. DBs or investors generally do not invest their money in only one risky asset. Instead they hold a portfolio of many assets with the hope of diversifying the investment risk. In the context of portfolio, the contribution of each asset to the portfolio risk is the portion of relevant risk of the asset.

The portfolio of assets usually offers the advantage of reducing risk through diversification. The standard deviation of the returns on the portfolio may be less than the sum of the standard deviation of the returns from the individual assets. The portfolio return is the straight weighted average of the variance of return of individual assets. The portfolio risk is affected by the variances of return as well as the covariance between the returns of individual assets included in the portfolio and their respective weights. In reality, one will find an asset held in the portfolio to be relatively less risky than when it is held in isolation. This is because when an asset is held in a portfolio, the unsystematic risk is very of at least partly eliminated. Therefore, the portfolio standard deviation is not just the sum of variances of assets held in the portfolio.

Table: 16
Risk and Return of Sample Banks

| Components | Expected Returns | | Risk | |
|-----------------------|------------------|------|------|------|
| | CDBL | GBBL | CDBL | GBBL |
| Government Securities | 0 | 0 | 0 | 0 |
| Share & Debenture | 0.4 | 0 | 3.14 | 0 |
| Other Investment | 3.25 | 0.83 | 3.66 | 1.85 |
| Loan & Advances | 1.86 | 1.32 | 1.33 | 3.21 |

Source: Appendix-2

4.5 Test of Investment Portfolio Performance

The portfolio of assets usually offers advantage of reducing risk through diversification. The portfolio risk is depending upon weight of funds invested in various assets, risk of individual assets, the tendency of two variables to move together etc. In this topic, the efforts have been made to explore in which extent the DBs are able to utilize portfolio concept in their investment. To test the portfolio performance, this study uses Sharpe's portfolio performance models, which have been given below;

Sharpe's Portfolio Performance Measure

Portfolio performance evaluations on the basis of return only will be insufficient; therefore, it is necessary to consider both risk and return. William F. Sharpe devised an index of portfolio performance denoted by S_1 which measures the slope of the line starting at risk less rate R and running out to assets is defined as below;

$$S_1 = \frac{\text{Risk Premium}}{\text{Total Risk}}$$

$$= \frac{\bar{r}_1 - R}{\sigma_1}$$

Where,

$\bar{r}_1 =$ Average return of Assets

$\dagger_1 =$ Standard Deviation of Returns

$R =$ Risk less Rate of Return

$S_1 =$ Sharp's Index of Portfolio Performance

The portfolio on investment is better than investment on other asset or not is determinant by the above model, which is used to test whether the portfolio in investment made by Nepalese DBs in appropriate or not.

Performance of government securities, share and debentures, other investments, loan and advances and portfolio is calculated in table

Table: 17
Performance of Various Investment Assets of CDBL and GBBL

| S. No. | Investment Assets | Average Annual Return (%) (r_1) | Standard Deviation of Annual Return (Ξ_1) | Sharpe's Measure of Performance $S_1 = \frac{\bar{r}_1 - R}{\dagger_1}$ $R = 0$ |
|--------|-----------------------|-------------------------------------|-------------------------------------------------|---------------------------------------------------------------------------------------|
| 1 | Government Securities | 0 | 0 | 0 |
| 2 | Loan and Advance | 1.59 | 2.27 | 0.7 |
| 3 | Share and debenture | 0.2 | 1.57 | 0.13 |
| 4 | Other investment | 2.04 | 2.76 | 0.73 |

Source: Appendix-3.

Risk less rate of interest (R) = 0 because the sample banks has not invested on government securities. From the above calculation, $S_o > S_l > S_s > S_g$, which indicates that the investment on other investment on other investment is a better performer than loan and advance, Loan and advance is better than share and debenture, Share and debenture better than government securities. The lower Sharpe's portfolio performance than that of investment other investment indicates that the development banks are not fully successful to utilize their resources on various assets by using portfolio concept to reduce risk and increasing return on assets. This is mainly to lack of well scientific approach towards diversification of funds among different assets.

4.6 Major Finding

Based on the analysis of the various data remarkable findings are drawn up. The major findings are as follows.

-) In investment portfolio on government securities have not invested by sample banks. GBBL has not invested on share and debenture but CDBL has invested certain amount from last 2 years.
-) The total investment to total deposit ratio of selected DBs shows that CDBL is most successful in utilizing its resources on investment than GBBL. The mean ratio and CV also reveal that CDBL (4.45% and 0.76%) is moderate in utilizing its resources on investment while GBBL (0.16% and 4.31%) is not so successful in better utilizing their total deposits on investment of various assets.
-) The Loan and Advance to total deposit ratio of selected DBs shows that CDBL is the most successful in utilizing its resources on loan and advance than GBBL. But the mean ratio and CV reveals that CDBL (79.32% and 0.03%) and GBBL (74.63% and 0.11%) are moderate in utilizing its resources on loan and advance.
-) The Government Securities to total deposited selected DBs is not so successful in better utilizing their total deposited on government securities.

- J The return on total assets ratio of selected DBs shows that CDBL (Mean 1.31% and C.V. 0.61%) utilized its overall resources efficiently than GBBL (Mean 0.95% and C.V. 1.86%).
- J In share and debenture very low portion of the total outside investment has invested by CDBL (Mean 0.008% and CV 0.0013%). But GBBL has not invested in share and debenture.
- J CDBL is the best bank among while compared to GBBL on the basis of mobilization of its deposits in the field of investment. CDBL is more focusing on loan and advances. CDBL is also successful to exploitation of resources in the field of share and debenture, other investment and loan and advance.
- J On the basis of investment, the DBs gives first priority to invest their resources on loan and advances, then other investment and lastly to share and debentures. Therefore DBs invest highest part of the resources to loan and advances.
- J On the basis of effective and efficient utilization of total assets, CDBL is having highest return on total assets ratio and least CV. Return on total assets of CDBL is below industry average thus more efforts are needed to proper utilization of existing total assets of those Banks.
- J By using Sharpe's portfolio performance test, it indicates that investment on other investment (0.73%) is a superior performer than loan and advance (0.7%), Loan and advance is better than share and debenture (0.13%), Share and debenture better than government securities (0%).
- J The portfolio has lower performance than other investment and loan and advance, which shows that the DBs are not properly using portfolio concept to reduce risk and increase return from their investment.
- J It shows that the DBs are not using proper diversification of funds among various assets.

CHAPTER-V

SUMMARY, CONCLUSION, RECOMMENDATION

This chapter is an accomplished specific and indicative enclosure 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 present strengths, weaknesses, opportunities and threats of the DBs. And suggestions are obtainable in recommendation, which is arranged on the basis of finding and conclusions.

5.1 Summary

Any country depends upon the economic development for developing the country. To strengthen, the economy of any country both the private and public sector should play a great role, which contributing to our nation. The process of the economic development depends upon various factors, however economists are now convinced the capital formation and its proper utilization plays a paramount role for rapid economic development.

In any economy, the importance of financial sector in general and banking sector in particular cannot be undermined. Banking sector definitely plays a pivotal role in the overall development of an economy. All the economic activities of each and every country are greatly influenced by the development banking business.

Banking sector mirrors the larger economy. Its linkage to all sectors makes it a proxy for what is happening in the economy as a whole. Banks are an essential part of the business activities which are established to safe guard people's money and there by using the money in making loans and investments. DBs collect scattered financial resources from the masses and invests them among those engaged in commercial and economical

activities of the country. DBs are those financial institutions deal in accepting deposits to persons and administrative assistance to industries, trade and business enterprise. DBs 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. DBs play vital role for development of a developing country. Banks provides internal resources for developing country's economy.

The concept of banking system was introduced in Nepal with the establishment of Nepal Bank Ltd. in 1937. The financial scenario has changed with introduction of joint venture banks in 1984. The domestic banks of Nepal, Nepal Bank Ltd. and Rastriya Banijya Bank could no longer hold monopoly. The number of Commercial bank, Development bank and financial companies has been increasing so is the investment volume and opportunity in various sectors that extends to agriculture, industry, commercial and social sectors.

As financial intermediary, the development bank also play an important role as implementing body for central bank. The monetary structure involves analysis of the behavior of banking system. The variation in the size and composition of bank assets play important role in transmitting the influence of monetary policy to the economy. The composition of bank portfolio, such as, reserve, investment and lending lead the money supply to vary.

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 DBs include the investment on government securities, like treasury bills, development bonds, national saving bonds, share on government

owned companies and non government companies and investment on debenture, similarly the DBs use their funds as loan and advance. Most of the banks are interested to invest their funds in more liquid and less risky sector. Nepalese DBs don't have their own clear vision towards investment portfolio. The investment planning of the DBs 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, and sluggish economic growth etc. are the most important problem for banking sectors in investment.

The researcher has tried to explore investment of DBs in various assets, portfolio management and risk return, risk and return on assets, relationship between various factors of DBs with various investment assets, performance of DBs towards investment for the study of investment portfolio analysis of Nepalese DBs. For the fulfillments of the objectives of the study many analysis has been done such as operation of DBs investment and loan and advance portfolio, risk and return analysis, portfolio risk and return on investment, ratio analysis, trend analysis, portfolio performance test and hypothesis test. For the analysis mainly secondary data are used, effort have been made to present current data for mid 2064/65 which is collected from concerned banks, NRB, NEPSE, SEBON and different library and different information also provided from there. Financial and statistical tools are used to reckoning and secondary data were complied, processed, tabulated and graphed for better presentation from which various finding and conclusion have been drawn which are presented as below.

5.2 Conclusion

Development bank has been operating efficiently and have 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 DBs are fascinated to invest their

sources in more liquid and less risky sectors. DBs 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 concluded that the loan and advances is much better than investment on share and debentures, government securities and other investment. It is due to the fixed interest income on loan and advances. So that the DBs 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 DBs are invested very low portion of resources into share and debenture of other companies which terminate that the DBs are investment on less risky sectors by which DBs 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 City and Garima limited moderate performance in utilization of overall resources.

While comparing the investment portfolio weight set up by the DBs with directives given by the central banks, the banks have not followed the directives. Directives direct not to invest more than 50 percent in one sector but some development banks have invested more than 90 percent of their funds into one sector. From investment portfolio analysis, it is accomplished that the DBs are given first priority to invest their funds in the sector of loan and advance due to high level of return from that with underestimating the risk. Those banks are given second priority to other investment like as bills purchase and discount and last priority to the share and debentures and government securities. DBs flow their funds from higher level of return to lower level of return.

The interest rates on saving deposit are less or more constant in five years before liberalization but it started to decline after liberalization. In the same way the fixed deposit rates also started to decline after liberalization. Thus, the deposit is increasing at decreasing rate. The lower rates of interest rates decrease deposit. Deposit rate is the most important determinate of the deposit collection.

The lending rates on purpose wise loan i.e. industrial sector, agricultural sector increased in average after liberalization but decreased in commercial sector. Increasing in lending rates resulted in the decrease in credit flow which consequently decreased the profit of development banks.

Credit/loan and advances also influenced by the lending rates. Increment in lending rates decreases the growth percent of credit flow. In this analysis except agriculture and general use and purpose sector the other sector growth rate is found to be increasing after liberalization instead of increasing lending rates. So it can be say that this increasing is not only due to changing lending rates but also other factors i.e. income, inflation, competition which indirectly affects credit flow of DBs.

DBs investment in government and other securities highly increased in the year liberalization, which is due to the lack of proper utilization of collected resources. But started to decline after two years of liberalization and reached to negative point due to the hither rate and enough promising investment opportunities available in private sectors.

In investment portfolio on government securities have not invested by sample banks. GBBL has not invested on share and debenture but CDBL has invested certain amount from last 2 years. The total investment to total deposit ratio of selected DBs shows that CDBL is most successful in utilizing its resources on investment than GBBL. The mean ratio and CV also reveal that CDBL is moderate in utilizing its resources on investment while GBBL is not so successful in better utilizing their total deposits on investment of various assets. The Loan and Advance to total deposit ratio of selected DBs shows that CDBL is the most successful in utilizing its resources on loan and advance than GBBL. The Government Securities to total deposited selected DBs is not so successful in better utilizing their total deposited on government securities. In share and debenture very low portion of the total outside investment has invested by CDBL. But GBBL has not invested in share and debenture. CDBL is the best bank among while compared to GBBL on the basis of mobilization of its deposits in the field of investment. CDBL is more focusing on loan and advances. CDBL is also successful to exploitation of resources in the field of share and debenture, other investment and loan and advance. By using Sharpe's portfolio performance test, it indicates that investment on other investment is a

superior performer than loan and advance, Loan and advance is better than share and debenture, Share and debenture better than government securities. The portfolio has lower performance than other investment and loan and advance, which shows that the DBs are not properly using portfolio concept to reduce risk and increase return from their investment. It shows that the DBs are not using proper diversification of funds among various assets.

5.3 Recommendations

On the basis of the analysis, findings and conclusion, the following recommendations are suggested to overcome limitation, disorganization as well as exploit opportunities and to improve the present fund mobilization and investment portfolio of Nepalese DBs.

-) In investment portfolio, compared to CDBL, GBBL has less investment in government securities. Therefore, investment should be increase.
-) Both the banks should utilize its overall resources effectively to gain the peak profit margins.
-) From the analysis of investment operation of DBs CDBL has increased its total investment by increasing total deposit and investment on loan and advance.
-) CDBL should concentrate more on portfolio diversification in order to lower the cost of fund.
-) GBBL is not successful in better utilizing their total deposits on loan and advances so that it is recommended that GBBL should increase the amount of Government Securities and Share and Debenture.
-) CDBL should invest more funds in loan and advance, other investment and share and debenture to control the risk.
-) Among two selected banks, CDBL is the most excellent bank than GBBL which is utilizing the investment in various assets and its best position on ratio analysis. The lowest investment on share and debenture to total outside investment and

-) DBs seems to be focusing on investment on different assets class but they should be diversified their lending portfolio and emphasis should be given to small and medium sized enterprise and productive sector.
-) Banking is the risky business, so risks cannot be eliminated it should be managed. In other to mitigate the risks DBs should evaluate the underlying risks of investment and lending in qualitatively as well as quantitatively.
-) It is clear from the above study that some DBs are able to exploit portfolio management concept in the field of investment, which is not satisfactory to reduce risk and maximize return in the finest level. So that DBs should used portfolio management concept usefulness and extend opportunities for exercising the portfolio management in investment.

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Appendix - I

Arrangement and Tabulation of Available Financial Data of Various DBs

a) Investment on Shares and Debentures

(Rs. In '000')

| FY | CDBL | GBBL |
|----------------|---------------|-------------|
| 2064/65 | 0 | 0 |
| 2065/66 | 0 | 0 |
| 2066/67 | 0 | 0 |
| 2067/68 | 600 | 0 |
| 2068/69 | 4802 | 0 |
| Total | 5402 | 0 |
| Average | 1080.4 | 0 |

b) Investment on Other Investment

| FY | CDBL | GBBL |
|----------------|--------------|---------------|
| 2064/65 | - | - |
| 2065/66 | - | - |
| 2066/67 | 10067 | 9674 |
| 2067/68 | 10033 | - |
| 2068/69 | 59580 | - |
| Total | 79680 | 9674 |
| Average | 15936 | 1934.8 |

c) **Investment on Loan and Advances**

(Rs. In '000')

| FY | CDBL | GBBL |
|----------------|------------------|-----------------|
| 2064/65 | 303299 | 65396 |
| 2065/66 | 813224 | 544617 |
| 2066/67 | 1136574 | 910726 |
| 2067/68 | 1415610 | 1171587 |
| 2068/69 | 1819299 | 1673097 |
| Total | 5488006 | 4365423 |
| Average | 1097601.2 | 873084.6 |

d) **Total Investment**

(Rs. In '000')

| FY | CDBL | GBBL |
|----------------|----------------|----------------|
| 2064/65 | 303299 | 65396 |
| 2065/66 | 813224 | 544617 |
| 2066/67 | 1147241 | 920399 |
| 2067/68 | 1430445 | 1171585 |
| 2068/69 | 1884281 | 1673097 |
| Total | 5578490 | 4375094 |
| Average | 1115698 | 875019 |

e) **Total Deposit**

(Rs. In '000')

| FY | CDBL | GBBL |
|----------------|----------------|----------------|
| 2064/65 | 393549 | 108565 |
| 2065/66 | 1025287 | 688839 |
| 2066/67 | 1426128 | 1221044 |
| 2067/68 | 1709808 | 1437980 |
| 2068/69 | 2340154 | 2150952 |
| Total | 6894926 | 5607380 |
| Average | 1378985 | 1121476 |

f) Net Profit**(Rs. In '000')**

| FY | CDBL | GBBL |
|----------------|----------------|----------------|
| 2064/65 | 1422 | (2690) |
| 2065/66 | 10817 | 5796 |
| 2066/67 | 38433 | 24114 |
| 2067/68 | 42091 | 41283 |
| 2068/69 | 52364 | 50296 |
| Total | 145127 | 118799 |
| Average | 29025.4 | 23759.8 |

g) Total Assets**(Rs. In '000')**

| FY | CDBL | GBBL |
|----------------|----------------|----------------|
| 2064/65 | 524735 | 133228 |
| 2065/66 | 1185936 | 812091 |
| 2066/67 | 1698602 | 1416913 |
| 2067/68 | 2036707 | 1757774 |
| 2068/69 | 2695984 | 2489982 |
| Total | 8141964 | 6609988 |
| Average | 1628393 | 1321998 |

h) Total Outside Investment**(Rs. In '000')**

| FY | CDBL | GBBL |
|----------------|----------------|----------------|
| 2064/65 | 303229 | 65396 |
| 2065/66 | 813224 | 544617 |
| 2066/67 | 1147241 | 920399 |
| 2067/68 | 1430445 | 1171585 |
| 2068/79 | 1884281 | 1673097 |
| Total | 5578420 | 4375094 |
| Average | 1115684 | 875019 |

Appendix - 2

(a) Yearly Return on Share and Debenture

(In %)

| FY | CDBL | GBBL |
|------------------------|-------------|----------|
| 2064/65 | 0 | 0 |
| 2065/66 | 0 | 0 |
| 2066/67 | 0 | 0 |
| 2067/68 | 0 | 0 |
| 2068/69 | 1.98 | 0 |
| Expected Return | 0.4 | 0 |
| Risk | 3.14 | 0 |

Where,

$$\text{Expected Return } \left(\frac{\sum_{t=1}^n r_t}{n} \right) = \frac{r_1 + r_2 + \dots + r_n}{n}$$

r_1 = Return on year 1

r_2 = Return on years 2

r_n = Return on N years

N = No. of years

$$\text{Risk } (\sigma) = \sqrt{\frac{\sum_{t=1}^n (r_t - \bar{r})^2}{N-1}}$$

(b) Yearly Return on Other Investment

| FY | CDBL % | GBBL % |
|------------------------|---------------|---------------|
| 2064/65 | 0 | 0 |
| 2065/66 | 0 | 0 |
| 2066/67 | 3.86 | 4.13 |
| 2067/68 | 8.91 | 0 |
| 2068/69 | 3.46 | 0 |
| Expected Return | 3.25 | 0.83 |
| Risk | 3.66 | 1.85 |

(c) Return on Loans and Advances

| FY | CDBL (%) | GBBL (%) |
|------------------------|-----------------|-----------------|
| 2064/65 | 0.00 | -4.11 |
| 2065/66 | 1.33 | 1.07 |
| 2066/67 | 3.38 | 2.65 |
| 2067/68 | 1.70 | 3.52 |
| 2068/69 | 2.88 | 3.01 |
| Total | 9.29 | 6.14 |
| Expected Return | 1.86 | 1.23 |
| Risk | 1.33 | 3.12 |

(d) Investment Portfolio of CDBL

(Rs. In '000')

| Year | 2064/65 | 2065/66 | 2066/67 | 2067/68 | 2068/69 |
|-----------------------|----------------|----------------|----------------|----------------|----------------|
| Government securities | - | - | - | - | - |
| Share & Debenture | - | - | 600 | 4802 | 5402 |
| Other Investment | - | - | 10067 | 10033 | 59580 |
| Loan & Advance | 303299 | 813224 | 1136574 | 1415610 | 1819299 |
| Total | 303299 | 813224 | 1147241 | 1430445 | 1884281 |

(e) Percentage of Each Item on Total Investment of CDBL

| Year | 2064/65 | 2065/66 | 2066/67 | 2067/68 | 2068/69 |
|-----------------------|----------------|----------------|----------------|----------------|----------------|
| Government securities | 0 | 0 | 0 | 0 | 0 |
| Share & Debenture | 0 | 0 | 0.0004 | 0.003 | 0.003 |
| Other Investment | 0 | 0 | 0.0088 | 0.007 | 0.032 |
| Loan & Advance | 100 | 100 | 99.9908 | 99.99 | 99.965 |
| Total | 100 | 100 | 100 | 100 | 100 |

(f) Investment Pattern of GBBL

(Rs. In '000')

| Year | 2064/65 | 2065/66 | 2066/67 | 2067/68 | 2068/69 |
|-----------------------|----------------|----------------|----------------|----------------|----------------|
| Government securities | - | - | - | - | - |
| Share & Debenture | - | - | - | - | - |
| Other Investment | - | - | 9673 | - | - |
| Loan & Advance | 65396 | 544617 | 910726 | 1171585 | 1673097 |
| Total | 65396 | 544617 | 920399 | 1171585 | 1673097 |

(g) Percentage of Each Item on Total Investment of GBBL

| Year | 2064/65 | 2065/66 | 2066/67 | 2067/68 | 2068/69 |
|-----------------------|------------|------------|------------|------------|------------|
| Government securities | 0 | 0 | 0 | 0 | 0 |
| Share & Debenture | 0 | 0 | 0 | 0 | 0 |
| Other Investment | 0 | 0 | 0.01 | 0 | 0 |
| Loan & Advance | 100 | 100 | 99.99 | 100 | 100 |
| Total | 100 | 100 | 100 | 100 | 100 |

(h) Investment to Total Deposits Ratio (%)

(Rs “000”)

| FY | Total Investment (A) | | Total Deposit (B) | | A/B | |
|---------|----------------------|------|-------------------|---------|----------|----------|
| | CDBL | GBBL | CDBL | GBBL | CDBL (%) | GBBL (%) |
| 2064/65 | 5000 | - | 393549 | 108565 | 1.27 | 0 |
| 2065/66 | 80000 | - | 1025287 | 688839 | 7.80 | 0 |
| 2066/67 | 120067 | 9673 | 1426128 | 1221044 | 8.42 | 0.79 |
| 2067/68 | 35263 | - | 1709808 | 1437980 | 2.06 | 0 |
| 2068/79 | 64382 | - | 2340154 | 2150952 | 2.71 | 0 |
| Mean | | | | | 4.45 | 0.16 |
| S.D. | | | | | 3.39 | 0.69 |
| C.V. | | | | | 0.76 | 4.31 |

Where,

$$\text{Mean } (\bar{x}) = \frac{n_1 \Gamma n_2 \Gamma \dots \Gamma N^n}{N}$$

$$\text{Standard Deviation } (|\exists) = \sqrt{\frac{\sum_{i=1}^n f_i Z_i^2}{N Z_1}}$$

$$\text{Coefficient of Variation (CV)} = \frac{|\exists}{\bar{x}}$$

(i) Risk & Return of Sample Banks

| Components | Expected Returns | | Risk | |
|-----------------------|------------------|------|------|------|
| | CDBL | GBBL | CDBL | GBBL |
| Government Securities | 0 | 0 | 0 | 0 |
| Share & Debenture | 0.4 | 0 | 3.14 | 0 |
| Other Investment | 3.25 | 0.83 | 3.66 | 1.85 |
| Loan & Advances | 1.86 | 1.32 | 1.33 | 3.21 |

Appendix-3

Performance of Various Investment Assets of CDBL and GBBL

| S. No. | Investment Assets | Average Annual Return (%) (r_1) | Standard Deviation of Annual Return (Ξ_1) | Sharpe's Measure of Performance $S_1 = \frac{\bar{r}_1 ZR}{\dagger_1}$ $R = 0$ |
|--------|-----------------------|-------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------|
| 1 | Government Securities | 0 | 0 | 0 |
| 2 | Loan and Advance | 1.59 | 2.27 | 0.7 |
| 3 | Share and debenture | 0.2 | 1.57 | 0.13 |
| 4 | Other investment | 2.04 | 2.76 | 0.73 |

Where,

(r_1) = Average return of Assets

(Ξ_1) = Standard Deviation of Returns

R = Risk less Rate of Return

S_1 = Sharp's Index of Portfolio Performance