CHAPTER -I

INTRODUCTION

1.1 General Background of Study

From the ancient history, Nepal is economically based on the agricultural phenomenon of the country .More than 80% of the population of the country's occupation is agriculture. In spite of greater dependency on this sector, most of the people living here are compelled to survive below the subsistence level. This means that the income generated from this sector is not enough to maintain the minimum level of living standard.

Nepal is one of the least developed countries in the world with the per capita income of US $260. The economic prosperity of a nation depends upon the development of industries and commerce of the country. The banking sector plays a vital role in development of industries and commerce and boost in economic development of the country.

Today due to changing nature of competition and increasing pressure of globalization in business world, portfolio management has become the most crucial determinant of the economy. The most important fact of international business operation is continuous change in economical, political and social dimensions. These changes are beyond the control of business concern. In recent years, international investors are attracted towards the financial markets of developing countries. As a result many joint ventures and multinational companies have emerged.

The growth of economy depends on availability of funds to finance the increased needs not only of government and business, but also of individuals. Private domestic investment can be the contributor to economic growth and employment generation in the developing country. For the economic development of any country public participation plays a vital role. If the people are rich, the country will be rich and people will have enough to invest on development of the country. "To the extent that public investment expenditure results in the provision of public services which reduce the cost of production of the private sector, they

have a positive effect on private profitability and investment" [1]. An investment in any funds is made to have some positive rate of return. Nobody is ready to bear risk without any return but to have returned one must be ready to face some risk. To minimize the risk at the given rate of return the concept of portfolio diversification is necessary. In 1952, Harry M. Markowitz published a landmark paper which is generally viewed as the origin of modern portfolio theory approach to investment.

Bank accumulates capital from general public and invests in different sectors. While investing in various sectors, banks constructs portfolio properly as it needs to provide return to its investors.

The main objective of any organization is to get return. It is the return that motivates the investor towards investment .Return is the reward for the investment done in the business .An individual investor's influence towards investment depends on the company's image and price. Today in the age of globalization: an investor has become much concerned towards investment .S/he does not try to invest in one opportunity only. Therefore, s/he chooses the best alternative among the different portfolios. The choice of best alternative depends on the trade off between risk and return. Risk is the chance that the actual outcome from an investment will differ from the expected outcome.

Portfolio theory is necessary to understand the corporate finance as the firm is really a portfolio of risky assets and liabilities. Portfolio analysis begins where the securities analysis ends. The investor should understand how to manage the portfolio. But before knowing the management of portfolio, let us understand the meaning of portfolio. 'Portfolio' refers to the diversification of assets. It is simply the collection of securities gathered to achieve certain investment goals. "Management" is the process of planning, organizing, leading, directing and controlling of resources in order to utilize in optimum manner. Portfolio management is concerned with efficient assets including shares and debentures of companies .The management may be by professional, individuals .The portfolio of

[1] Chhibber Ajay & Dailami Mansoor(1990) "Fiscal Policy and Private Investment in Developing Countries." World Bank, Dec 1990

an individual or a corporate unit is the holding of securities and investment in financial asset. The process of portfolio management is closely and directly linked with process of decision making. Portfolio theory is necessary to understand corporate finance as the firm is really a portfolio of risky assets and liabilities.

"A portfolio simply represents the practice among the investors of having their funds in more than one asset. The combination of investment is called a portfolio"[2]

"Portfolio management is an act of handling a pool of funds so that it not only preserves its original worth but also overtime appreciates in value and yield an adequate return consistent with the level of risk assumed"[3].

Therefore, Portfolio management of bank assets basically means allocation of funds to different components of naming assets having different degree of risk and varying rates of return in such a way that balances the conflicting goals of maximum yield and minimum risk. The risk can be of two types: systematic and unsystematic risk. Systematic risk cannot be eliminated and are uncontrollable as it is affected by factors like political, economical, socio-cultural and technological environmental factors. It is denoted by beta (ß). Unsystematic risk is diversifiable risk and can be eliminated by holding enough stocks.

"A systematic investment process should be followed to win the stock market. Investment process describes how an investor should go about making decisions with regards to what marketable to invest in, how extensive the investment should be and when the investment should be made. A five –step procedures for making these decision forms the basis of the investment process:

- Set investment policy
- Perform security analysis
- Construct a portfolio

2 J.F.Westorn and E.F.Brigham, Managerial Finance 8th edition, pp.245

3 George B.Cohen, Edward d. Zinbarg, Arthur Ziekel, Investment Analysis an Portfolio Management, 3rd ed. , pp.591

- Revise the portfolio
- Evaluate the performance of the portfolio"[3]

Among this investment process the research is focused on security analysis and portfolio selection. Security analysis involves examine of individual securities or groups of securities within the board categories of financial assets. Portfolio construction identifies those specific assets in which to invest determining the proportion of the investor's wealth. Diversification should be done to minimize the risk and maximize the return. "Portfolio performance involves determining periodically how the portfolio performs in terms of not only the return earned, but also the risk experienced by the investor."[4]

Financial market facilities the flow of funds surplus to deficit units. Those financial markets that facilitate the flow of short-term funds, that is, less than one year are known as money markets, while those that facilitate the flow of long-term funds are known as capital markets. There are two types of market securities and securities having life of more than one year are called capital market securities. Money market securities generally have higher liquidity whereas capital market securities are used to generate higher annual return investors.

"Stock market is a financial market which probably has the greatest glamour and is perhaps the least understood. Some observers consider it as a legalized heaven for gambling and many investors consider stock market investing as a game in which the sole purpose is pocking winners".[5]

The well functioning stock market allows stockholders to achieve efficient diversification, which reduces risk, which in turn lowers the risk premium component in the cost of capital. Stock markets lower the cost of capital by liquidating investor's investment. It encourages investors to retain their earning

[4] Ibid pp 10 to 14

[5] Lorie & Dodd, James H. Pater (195) "The stock market: theories and Evidence" Richard D. Irwin Inc. USA

and convert it into cash by selling shares in the stock market. The stock market provides an opportunity to the portfolio managers and public for direct participating and sharing the gain of economic progress.

In Nepalese context, the concept of security market began with the set up of "Nepal stock exchange" former known as securities exchange center in 1976. This is the only stock market in Nepal .In spite of considerable development of stock market there is lot more to be done for the development of stock market in Nepal. Many investors are still afraid to invest in securities because of inadequate knowledge in this field and most investors are exploited from market intermediaries. For this purpose investors must be able to analyze risk and return of individual stock to increase market efficiency and consequently speed up the economic development.

1.2 Introduction to NBL, Nabil Bank, EBL & NIC Bank Ltd.

Nepal's banking history had begun with the establishment of Nepal Bank Ltd. in 1997B.S (1937A.D).At that time their bank had authorized capital of Rs10million and paid up capital of Rs842thousand.NBL was the first commercial bank with51% government equity .RBB came into existence in 1996, fully government owned with the authorized capital of Rs 10 million and paid up capital of Rs 2.5million.

After the adoption of economic liberalization in 2042B.S.in global perspective, joint ventures came into existence. Joint ventures are the modes of trading through partnership among nations and also a form of negotiation between various groups of industries and traders to achieve mutual exchange of goods and services for sharing competitive advantages.

"A joint venture is the joining of forces between two or more enterprises for the purpose of carrying out a specification operation i.e. industries or commercial investment and production or trade."

Joint venture banks are those banks which pool together saving of the community and arrange them for the productivity use, that accept deposits from the depositors /public and grant financing, they also provide the services like collection of bill and cheques, safeguarding of assets, advisory functions to their customers.

After the adoption of financial sector reforms in 1980 with 50% maximum equity participation, the first venture bank i.e. Nepal Arab Bank ltd (NABIL) was established in 1984. Consequently , other joint venture banks i.e. Nepal Indo Suez Bank (Investment Bank)1986,Nepal Grind lays Bank (SCBNL)1987, Himalayan Bank Ltd (1993),Nepal Bangladesh Bank(1994),Everest Bank (1994),Bank of Kathmandu(1995), Nepal Industrial and Commercial Bank (NIC)2054B.S were established .

Nepal reforms effort in the financial began in 1980s when NRB eased entry restrictions with the amendment to Commercial Bank Act 1974. However, it was only 1992, after NRB adopted a liberal attitude in permitting commercial banks to open the financial liberalization really took place.

1.2.1 Nepal Bank Ltd

The establishment of NBL marked the beginning of the era of formal banking in Nepal. Until then all the monetary transactions were carried out by private dealers and trading center. As the first commercial bank NBL was established in the year 1937 (on Kartik 30, 1994 B.S.) in accordance with the provision of NB Act with authorized capital of Rs 100 lakh raised with 20 thousand partly paid up and 5,000 fully paid up ordinary shares of Rs 100each by 1949-50, all the 25,000 shares were fully paid up. Even 51% of shares are hold by Government of Nepal and the rest by private individuals. The then king Tribhuvan inaugurated the bank. The main objective of the bank was to render service to the people whether rich or poor and to contribute to the nation’s development. In that era, very few understood the new concept of formal banking. So, the raising of

equity shares was not easy and mobilization of deposits was even difficult. This was been proved when bank issued equity shares of worth Rs. 25 lakh, but was successful to raise only Rs. 8, 42 thousand. From the very conception and its creation, NBL was as joint venture between government and private sector. Out of 2500 equity shares of Rs. 100 face value, 40% was subscribed by the government and 60% was offered for the sale to private sector. There were only 10 shareholders when the bank first started its operation.

While studying the organizational structure of the NBL, the government also had representation to the board of directors in proportion to its subscription to the share capital. In the construction of BOD one is chairman, 3 directors ,four from government of which one is from NRB and three directors are elected from other shareholders .Out of four government nominated directors ,one acts invariably as the chairman General presides over the board meeting and enjoys all rights vested on him under the Act. Thus there is active participation of the government both in share capital and management which enable the bank to inspire confidence of the people which is in turn contributed to growing prosperity during the past years; this bank had tried to solve a lot of problems of commercial banking system in the economy. Various facilities are provided by the bank for depositing and borrowing money for commercial and agricultural purposes. It provided facilities for selling the internal and external modesties areas and helped the business community on various ways. It managed all the business transactions of the government including entire business of currency exchange due to the absence of the banks.

Nepal Bank Ltd was the only financial institution up to 1955 .So, there was a feeling of need of a central bank in the country .In its absence the proper regulation and management of currency and credit could not be done .NBL had no capacity to face with all these problems due to its limitation in respect of financial position, scope of business etc .It is only in 1956 that the country first created Central bank i.e. Nepal Rastra Bank under NRB Act 1955. Since 22 July, 2002 the management responsibility of the bank has been handed over to ICCMT (ICC Bank Management Team) in order to make it more competitive.

1.2.2 Nabil Bank

Joint venture banks are those types of banks which are established with a joint co -operation of two countries for mutual benefit. As a joint venture's establishment, Nabil Bank is the first commercial bank in Nepal which has played a vital role in the economic development of Nepal .Nabil Bank is also known as Nepal Arab Bank and commenced its operation on 12th July 1984(29th Ashad 2041 B.S) with the authorized capital of Rs.1000lacs and paid up capital of 300 lacs . Dubai Bank Ltd was the initial foreign joint venture partner with 50% equity investment with the Nepalese government investment of 20% and general public investment of 30%. Later on, the ownership of Dubai Bank Ltd. was transferred to Emirates Bank International Ltd, Dubai and again it sold its shares to National Bank Ltd of Bangladesh. Nabil Bank has been growing very fast. It was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, it provides a full range of commercial banking services through its 19 points of representation across the kingdom and over 170 reputed correspondent banks across the globe.

Nabil, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business. Operations of the bank including day-to-day operations and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes ATMs, credit cards, state-of –art, world-renowned software from Infosys Technologies System, Bangalore, India, Internet banking system and Telebanking system. It is the only bank having its presence at Tribhuvan International airport only international airport of the country. Also the number of outlets in the country is the highest among the joint venture and private banks operating in Nepal. Success of Nabil is a milestone in the banking history of

Nepal as it paved the way for the establishment of many commercial banks and financial institutions. D & B, a leading international credit rating agency, has assigned its rating of 5A2 to the bank indicating it to be a financially sound institution with a consistent performance record. In D &B rating system, the 5A is a reflection of the size of the bank and 2 is a rating given in a scale of 1 to 4, with 1 being the best.

Shareholders structure

At the time of commencement it had Rs.100million as authorized capital has reached at Rs.500million. Issued capital and paid up capital were Rs.261, 702,400 and Rs. 261,702,400 till fiscal year 053/054

Table No. 1.1
Shareholders Structure of Nabil Bank

Shareholders	% of capital owed
N.B(International)limited ,Ireland	50%
Nepalese Public	30%
Nepal Industrial Development Corporation	10%
Rastriya Beema Sansthan	9.67%
Nepal stock exchange	0.33%
Total	100%

Objectives of Nabil bank

Nabil has a mission which states-"we will become the pioneer in the financial community committed to economic development of the society." In order to fulfill this mission Nabil has been operating with the objectives of:

- to provide efficient and innovative service to the customer
- to generate adequate resources for expansion and growth
- to ensure optimum development of their human resources
- to earn recognition as professionals from the society

1.2.3. Everest Bank Ltd.

Everest Bank Limited (EBL) started its operation in 1994 with a view and objectives of extending professionalized and efficient banking services to various segments of the society. The bank is providing customer friendly services through a network of 29 branches in Nepal. Punjab National Bank (PNB),which is the largest nationalized bank in India having 112 years of banking history is the joint venture partner (holding 20% equity in the bank).Nepalese promoters and general public have 50% and 30% of its shareholding respectively. PNB is a technology driven bank serving over 35 billion customers through a network of over 4500 branches spread all over the country with a total business of around INR 2178.74 billion. The bank has been conferred with *"Bank of the Year 2006, Nepal"* by the banker, a publication of financial times, London. The bank was bestowed with the "NICCI Excellence award" by Nepal India chamber of commerce for its spectacular performance under finance sector. Its unique selling proposition is as follows:

- One of the Largest Network among private sector banks spread across Nepal and all connected with ABBS
- Strong Joint Venture Partner providing Technical Support
- Representative office in India to facilitate remittance from India
- Direct Drawing arrangement with PNB and HDFC bank India whereby instant payment is done on presentation of the instrument.
- Direct account credit in PNB branches connected with Central Banking System and RTGS member banks via speed remittance.
- More than 126 remittance payout location in Nepal

Recognizing the value of offerings a complete range of services, the bank has pioneered in extending various customer friendly products such as Home Loan, Education Loan, EBL Flexi Loan, EBL Property Plus (Future Lease Rental),

Home Equity Loan, Vehicle Loan, Loan Against Share, Loan Against Life Insurance Policy and Loan for Professionals. EBL was one of the first banks to introduce Any Branch Banking System (ABBS) in Nepal.

EBL has also introduced Mobile Vehicle Banking system to serve the segment deprived of proper banking facilities through its Birtamod Branch, which is the first of its kind. The banks performance under all parameters has been outstanding during the fiscal year 2063-64 after providing for income tax and statutory provisions there was a disposal net profit of Rs. 30.06 crore compared to Rs. 23.73 crore last year- an increase of 26.68 %. The bank was able to increase its operating profit by 31.9%, deposit by more than 38% and advances by 39% during the year compared to the corresponding period last year. During the financial year2062/63, the Bank opened three branches namely Balaju in Kathmandu Valley, Nepalgunj and Birtamod. The Bank also opened a branch at Baglung during the month of Bhadra, 2064.

EBL is playing a pivotal role in facilitating remittance to and from across globe. Being the first Nepalese bank to open a representative office in Delhi, India, the Nepalese in India can open account in Nepal from the designated branches of Punjab National Bank and remit their saving economically through banking channel of Nepal. The Bank is also offering Cash Management System through HDFC Bank., India for managing the funds of corporate exporting to India by collecting their fund from about 183 locations in India. The Bank's own Web based online remittance product "Everest Remit" facilitates remittance from Malaysia, Doha, UK, Bahrain, UAE and Qatar to more than 126 payout location in Nepal. With India Remit, the Bank has same day remittance facility with India with association of PNB's 2200 networked branches at 550 locations, besides draft drawing arrangement with 280 PNB branches across India. All the branches of the bank are connected with Anywhere Branch Banking System (ABBS), which enables customers to do all their transactions from any branches other than where they have their account.

The corporate vision of the bank is to evolve and position the bank as a progressive, cost effective & customer friendly institution providing comprehensive financial and related services; integrating frontiers of technology & servicing various segments of society; committed to excellence in serving the public & also excelling in corporate values. The corporate mission is to provide excellent professional services & improve its position as a leader in the field of financial related services; Build & maintain a team motivated & committed workforce with high work ethos; Use latest technology aided at customer satisfaction & act as an effective catalyst for socio-economic developments.

1.2.4. NIC Bank Ltd:

Nepal Industrial & Commercial Bank Limited (NIC Bank), which was incorporated on 30May 1997 and commenced its operation on 21st July 1998, is the first commercial bank in the country to be capitalized at Rs. 500 million. The Bank which has been in profitable operation from its inception, has managed robust growths in its overall business and profitability during the recent years. The Bank offers a complete suite of commercial banking products and services including transaction banking, international trade finance, business banking, project finance, corporate banking and consumer banking. NIC Bank is one of the most widely held banking companies in Nepal with close to 35,000 shareholders. Currently, it has 14 branches nation wide.

The Board, supported by the management team comprising of young, enthusiastic professionals, has successfully embarked on a multi-pronged strategy of consolidation, administrative streamlining, human resource up-skilling, strategic cost management, focused non-performing assets management, balance sheet and treasury management and controlled asset growth in tandem with strengthening the credit culture and strategic marketing and sales. The Bank's achievements following these strategic measures are considered well-reflected in recognition by Nepal Rastra Bank, the central bank of Nepal, as the

highest rated Bank amongst all private sector commercial banks in the country, based on the internationally recognized **"CAELS"** rating, during an assessment done in April 2005. NIC is committed to provide superior banking products and financial services to its patrons through efficient and cost-effective service delivery; offering of new innovative products and friendly customer service; and at the same time maintaining confidentiality, professionalism & good governance. It consistently upgrades its processing systems and technology support besides broadening its scope, range and quality of services. All its branches are inter-connected through VSAT with micro-wave/leased line/optical fiber back-ups and are capable of providing on-line real-time banking services. The Bank is seriously considering adopting capital adequacy norms under the Basel II accord to the extent applicable to the Nepalese banking industry well before it becomes a regulatory requirement. The Bank believes in continuously offering new and value added services to customers with commitment to quality and value to clients. Accordingly, the Bank has been in the forefront in launching innovative & superior products with unique customer friendly features with immense success.

It is the first commercial bank in Nepal to be awarded with ISO 9001:2000 standard certifications for Quality Management System. It is also the first bank to be provided a line of credit by IFC (International Finance Corporation), World Bank Group, under its Global Trade Finance Program enabling its Letter of Credit/Guarantees to be accepted/confirmed by more than 200 bank branches world wide. NIC Bank became the first bank in 2007 to trade in bullion. The bank has built a reputation as one of the most professionally run and financially sound companies in Nepal with an innovative streak that follows arguably amongst the best corporate governance models among banks in Nepal with complete segregation of Management and Board with a policy of full disclosure. The bank has also been awarded as “The Bank Of The Year 2007, Nepal” by The Banker, Financial Times, London, the banker magazine, one of the most prestigious awards in the banking industry world wide and is extremely coveted

by all. This holds special significance to the bank as it is the only bank in Nepal that has not been managed and/or by foreign banks one time or the other, to have been given this award.

1.3. Statement of the problem

The investing planning of the commercial bank in Nepal heavily depends on the rules and regulations provided by the Central bank i.e. Nepal Rastra Bank .So the composition of the assets portfolio of the bank is influenced by the policy of the central bank .Hence this is the major problem for the investment in portfolio by banks.

In the present scenario of Nepal, the complex political and economic situation, lack if infrastructural facilities and down fall of lots of industries (private or government) have also become the major problems for the portfolio management for the banks as these all factors have obstructed the investment opportunities for the banks.

After the adoption of economic liberalization policy, the competition for commercial banks have become the burning issue as there is emergency of lots of finance companies, co-operative societies and development banks in the short time span. This has threatened the entire banking system and also made managers to improve their productivity. The credit policy, discount rate policy .interest rate and lending policy also effect the investment decisions of the commercial bank.

There is continuous economic recession going on in the country. Lower volume of the investment is causing lower growth of gross domestic product and hence trade deficit is increasing day by day. As a result very few entrepreneurs are able to survive and others who are less competitive are backing out from market. Commercial banks are also affected directly by this economic turmoil and facing difficulties in furnishing their loans and advances towards the profitable sectors. In such a situation the commercial banks are bound to invest in

government investment like T- bonds, T- bills or government's securities which yield lower rate of return in comparison to credit.

Moreover, the Nepalese commercial banks concentrate on the urban areas like Birgunj, Kathmandu, Biratnagar, Butwal etc, making the rural and remote areas deprived of its modern banking facilities where most of the population lives. Despite of the circular passed by NRB for the compulsory investment for 10% of their investment in the rural areas, banks are inclined in such less profitable sectors. This state of affairs cannot contribute much to the economic development of the country and has also become the problem to commercial banks. In order to find out the portfolio behavior and remedies to their problem, studies of commercial banks and researches are to be conducted to explore the reality. So, this study would be one of those efforts to find out the investment pattern of commercial banks in portfolios with the analysis of these banks market return and financial statements. The attempts have been made to sort out the answers to the following questions:-

(i) What are the investment policies of commercial banks of Nepal?

(ii) Should the present investment policy adopted by commercial banks be reformed?

(iii) How does the bank portfolio variable behave?

(iv) Which bank has the largest degree of financial risk measured in terms of portfolio risk?

(v) What is the existing situation of financial position of commercial banks in Nepal?

(vi) How is the portfolio investment managed by the commercial banks?

(vii) Is the portfolio investment management efficient?

1.4. Objectives of the study

Objectives refer to the aim, goal or target. The primary objective of this study is to know the portfolio investment behavior of the commercial banks of Nepal. This study is focused on investment decisions of banks on portfolio.

Problems faced by them in constructing it and their relevant solution. The specific objectives of the study are as given below:-

(i) To check the existing situations of portfolio management of Nepalese commercial banks.

(ii) To evaluate the investment and advance portfolio of commercial banks.

(iii) To examine the portfolio management practices in Nepalese commercial banks and their performance in relation to profitability.

(iv) To analyze portfolio attributes of Nepalese commercial banks in relation to risk and return.

(v) To evaluate the financial performance of commercial banks.

(vi) To give suggestions on the basis of analysis of data.

1.5. Significance of the study

With the introduction to the globalization concept, the whole market acts as a single market. The investment is concentrated not only in one area of place. It has widened its scope. Portfolio investment is gaining popularity. Managing portfolio investment is quite a challenging task.

Different parties remain under influence from any business directly or indirectly as every business firm's economic activities should be performed taking into consideration the economic policy of the state which in turn affects the economic policy of the state and financial condition of the firm. All investors invest their fund on share for getting greater return which is achieved by the organization through value maximization objective. Previously, the investors had to concentrate only on shares of government sectors. But today with the introduction of economic liberalization in the country, various joint venture banks have emerged which have brought in ample of opportunities for investment to the investors in the country. This has arisen the need of depth study and analysis of risk and return, market sensitivity and hence portfolio management is created.

This study is focused on portfolio management of Nepal Bank Limited, the first modern bank of Nepal; Nabil Bank Limited, the first joint venture bank of Nepal;

Nepal Industrial and Commercial Bank Ltd., the first and only bank in Nepal that has not been managed and/or owned by foreign banks and Everest Bank Ltd., the joint venture bank of Punjab National Bank of India and their comparison in the field. This study is significant to all the stakeholders i.e., shareholders, creditors, and government for dividend, top management for remuneration and so on. It also helps them to understand financial performances of the selected banks. Further, it also explores suggestions for the better investment opportunities and portfolio management to policy makers, planners, managers and potential investors.

Last but not the least, it will provide literature to the researchers who want to carry out further research in this field.

1.6. Building of Hypothesis

Hypothesis is the most powerful tool man has invented to achieve dependable knowledge. (Kerlinger, 1986, Pg. 25). Thus, it is the statement about the relationship between two or more variables which needs to be investigated for truth.

This study is performed considering following hypothesis:

- It is assumed that portfolio is one of the best ways for investment by banks.
- No bank can survive long without proper portfolio management.
- Efficient portfolios are way to get success in competition.
- It is assumed that investors are well informed about the market.
- Unsystematic risk can be easily removed and systematic risk is taken constant.
- It is assumed that risk and return behavior in future will be as per the ex-post information.
- The quantities of all the assets are given and fixed.
- The portfolio selection is solely on the basis of expected return and variance of return only.
- The portfolio having low risk, high return is selected.

- There is direct relationship between portfolio investment and profitability of commercial banks.
- Higher the risk, higher will be the return of banks and vice-versa.
- More diversification of assets better will be the financial performance of banks.
- Diversification of investment decreases the risk of banks.

1.7. Research Methodology

Research methodology is the process of converting to the solution of the problem through planned and systematic dealing with collection, analysis and interpretation of facts and figures. It describes the methods and process to be applied in the entire aspect of study. It serves as a framework for the study and guidance for collection and analysis of data. To conduct the study about the comparison of portfolio management of NBL, EBL, NICBL and Nabil Bank Ltd. descriptive research design will be adopted. Secondary data is used to analyze and examine the relationship between them. Analysis is based on the development of various financial and statistical tools. NBL, Nabil bank, NIC Bank and EBL are taken as the sample for data analysis purpose.

For the purpose of the study, annual balance sheet of related banks, journals of banks, annual report of NEPSE, trading report of NEPSE and periodicals and statistical report of the NRB are taken as the main sources of data.

1.8. Limitations of the study

Every work has restrictions and limitations. This study has been made by using certain methodology based on available data. It is focused only on the Portfolio Management of NBL, Nabil Bank Ltd, NIC Bank Ltd. and EBL. and their evaluation which are be acting as the sample for the population.

This study is based on following limitations:

- The problem of non-availability of required data and information regarding portfolio management has been faced which may limit the scope of the study.
- The samples taken for the study may not represent the whole population.
- This study is based on the secondary data provided by the banks.
- This study is only for suggestions not for decisions.
- The time factor is the major limitations for this study as the study has to be completed within a short span of time.
- The data has been modified as per the need of the study.
- Risk and return measurement has been taken as the major tool for methodology.
- The study has covered the data of past seven fiscal years.
- Only some statistical tools and financial tools have been used for the study.
- The study has been limited by certain boundary, which has been given to all researchers during the thesis writing.
- For the study, required document is not available by certain place.
- The income statement & balance sheet of NBL could not be made available during the study period

1.9. Organization of the study

The study has been organized into five different chapters: each devoted to some aspects of the study required i.e., Portfolio management of listed banks in Nepal. The chapter one to five consists of:

- **Chapter I: Introduction**:

It contains the introductory part of the study. Background information on the subject, matter of research undertaking will be presented under this section to provide a general idea of its history. So, this chapter includes a brief history of NBL, Nabil Bank, NIC Bank and EBL, statement of problem, objective of study, research methodology and limitation of study. It includes major issues to be investigated.

- **Chapter II: Review of Literature**:

This section includes the review of previous writings and studies to find the existing gap. So, past studies in portfolio management function has been reviewed to examine what new can be contributed. Theoretical review, review of related studies, journals, textbooks, dissertations and newspapers are included.

- **Chapter III : Research Methodology**:

Research Methodology to be employed for the study has been described. It includes research design, sources of data collection, population and sample, financial and statistical tools for analysis of data.

- **Chapter IV: Presentation and Analysis of data**:

In this section, the acquired relevant data has been presented and analyzed through financial and statistical tools. An attempt has been made to include all the necessary data required for the study purpose.

- **Chapter V: Summary of major findings, conclusion and recommendation**:

This chapter is the most important part of the study where major findings, issues and gaps have been summarized, conclusion is drawn and viable recommendation is suggested.

Bibliography or references and Appendix have also been included in the last part of the study.

CHAPTER-2

REVIEW OF LITERATURE

This research study aims to analyze the portfolio investment management practice and competitiveness of four commercial banks viz Nepal bank ltd, NIC Bank Ltd, Everest Bank Ltd and Nabil Bank Ltd. This chapter will give the researcher the clear concept, ideas and opinions on the topic.

This chapter is mainly concerned with the competent exploration of the background to the work and relevant literature. In this regard, some basic academic course books, journals and other related studies are reviewed. But so far nominal research work has been performed in this topic in Nepal. Our stock market is on emerging state and is unable to provide necessary information concerning to the study. The previous thesis available related to this topic are reviewed. Apart from these, studies carried out by well-known experts, views and concepts of various authorities and intellectuals and questionnaires are also taken in to consideration.

2.1 Conceptual Framework

Every investment is done in order to earn some more wealth. An investment is a commitment of money that is expected to generate additional money. Every investment entails some degree of risk which requires a present sacrifice for the future uncertain benefit. Since this thesis is related to portfolio investment management by banks in Nepal, we shall study about the return, risk and then portfolio analysis in detail with this regard.

2.1.1 Returns: -

In general term, return means benefit. In other words, it is the income received on investment. Investment return is defined as the after tax increase in the value of initial investment. Return is the motivating force and it is the key ingredient to the investors in comparing investment alternatives.

The increase in the value of assets can come from two sources: A direct cash payment to the investors or an increase in the market value of the investment relative to the original purchase price. Stockholders expect two forms of return from the purchase of common stock: Capital gain and dividend gain appreciation i.e. increase in the market value of stock in comparison to the original purchase price. Dividend gain is the cash flow income from cash dividend for stockholder or coupon interest payments for a bond holder. Generally most investors expect regular dividend to be declared and paid on common stock.

Realized returns and expected return are two terms which are often used in the language of investment. Realized return is return that was earned in the past. Expected return is the rate of return from an asset that the investor will earn over some future period. It is a predicted return which may or may not occur.

Expected Rate of Return :-

The single period rate of return is the basic variable in investment analysis. The rate of return concept is quite important as it measures the speed at which the investor's wealth increases or decreases. As investors single period return (r) is simply the total return investors would receive during the investment period or holding period. It can be shown as below:-

$$r = \frac{\text{Ending wealth – beginning wealth}}{\text{Beginning wealth (or purchase price)}}$$

Since an investors can obtain two kinds of gain i.e. capital gain and dividend gain, the rate of return can be restarted as below:-

$$r = \frac{\text{Price change + cash flow}}{\text{Price at beginning of the period}}$$

Mathematically,

$$R_t == \frac{(p_t - p_{t-1}) + c_t}{p_{t-1}}$$

where,
r_t = rate of return during t^{th} period
p_t = market price at the end of the period t
p_{t-1} = price at the end of the period t-1
c_t = cash flow income received during the t^{th} period

The expected rate of return must be greater or equal to the required rate of return for the investor the find the investment acceptable.

2.1.2 Risk

Today in this complex environment risk and uncertainty are in life. Everyone encounters uncertainty in everyday life. Uncertainty can be about weather, performance of ones investment and ones health. Any decision maker may be an investor or a portfolio manager does not function in the theoretical world but they function within the reality that manager things are unknown.

Uncertainty is the condition where there is no awareness of all the alternatives and also the outcomes, even for the known alternatives. Risk is the condition where the investor or a decision maker is aware of all the alternatives but unaware of their consequences. The probability associated with each alternative is calculated by experience, incomplete but reliable information or intelligence. Risk and uncertainty are integral part of an investment decision.

In finance, risk has a very special meaning. It refers to uncertainty associated with the returns at a particular investment i.e., variability of the returns of a period. Every investment has uncertainty. The sources of uncertainty are interest rate risk, purchasing power risk; bull-bear market risk, default risk, liquidity risk, callability risk, convertibility risk, political risk, management risk and industry risk.

Measurement of risk

1. **Standard Deviation**

   It is the statistical tool which measures the risk of holding a single assets. High standard deviation represents a large dispersion of return and high risk and on the other hand, low standard deviations represent a low dispersion

of return and low risk. It provides information about the risk of asset; its returns can be summarized into a single easily calculated number. The major disadvantages is that it considers possible returns above the expected value to be risky than return below the expected value. It is denoted by small sigma (σ).

Standard deviation is a measure of the relative dispersion of a probability distribution.[1] Standard deviation can be calculated as below:

In case of historical return:

$$\pm \sqrt{\frac{(Ri - \bar{R})^2}{n}}$$

In case of probability,

$$\pm \sqrt{(Ri - \bar{R})^2 Pi}$$

where,

R_i = return for i^{th} possibility

P_i =probability of occurrence of return for i^{th} possibility

n= total number of possibilities

R= mean expected return

2. Variance

It shows the variability of set of observations and is denoted by sigma square i.e. σ^2 . The smaller the variance, the lower the riskiness of the stock and vice-versa. The standard deviation and the variance are equally acceptable and conceptually equivalent quantitative measures of an assets total risk.

3. **Coefficient of variation**

It is statistical tool which measures the risk per unit of return. It is defined as standard deviation divided by mean of expected return. The investment with low C.V has high risk.

The coefficient of variation is more useful when we consider investments which have different expected rather of return and different level of risk.

Mathematically,

$$C.V\ X = \frac{\pm}{E(R) or Ri}$$

Where , σ = standard deviation for i^{th} assets

$\overline{R_i}$ = expected return or mean for i^{th} assets

4. Beta

"The relevant risk associated with an individual stock is based on its systematic risk, which depends on how sensitive the firm's operations are to economic events such as interest rate changes and inflationary pressures. Because the general movements in the economy, the market risk of the stock can be measured by observing its tendency to move with the market, or with an average stock that has the same characteristic as the market. The measure of the stock's sensitivity to market fluctuations is called its beta coefficient. Beta is a key element of the CAPM."

"The beta is simply the slope of the characteristic line. It depicts the sensitivity of the security's excess return to that of the market portfolio if the slope is one, it means that excess return to that of the market portfolio if the slope is one, it means that excess return for the stock vary proportionally with excess return for the market portfolio. In other words, the stock has the same unavoidable or systematic risk as the market as a whole. A slope steeper than one means that the stock's excess return varies more than proportionally with the excess return of the market portfolio"

Beta measures non – diversifiable risk. Beta shows how the price of a security responds to market forces. In effect, the more responsive the price of security is to changes in the market, the higher will be its beta. Beta is calculated by relating the returns on a security with the returns for the market. Beta can be positive or negative. But nearly all betas are positive.

5. Capital assets pricing model:

Three economical William Sharpe, john linter and Jack Treynor developed capital asset pricing model or CAPM in the mid 1960's. The main message of the model is 'in a competitive market, the expected risk premium varies in direct proportion to beta'. This means that all investment must plot along the security market line.

The CAPM is sometimes used to estimate the required rate of return for any firm with publicly traded stock. The CAPM is based on the premise that the only important risk is systematic risk, or the risk that results from exposure to general stock market movements. The CAPM is not concerned with so called unsystematic risk, which is specific to an individual firm, because investors can avoid that type of risk by holding diversified portfolios

Portfolio Analysis

Investment positions are undertaken with the aim of earning some expected rate of return. Investor purchase financial assets such as share of stocks, bonds for positive rate of return and seek to minimize inefficient deviations from this 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.[6]

In other words, investors can reduce their exposure to individual assets risk by holding a diversified portfolio of assets. In finance, portfolio represents passive holdings of securities such as foreign stocks, bonds, options, warrants, gold certificate, real estate, future contracts, production facilities or other financial assets, or that is expected to retain its value or a collection of investments held by an individual or institution. In building upon investment portfolio, a financial institution will typically conduct its own

[6] Francis, Jack Clark; Investments Analysis and Management ,pp.228,7th edition

investment analysts, whilst a private individual may make use of the services of a financial advisor or a financial institution which offers portfolio management services. Holding a portfolio is part of an investment and risk limiting strategy called diversification.

Portfolio Management (PfM) involves deciding what assets to include in the portfolio, in the given goals of the portfolio owner and changing economic conditions. Selection involves deciding what assets to purchase, how many to purchase, when to purchase them and what assets to divest. These decisions include some sort of performance measurement, most typically expected return on the portfolio and the risk associated with this return (i. e. the standard deviation of the return). In other words, PfM is the management of selected groupings of investments using integrated strategic planning, integrated architecture, measures of performance, risk management techniques, transition plans and portfolio investment strategies. The portfolio should be inclusive of all investments: people, processes and technology.

From the above explanation, in the simplest and most practical terms, PfM focuses on five key objectives:

1. Defining goals and objectives- clearly articulate what the portfolio is expected to achieve. Questions to consider: what is the mission of the organization and how does the environment (internal and external) support and achieve that mission?
2. Understanding, accepting, making trade offs – determine what to invest in and how much to invest. Questions to consider: which initiatives contribute the most to the mission?
3. Identifying, eliminating, minimizing and diversifying risk – select a mix if investment that will avoid undue risk will not exceed acceptable risk tolerance levels and will spread risks across projects and initiatives to minimize adverse impacts. Questions to consider: when and how do you

terminate a legacy system? At what point do you cancel a project that is still behind schedule and over budget?

4. Monitoring portfolio performance: - understanding the progress the portfolio is making towards achieving of the goals and objectives of the organization. Questions to consider in the portfolio's progress meeting the goals of the missions
5. Achieving a desired objectives: have to confidence that the desired outcomes will likely be achieved given the aggregate of investments that are made. Questions to consider: which combination of investments best supports the desired outcomes.

In portfolio management, riskier strategic investments (high growth stocks) are balanced with more conservative investments (cash funds) and the mix is constantly monitored to assess which projects are on track and which project need assistance and which project should end. A strong portfolio management program should:

Maximize value of investments while minimize risk.

Encourage business leaders to think as a "team", versus about the individual department or mission area ("me") and be accountable for projects.

Enable planners to use assets more effectively.

Reduce the number of redundant projects and make it easier to eliminate non-value add projects.

It is often said that portfolio management is not just about doing projects right but in doing the right projects. For illustrative purposes, Figure 2 offers an example of how DoD might view a project portfolio rollup by Mission Area.

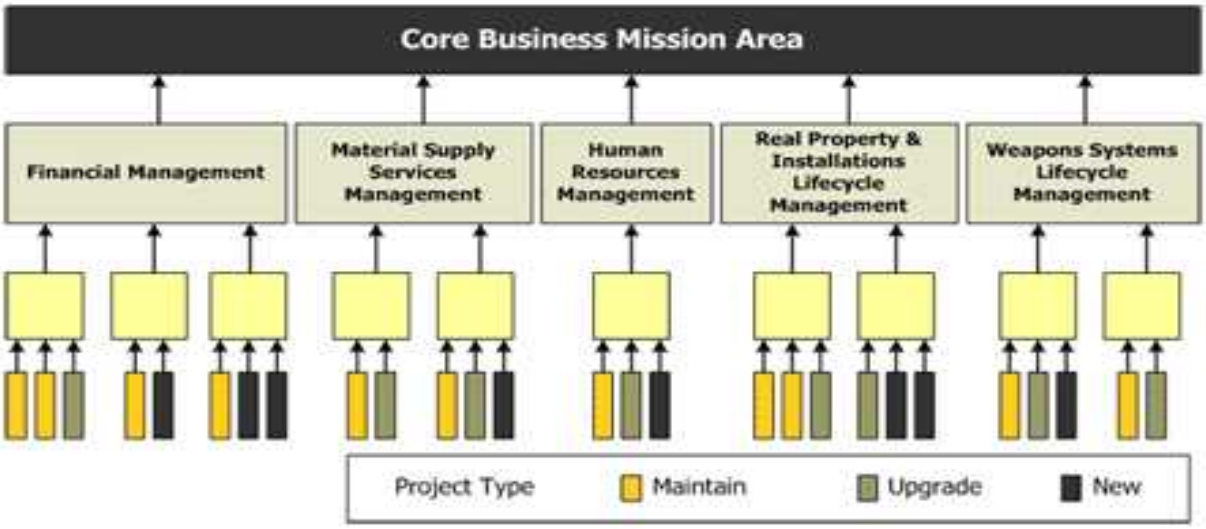


Figure No. 2.1

Example of DoD(Department of Defense) Project Portfolio by Mission Area

When individual projects are collectively viewed as a portfolio of investments, discussions are no longer about cost and schedule but also about anticipated risks and returns in relation to other projects. Portfolio Management builds a single program level view by combining current metrics for multiple projects into a single portfolio. This affords the Program Managers a well-organized approach to:

- allocate resources effectively
- create the ability to efficiently monitor the program and all of its individual projects
- recognize redundancies
- identify gaps and/or improvement opportunities
- Manage and mitigate program risk or exposure

Previously, projects were acknowledged as being inter-dependent but were nevertheless sometimes managed as independent entities. Often this was because the projects were perceived to be independent by the individual project managers

who may have belonged to different organizations. Detailed reviews of the effect of project inter-dependencies might only have occurred during budgeting cycles or milestone driven reviews. Today, organizations that have matured from managing single to multiple projects are embracing portfolio management as a mechanism for assisting in conducting program oversight. It provides the visibility needed to assess business impact for each item in each portfolio and to better balance investments across mission objectives.

The analysis and selection of projects for a portfolio can be complex and depends on multiple factors. One important component of the decision process is the relationship between projects or programs and a desire to introduce a new initiative or capability. The allocation of resources and budgets must be carefully analyzed to determine an optimum portfolio of projects yielding the greatest ROI, while remaining in alignment with Mission Area goals and objectives. Unlike project management where a project is managed all the way through completion, portfolio management is an ongoing process that never ends. Projects in the portfolio are routinely re-evaluated. Poorly performing or stovepipe projects are terminated and new initiatives are started to address capability gaps or to react to changes in Mission Area goals and objectives.

The portfolio manager or investor seeking investment work with two kind of statistics expected return and risk statistic for individual assets are exogenously determined input data analyzed by the portfolio analyst. The objective of portfolio management is to develop a portfolio that has maximum return at whatever level of risk the investor deems appropriate. Portfolio is owned by individuals and organization having dramatically different objectives and constraints. Different portfolio investment process applies to different situations. In the investment process portfolio constructions involves following steps

I. Study of investor
II. Planning for goals
III. Investment strategy
IV. Select individual investment

A. Study of investor:-Investor is the main element in portfolio construction process. While selecting the portfolio of assets and determining appropriate goals and policies, following basic facts about the investor must be considered.
    - Financial status of investor (marketable and non- marketable assets, liabilities, financial distress.)
    - Physical status of the investor (age, health, etc.)
    - Risk tolerance (attitude towards the risk, depends on income and financial position)
    - Knowledge about the investment sector.

The above information helps to decide what kind of investment program is best suited to the investor's needs.

B. Planning for goals:-After studying about the investor, the suitable goal is set. The goals should be SMART (specific, measurable, achievable, realistic and time-bound). If an investor needs capital growth now and insure in later years, the plan must reflect these planning needs as it is the part of risk aversion process. The investor must decide how much risk is to be taken and then plan for the goal achievement. The goal may be growth, income, or combination of both. The investor must realize that high current income and high return hardly go together.

C. Investment Strategy:-After planning about the goals, a proper investment strategy should be selected in order to achieve the portfolio objective. Following strategies may be applied to achieve the objective:
    - Balancing fixed interest securities against equities.
    - Balancing high dividend payment companies against high earnings growth companies as required.
    - Balancing transaction costs against capital gains from rapid switching.

- Balancing income tax payable against capital gain tax.
- Retaining some liquidity to seize upon bargains.

D. Select Individual Investments:-After objectives and strategies are being set, the assets must be kept together to form the desired portfolio. Security analysis plays a vital role at this point. While selecting the portfolio, following factors should be considered:

- Try to predict further share point from price movements (technical analysis).
- Get expert advice, i.e. stock broker, merchant banker, investment banker, etc.
- Seek out widely diversified growth companies.
- Try to obtain inside information to beat the market.
- Locate companies with good assets banking, dividend growth earning record and high quality of management.

In order to get success in investment, time factor plays a vital role as market fluctuate according to the economic and political situation of a country. Investors try to purchase the securities at low price and sell at high price. If the securities are overpriced, the investors should wait for the right time to buy. Portfolio management assumes periodic supervision of the security in the portfolio. The passive strategy of buying and holding of assets in this present competitive market is not prudent, or a rational plan of action for sound portfolio management.

❖ **Stages of Portfolio Investment Process**

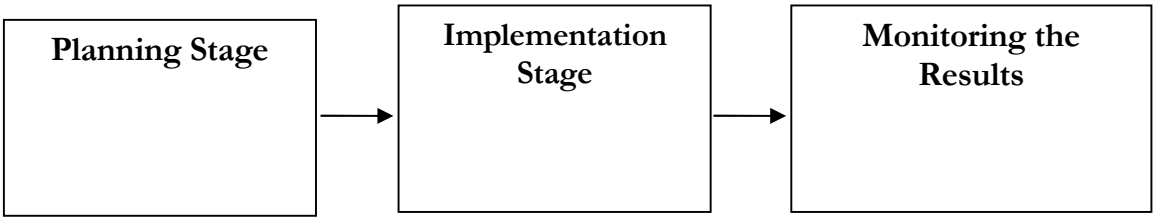


Figure No:2.2

A. *Planning Stage*: - Planning refers to decide in advance in order to achieve the desired objective. This aspect of portfolio management is the most important element of proper portfolio investment and speculation. A careful review should be conducted about the investor's financial situation and current market conditions. Investor and market condition are blended together in order to determine an efficient portfolio set for investment. The aspects of planning stage are shown below:

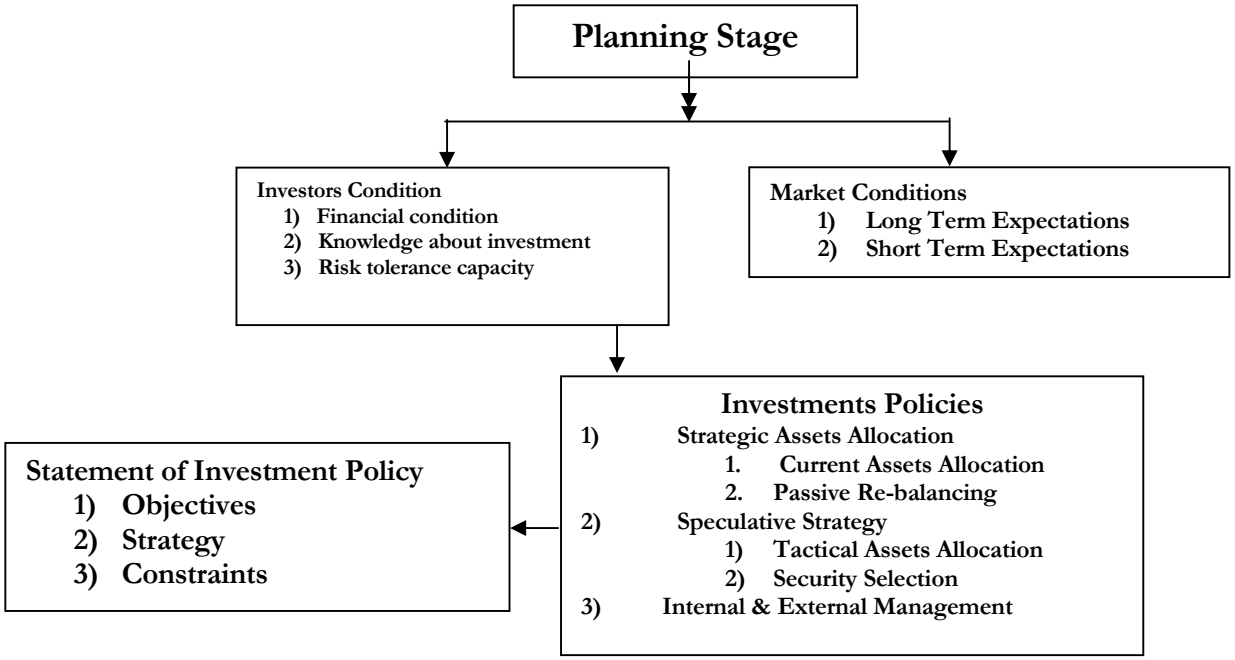


Fig No. 2.3

B. *Implementation Stage*: - After planning about the portfolio set, the implementation phase comes. In this phase, the planning should be brought into action. Generally, three decisions are needed to be made. If any deviation is found in the percentage holding of various asset classes in comparison to the desired holding as stated in the statement of investment policy, the portfolio set should be re-balanced to the desired strategic assets allocation. After re-balancing of strategic asset allocation, re-balancing of tactical asset allocation and security selection is done.

C. *Monitoring the Results*: - It refers to the controlling of the portfolio set i.e. comparing the actual performance with the set portfolio standard. It is the last stage of portfolio investment process and consists of 3 stages.

1st) Actual portfolio should be examined in order to compare with statement of investment policy.

2nd) Portfolio performance should be ascertained.

3rd) If any deviation is found, the action should be taken in order to control and make adjustments.

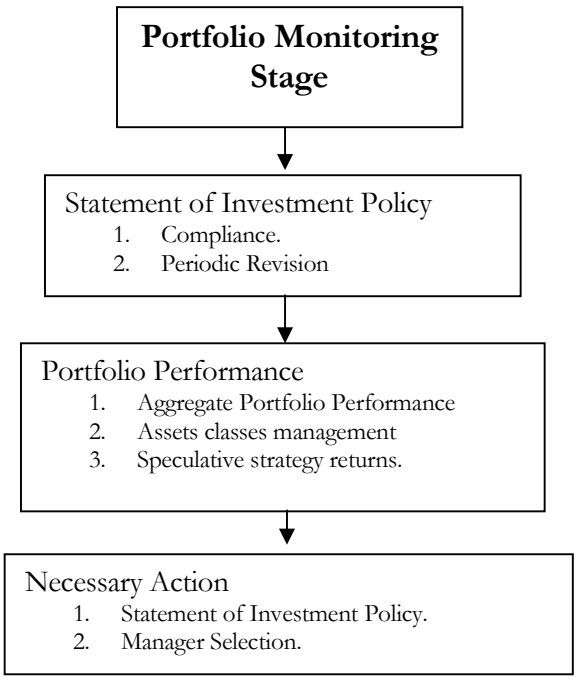


Fig No. 2.4

2.2 Review of theoretical studies

In this section, we shall make the review of major related literature about the portfolio management and its related studies. The major objective of modern portfolio theory is to provide the means by which the investors can easily identify the optimal portfolio set from various alternatives. For this purpose, a potential investor should estimate the expected return and standard deviation for each security in order to make an efficient portfolio set by considering the co-variance between securities. Various reviews of studies are conducted through relevant studies, textbooks, journals, dissertations, magazines and newspapers, etc in this regard.

2.2.1 Review of dissertations

A. "Portfolio behavior of commercial banks in Nepal." by Sunity Shrestha.

In this research, five commercial banks are taken under study. They are Nepal Rastriya Bank Ltd., Rastriya Banijya Bank, Nabil Bank, Nepal Indosuez Bank and Nepal Grin lays Bank Ltd. Data are collected from various sources from 1975 to 1990 A.D. The objective of the research was to evaluate the financial performance of the commercial banks, to analyze the investment pattern of commercial banks on securities & loan, to observe the relationship of bank portfolio variables with national income and other fiscal variables.

Among these objectives financial performances of the commercial banks and observe bank portfolio variables is somehow related to this research.

From the analysis of commercials banks, the researcher has made following conclusions:

- The general trend of commercial banks asset holding is growing.
- Spread of foreign banks is relatively higher than that of Nepalese banks.
- The relationships of banks portfolio variables is found to be the best explained by log linear equations.
- Borrowing of commercial banks from the central bank has been found to be positively affected by the cash reserve requirement, bank rate and Treasury bill rate.

Following suggestions have been point out from the research:

- The evaluation of the performance of the commercial banks can be made only with reference to the government policy and regulation framework of the central bank
- Some of the problems of resource mobilization and resource deployment by the commercial banks in Nepal can be directly traced to the fiscal

policy of the government and heavy regulatory procedures of the central bank.

The joint venture between foreign banks and Nepalese banks should be encouraged in Nepal, especially in merchant and investment banking, leasing and other new creative financial services. The entry of foreign joint venture banks hopefully will bring healthy competition in the environment that will improve work and service efficiency of Nepalese banks too.

B. "Assessment of the performance of listed companies in Nepal" by Gopal Prasad Bhatta.

This research is based on the data of ten listed complaints from 1990 to 1995. One of the major objectives of this study is to analyze the performance of listed companies in terms of risk and return and internal rate of return, systematic risk and diversifications of risk through portfolio context.

Following are the findings of this study:

- A highly significant positive correlation ship has been addressed between risk and return character of the company. Investors expect higher return from those stock which associates higher risk. Nepalese capital market is not efficient. So the stock price doesn't contain all the information relating to the market and company itself. Neither investors analyze the overall relevant information of the stocks nor the member of stock exchange tries to disseminate the information. So the market return and risk both may not show high priced stocks such as BBC, NIB, NIC, has higher risk than others. These companies thus require higher returns to satisfy the investors for their risk premium.
- Investors in Nepal have not yet practiced to invest in portfolio of securities. An analysis of the two securities portfolio shows that the risk can be totally minimized if the correlation is perfectly negative. In this situation, the risk can totally be diversified, but when there is perfectly positive correlation ship

between the returns of the two securities, the risk is not diversifiable. The analysis shows some has negative correlation and some has positive on. Negative correlation between securities returns is preferred for diversification of risk.

The following recommendations are made by the researcher:

- Developed intuitions to consult investor for risk minimization.
- Establish an information channel in Nepal Stock Exchange.
- Make proper amendment on trading rules.

C. "Management of Corporate Portfolio in Nepal" by Nirmala Shrestha.

In this research study, 8 commercial banks are taken under study. They are Nabil, HBL, SBI, BoK, NBBI, SCB, EBL, Nepal Indosuez Bank (NB). Data are collected from various resources like NEPSE, NCB, etc. from 1995 to 2001 A.D. the main objective of the research was to examine the performance of Nepalese commercial banks in relation to profitability & to analyze portfolio attributes of Nepalese commercial banks in relation to risk and return.

From the analysis of commercial banks the researcher has made following findings:

© Expected return is simply an average return of investment which is usually expressed in percentage. The expected return becomes high due to effect of unrealistic annual return, issue of bonus share and increase in share closing price. Out of 8 sample banks Nabil, HBL, SBI, BOK, NBBI, SCB, EBL, Nepal Indosuez Bank (NB) have more than 50%, expected return & crest have less than 50%.

© Risk is the variability of returns which is measured in terms of standard deviation of returns. The security having high risk has high expected return.

© Higher the beta, greater the volatility and riskier the common stock.

- © Required rate of return is obtained from CAPM which describes the relationship between risks & required return. All the commercial banks have less required return than expected return.
- © The study assumes that the correlation between risks & return with profitability should be positive. But it finds that there is negative correlation between risks & return of stocks. This may be due to lack of investment market and small sample size.

Following suggestions are made by the researcher:

- © The banks taking low risks have low return and vice-versa. So, the banks taking low risk is suggested to take higher risk for higher return.
- © Sufficient sample size is recommended for the further research study.
- © Since unrealistic relationship has been found between required return and expected return, it has been suggested to investors to be aware about the financial performance of individual banks.
- © NEPSE is the only stock market in Nepal. The trading system of NEPSE should be modernized. Effective information channel should be launched. Up-to-data should be made available by NEPSE's website and the concept of on-line trading should be developed.

D. "The Effectiveness of Portfolio Management of listed joint venture banks in Nepal" by Rajendra Shahi.

This research study is based on three joint venture banks of Nepal. They are SCBN, NBBL and EBL. Data are collected from various sources like annual reports of concerned banks, NRB samachar economic survey and other secondary sources from 1999 to 2004 A.D. the main objective of the study was to identify the situation of Portfolio Management of Nepalese Joint Venture Banks, to evaluate the financial performance of the banks, to analyze the risk and return of the banks.

From the analyzing the researcher has made following conclusions:

- The mean investment to total deposit ratio of SCBNL is the highest while the mean loan & advances to total deposit ratio is the lowest.
- The COV of investment to total deposit ratio of NBBL is the highest which shows least consistency.
- The variability of liquid fund balance to joint deposit ratio of EBL is the least.
- The mean return on total assets ratio & return on shareholder's fund of NBBL is the lowest while SCBNL is the highest. SCBNL and EBL focus on investing its fund on private as well as government shares, while NBBL focuses its investment on government securities. This shows that bank investing in government as well as private sector achieves better return.

Following recommendations are made by the researcher:-

- For better performance investment should be increased.
- The priority should be given to loan and advance in order to mobilize the total deposits.
- The liquidity fund should be increased to meet the demand of deposit.
- Investment position of joint venture banks, generally, allocation of fund into different degree of risk of banking assets and raised rate of return should be verified in such a way that would maintain balance in conflicting goal maximization and minimum risk.

2.2.2 Review from journals:

A) An analysis of the portfolio behavior of Black Owned Commercial Banks by Timothy Bates and William Bradford:

Commercial banks have traditionally been formed to provide service for loan demands of local markets with funds derived primarily from depositors. According for the researchers, "Data analyzed in this study do not support this

pessimistic view of Black banks. These institutions face a number of problems that are completely unrelated to the presence or absence of management risk." Black banks have lower average deposit account sizes than non-minority banks and the variability of these deposits is substantial.

Following findings have been found from the research:

- The lack of significance of the age variable for explaining Black bank liquidity may be caused by: a) the fact that all of the sampled banks had been in existence for at least three full years and b) small sample.
- Explanatory variables describing deposit structure and behavior were extremely important determinants of the asset composition observed in Black bank portfolios.
- The high correlation between demand deposit and time deposit variability is a noteworthy fact.

From the research following conclusions have been drawn out:

- Black bank liquidity has been incorrectly interpreted by the existing banking literature.
- Bank racial grouping doesn't appear to be casually related to bank liquidity.
- Because of government programs to assist them, Black banks hold U.S. government deposits that are relatively large proportion of their total deposits.

B) International portfolio investment flows by Michael J. Brennan and H. Henry Cao:

This article develops a model of international equity portfolio investment flows based on differences in informational endowments between foreign and domestic investors. It is shown that when domestic investors possess a cumulative information advantage over foreign investors about their domestic market,

investors tend to purchase foreign assets in periods when the return on foreign assets is high and to sell when the return is low.

Followings are the conclusion from the article:

- The article has developed the model of international equity portfolio flows that relies on informational differences between foreign and domestic investors.
- The model predicts that if foreign and domestic investors are differently informed then portfolio flows between two countries will be a linear function of the contemporaneous returns on all national market indices and if domestic investors have cumulative information advantages over foreign investors about domestic securities the coefficient of the host market return will be positive.

2.2.3 Review of books :

This part of the study is related with the reviewing of major related theories about portfolio management propounded by various experts. The objectives of modern portfolio theory are to provide a means by which the investors can identify optimal portfolio when there is infinite number of opportunities. The concept of portfolio management and its analysis can be cleared from following studies:-

1.Markowitz's diversification model:-

Markowitz's diversification may be defined as combining assets which are less than perfectly positively correlated in order to reduce portfolio risk without sacrificing portfolio returns. It can sometime reduce the risk below the undiversifiable level .Markowitz diversification is more analytical than simple diversification and considers assets correlation(or covariance).The lower the correlation between the assets, the more reduced level of portfolio's risk. Markowitz's approach considers the single period rate of return.

Dr. Harry Markowitz used mathematical programming and statistical analysis in order to arrange for optimum allocation of assets within portfolio. In order to reach these objectives, Markowitz generated portfolio within a reward risk context. In other words, he considered the variance in expected returns from

investment and their relationship to each other in constructing portfolios. Markowitz's model is theoretical framework for the analysis of risk return choices. According to him, investors are risk averse, so they would choose that portfolio which offers the highest return for a given level of risk and they should evaluate alternative portfolio on the basis of their expected returns and standard deviation by using indifference curves.

Assumptions:

This model is based on following assumptions regarding investor's behavior.

1. Investors consider each investment alternatives represented by a probability distribution of expected returns over some holding period.
2. Investors maximize one period expected utility and posse's utility curve, which demonstrate diminishing marginal utility of wealth.
3. Individual estimates risk on the basis of the variability of expected return.
4. Investor's decision is based on expected return and variance of return.
5. For a given risk level, investors prefer high return to lower returns. Similarly for a given level of expected return investor prefer less risk to more risk.

Using these assumptions, a single assets or portfolio of assets is considered to be efficient if no other assets of portfolio of assets offer higher expected return with the same or lower risk with the same or higher expected return.

According to Markowitz, the investor should maximize expected return. This rule implies that the non-diversified single security portfolio with the highest expected return is the most desirable portfolio. The single security portfolio would obviously be preferable if the investor were perfectly certain that his highest expected return would turn out to be actual return. However, under real world conditions of uncertainty most risk adverse investors joints with Markowitz's n discarding the rule of calling for maximizing expected returns. Markowitz's offers the expected return/variance of returns rule. The goal of portfolio manager should be to minimize portfolio risk for any level of expected returns. The portfolio's expected return and variance is denoted by

$$Kp=W_1K_1+W_2K_2+ \ldots\ldots\ldots\ldots W_nK_n$$

Where,

K_p = portfolio expected return

K_1 = expected return of stock 1

W_1 = weight for stock 1

K_2 = expected return for stock 2

W_2 = weight for stock 2

Variance portfolio variance

$$|\sigma^2_p|=w^2_A\sigma^2_A+ w^2_B\sigma^2_B + 2w_Aw_{\mathbf{B}}Cov[r_Ar_B]$$

in the case of risk –averse investors ,the portfolio with the difference curve that is furthest northwest would be the selection for investment which states that a portfolio is efficient when

i) offer maximize when expected return for varying levels of risk and

ii) offer minimize risk for varying levels of expected return

The set of portfolio meeting these two conditions is known as the efficient set of efficient frontiers. To build an efficient portfolio, an expected return level is chosen, and assets are substituted until the portfolio combination with the smallest variance at the return level is found. As this process is repeated for other expected returns, set of efficient portfolio is generated. Fig -1 provides an example of feasible set, also known as opportunity set. From which the efficient set can be identified .the feasible set simply represents all portfolios that could be formed from a group of n securities lie either on or within the boundary of the feasible set i.e. points G,E,S and H.

Feasible and Efficient Set

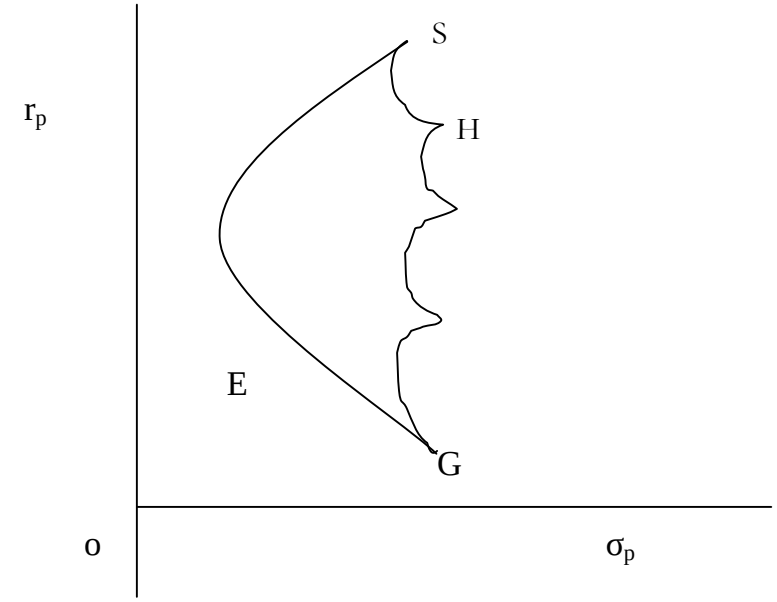


Fig.No. 2.5

In the above figure, return is shown on the y axis and risk is measured on the x axis. The efficient set can now be located by applying the efficient set theorem to this feasible set. In fig 2.5 there is no portfolio offering less risk than that of portfolio E. also there is no portfolio offering more return than that of portfolio H. the set of portfolio offering maximum expected return for varying levels of risk is the set of portfolio lying on the northern boundary of feasible set between point E and H.

Markowitz also deals about optimal portfolio. Any investor should plot his indifference curve on the efficient set and then proceed to choose the portfolio that is on the indifference curve that is "furthest northwest". This portfolio will correspond to the point where an indifference curve is just tangent to the efficient set.

A correlation coefficient of $\int_{xy}$ =+1 shows that an increase in return for one security is always associated with a proportional increase in the return for the other security, and similar for decrease. A correlation coefficient of indicates that an increase in the return for one security is always associated with a proportional decrease in the return for the other security, and vice –versa. A zero

coefficient $\int_{xy}=0$ indicates an absence of correlation, so that the returns of each security vary independently of other. However most stock return tends to move together, so the correlation coefficient between two stocks is positive.

2. The CAMP and the Security Market Line

According to CAMP approach, investors are risk averse. They will take risk only when they are appropriately compensated. The market prices risky securities in a manner that they yield higher expected return than risk free securities. The risk averse investors can be included to hold risky securities when they are offered risk premium. Thus there is positive relationship between risk and return. The expected return on a risky security is shown as follows:

Expected Return =Risk free rate +Risk premium.

$E(R) = R_f$ +Risk premium

When an investor holds a zero risk security, he expects a low risk free rate of return. Risk free rate is a compensation for time. As, he holds risky securities, his expected return increase, as he demands premium for risk also.

The capital assets pricing model is an idealized approach for determining the market prices of securities and expected return. The significant contribution of the capital assets pricing model is that it provides a measure of the risk of an individual securities which is consistent with portfolio theory. It enables us to estimate the undiversifiable risk of single assets and compare it with the undiversifiable risk of a well diversified portfolio.

Assumptions:

Following are the assumptions of CAPM approach :

1. Investors evaluate portfolio by through the expected returns and standard deviations of the portfolio over a one period horizon.
2. Investors are never satisfied so when given a choice between two otherwise identical portfolios, they will choose the one with the higher expected return.

3. Investors are risk averse, so when given a choice between two otherwise identical portfolios they will choose the one with the lower standard deviation.
4. Individual assets are infinitely divisible i.e. investors can buy a fractions of a shares if he or she so desires.
5. There is a risk free rate at which an investor may either lend or borrow money.
6. Taxes and transactions costs are irrelevant to risk assumptions
7. All investors have the same one period horizon.
8. The risk free rate is the same for all investors.
9. Information is freely and instantly available to all investors.
10. Investors have homogeneous expected, i.e. they have the same perceptions in regard to the expected returns, standard deviations and covariance of securities.

This risk of well diversified portfolio depends on the market risk of the securities included in the portfolio . On the basis of above assumptions, originally developed by Sharpe, Treynor ,Mossin and Linter, the CAMP equation or security market line (SML)can be shown below:-

$$E(R_j) = R_f+[E(R_m)-R_f]B_j$$

Where,

$E(R_f)$ = the expected return on the $_j$th risky assets
R_f = risk free rate of return
$E(R_m)$ = the expected return on the market portfolio
B_j = $cov(R_{j.}R_m)/VAR(R_m)$

Beta reflects the systematic risk which cannot be diversified. The important result of CAMP is that a security's return is related to systematic risk only an investors need to be compensated for that only, by forming a well diversified portfolio the systematic risk can be eliminated.

A beta of 1.0 indicates an average level of systematic risk. A security's beta of more than 1.0 means that it fluctuates more than the market.

Similarly, a beta of less than 1.0 means that it is less sensitive to the market changes.

The CML may be used for determining the required return only for those efficient portfolios that are perfectly co related because they fall on the CML. Thus the expected return of a portfolio and the total risk associated with it but the SML may be used to explain the required rate of return on all efficient portfolio . the SML provides a unique relationship between undiversifiable risk (measured by B)and expected return. Hence if we can accurately measure the beta of a security, we can estimate its equilibrium risk adjusted rate of return.

The relationship between the CML and SML can be seen by writing the two equations, one underneath the other.

$$\text{CML}: E(RF)\,\Gamma\ \frac{E(R_{m)}\ Z R_F}{\pm_m}\ E(Rm) - Rf \qquad \acute{o}(RP) \text{----------} (1)$$

$$\text{SML}: E(R_J) = R_F + [E(R_m) - R_F]B_J \text{.....} (2)$$

Rewriting the SML by using the definition of P_j

We Have,

$$\text{SML}: E(R_j) = R_F + [E(R_M) - R_F]\ \frac{\text{Cov}(R_J R_M)}{\text{Var}(R_M)}$$

When the beta of the market portfolio is equal to one because the covariance of the market with itself, Cov (R_j,R_m) is the same as the variance of the market VAR(R_m) and Var(R_m)=1

Furthermore, since VAR (R_m)= σm^2

$$\text{SML}: E(R_j) = R_f - \frac{E(R_m)\ Z R_1}{\pm m}\ \frac{COV(R_1 R_m)}{\pm m} \text{.....} (4)$$

The above equation shows that the market price of risk per unit of risk is the same for the SML and for the CML.

Market price of the risk= $\frac{E(Rm) - R_F}{\pm m}$

Also, if we recall $Cov(R_jR_m)=r_{jm}\ \sigma_j\ \sigma_m$

Where r_{jm} is the correlation between the return on asset j and the market rate of return. We can rewrite the SML as:

$$SML:\ E(R_j) XR_F \Gamma \ \frac{E(R_M) ZR_F}{\pm m}\ \ \ell jm^{\pm}\ j^{\pm} m$$

$$XR_F \Gamma \ \frac{E(R_M) ZR_F}{\pm m}\ \ \ell jm \ldots\ldots\ldots\ldots\ldots\ldots (5)$$

If we assume that the points along CML are perfectly correlated with market portfolio, $r_{jm}=1$, then the equation (5) for SML reduces to equation (1) of CML. Hence for portfolios that are made for the riskless assets and the market portfolio, the CML and SML are identical.

The CAPM (SML) is an equilibrium theory of how to price and measure the risk. Actually, it has many applications for the decision making under uncertainty. We use it for capital budgeting, assets valuation, cost of equity capital determination and explaining risk in the structure of interest rates.

2.2.4. Review of article:

Excerpts taken from Ashutosh Upadhyay:[7]

Ashutosh Upadhyay is the Senior Manager of EBL, New Baneshwor branch. He earned four promotions and bagged the best branch award on two different occasions. EBL's office at New Baneshwor has become the biggest branch with an approximate portfolio of Rs. 750 crores and average growth rate of 25% and above. Upadhyay credits behind this success. According to him, banks

[7] The Boss Magazine, March - April 2008

should invest their funds through retail lending in the form of special loans for things like education, homes and automobiles. He emphasizes on hydropower, tourism, education and medicine sector for investment. He says, "The most promising areas for investment are hydropower, tourism education and medicine." He added "Of Course, big long- term projects require huge amount of money so we need to install few mechanisms in place to generate such kind of investments. Firstly, to avoid the much talk about cash crunch, we need to consolidate capital from the market using tools like securities and bonds. And then we have to attract foreign investment to ensure an uninterrupted cash flow into the projects." He also feels that banks can diversify into areas like infrastructure, mutual funds, private equity and investment, securities, bonds and emerging market funds and help in such projects.

2.3 General environment of Nepal

The Nepalese economy, with a diminutive per capital income and more than one third of the total population below absolute poverty line, is passing through a critical phase circumscribed by a low level of equilibrium trap resulting in poverty and stagnation where dependence, interdependence, vulnerability and sensitivity currently exist. The challenge to Nepalese economy is enormous. There is a need to develop a more pragmatic approach to a substantial breakthrough in the economic front to deal with poverty, employment, inflation and sustainable development without compromising in core national interest. In economic terms Nepal is one of the least developed countries. 42% of the total population is below international poverty line, GDP per capital is USD 238, and illiteracy is 55%. More than 87% of the total population still lies in rural areas and most of them are not yet receiving the minimum physical facilities necessary to fulfill their basic needs. A major challenge exists for the government in providing as appropriate level of infrastructure to these remote and scattered settlements to support development and reduce poverty.

Factors in general environment of portfolio investment

General environment is the set of broad forces in organization surroundings. It consists of forces such as: Political-Legal, Socio -cultural, Economical and Technological. It is located outside the organization and cannot be controlled .It influences the activities of business by providing opportunities and threats.

i. Political – Legal Environment

Factors in political environment consist of factors related to management of public affairs. The political situation in the country was unstable due to the ongoing Maoist insurgency in the rural areas and sporadic attacks in the urban areas. As the economic risk is largely associated with political conditions in the country, series of strikes, riots and road blockades have negatively impacted the functioning of trade and industry in the last few years.

After the recent pro-democracy movement (Jana Andolan II,2006)the political change has brought the aggressive Maoist on the tables with the seven party government ,United Nations playing key role in arm management and restoration of peace and democracy. This change in the political situation has brought hope to the business community which indicates a positive sign in the portfolio investment business too.

ii. Socio – Cultural Environment

It refers to the social surrounding that influences the activities of portfolio investment. It consists of factors related to human relation that have a bearing on business. Social factors influence the policies, parties and activities of the business. Important social factors in the environment consist of demographic, social institutions, pressure groups and social change.

In Nepal about 42% of the population is below the international poverty line, with GDP per capital of USD 238, and illiteracy rate of 55%.Thus it has become a major challenge for Nepalese financial institutions to grow in retail lending like portfolio investment. Moreover, excluding few big cities like Kathmandu, Biratnagar, Pokhara etc. people have less knowledge about portfolio investment and their tendency for purchasing the vehicles for private and commercial purpose.

iii. Technological Environment

Technical environment refers to all the technical surrounding that influence the activities of portfolio. Technology is the method of converting resources into product. It consists of skills, methods and equipments. It includes inventions and innovation.

There has been dramatic development in new technology. The application of computerized system in providing the portfolio investment services and record keeping has increased the efficiency and speed of the banks. The highly advanced and sophisticated technologies have introduced various automated, stylish and ecumenical machines.

Moreover banks are enhancing MIS capabilities to track key performance indicators in as much granular form as possible.

iv. Economical environment

A business is an economic environment. Economic environment refers to all the economic surroundings that influence business activities. It consists of economic parameters that together make or breaks the climate for the survival and growth of business. The portfolio business of financial institutions in Nepal is influenced by various components of macro economical environment. The important components of economic environment of portfolio business of Nepal are:

a) Economic system

Economic system determines the scope of private sector participation and market forces in business .in context of Nepal, Nepal Rastriya Bank regulates all the financial institutions. But the policies of portfolio investment are not planned, controlled or guided by NRB. Free market economy is adopted. Individual financial institutions make their own portfolio investment policies which are approved by NRB. The competitive market mechanism guides the business decisions.

b) Economic policies

Economic policies of government significantly influence and guide business policies. Economic policies aim to achieve economic growth, stability, employment generation and balance in external payments. Changes in economic policies influence business activities and thus affect the portfolio investment disbursement.

Monetary policy makes a significantly effect in the field of portfolio investment. Money supply, interest rates, credit availability and exchange rates: all there influences consumer loan of financial institutions that includes portfolio investment. The factors of monetary policy influences level of spending and cost of capital of financial institutions and business organization.

The fiscal policy such as taxation on income, expenditure and capital exerts also play an important role. The taxation on the private investment is high. This has affected the portfolio investments by banks

c) Economic conditions

This indicates the health of the economy in which the business organizations operates. They fluctuate continuously and greatly influence business activities. Hence the factors such as income distribution, business cycle, inflation and stage of economic development have highly influenced the portfolio investment in banks and financial institutions.

The level and distributions of income affects expenditure, saving and investment which together influence the market potential of business organizations. Nepal has low per capital income of USD 220. In spite of this, due to the easy EMIs and affordable interest rate in the competitive market, many banks are able to attract consumers towards auto loan. “The income distribution in Nepal is highly skewed. The bottom 20%of household receives 3.7%of national income. The top 10% households claim 50%of national income. More than 40%people live below poverty line. The incidence of poverty is higher in hills and mountains, especially in remote areas.” This shows that people in the urban areas are prone to buy cars and commercial vehicles. This is one of the major reasons that the auto mobile department of most of the banks is located only in the urban areas like Kathmandu, Pokhara, and Biratnagar that has more market potentiality in the field of auto mobile lending.

Another economic factor inflation which raises the general prices also influences price, cost and profits of business organizations and purchasing power and demand of people for stocks.

Chapter III

Research Methodology

3.1 Introduction

Research is a systematic and organized effort to investigate a specific problem that needs a solution through activities of gathering, recording, analyzing and interpreting the data. Methodology refers to the methods and process applied. Hence, it can be said that research methodology is the application of various methods and process by a researcher through planned and systematic dealing of collection, recording, analyzing and interpretation of facts and figures in order to study or solve a problem with definite objective.

In order to examine the portfolio management of listed Nepalese commercial banks (i.e., NBL, Nabil Bank, NIC Bank, and EBL), we basically use secondary data (both internal and external). However, certain primary data are collected through interview and questionnaire methods. As the number of whole population of commercial banks is very large, a sample of listed banks is taken as sample for data analysis purpose in the research study. To find out the solution of problems, various statistical and financial tools and techniques are applied according to the nature of phenomenon. The present research study has been undertaken to evaluate the comparative study of portfolio management of listed commercial banks of Nepal. For this purpose, an appropriate research methodology should be applied and various techniques should be used to analyze the data. Therefore, this chapter describes the methodology that will be employed for the study.

In this research study, explanatory as well as analytical research work is done. The following are the major contents of research methodology.

3.2 Research Design

In order to accomplish the objective of research work successfully, an appropriate research design should be constructed. Choosing an appropriate research design is crucial. A research design is the plan of attack: what approach to the problem will be taken? What methods will be used? And what strategies will be most effective?[8] "Generally, research design is the structure and strategy of investigation conceived so as to obtain answer to research questions and to control the actual variance."[9] "A research design is the arrangement of conditions for collection and analysis of the data in a manner that aims to combine relevance to the research purpose with economy in procedure."[10]

Basically, the research design has two purposes i.e. first is to answer the research question or test research hypothesis and second is to control variance (maximization of experimental variance, control of extraneous variables and minimize the error variance). It sets up the framework to test the relation among variables.

Myriad of questions are to be answered in this research study and to fulfill the objectives of the study, a well research design will be done accordingly. This research study is mainly based on historical, descriptive and analytical research design. This research study also attempts to analyze the relationship between portfolio management of banks (dependent variable) and external environmental factors (independent variables). Hence, a correlation research design is used. Descriptive research design describes business structure, problem of portfolio

[8] Pant & Woolf, P.R. & H.K., Social Science Research & Thesis Writing, pp 92, 4th Edition

[9] Kerlinger F.N., "Research design", Meaning, purpose and principles, Foundation of behavioral research, pp 30, 2nd Edition

[10] Kothari, C.R. "Qualitative Technique", (New Delhi. V.P.H. India, 1989)

management, methods of portfolio management, etc. The analytical research design makes analysis of the gathered facts and information and makes a critical evaluation of it. Annual reports of respective banks, statistical report of NRB were collected from 2001 to 2007 for the analytical purpose.

3.3 Population and sample

In ancient times, money lenders, gold smith, etc. performed the functions of bank. In Rana reign, Tejaratha Adda was formed and in 1994 B.S. NBL was formed which brough the beginning of banking sector in modern form in Nepal. But the spread of banks began only with the establishment of NRB, the central bank of Nepal. After the adoption of economic liberalization in 2042 B.S., various joint venture banks emerged in Nepal. The first joint venture bank in Nepal is Nabil Bank Ltd. Now-a-days various finance companies merge together to form banks. There are many banks whose shares are traded actively in the stock market. Its not possible to study all the banks regarding the topic. So, sampling technique is used for selecting sample from population.

The population for this study comprises all the commercial banks (public and private banks) of Nepal. The total licensed commercial banks of Nepal are 25 till the date. The commercial banks traded in NEPSE index are:

i. Nepal Bank Ltd.
ii. Rastriya Banijya Bank
iii. Nabil Bank Ltd.
iv. Nepal Investment (Indosuez) Bank Ltd.
v. Standard Chartered Bank Nepal Ltd.
vi. Himalayan Bank Ltd.
vii. Nepal SBI Bank Ltd.
viii. Nepal Bangladesh Bank Ltd.
ix. Everest Bank Ltd.
x. Bank of Kathmandu Ltd.

xi. Nepal Credit & Commercial Bank Ltd.
xii. Lumbini Bank Ltd.
xiii. Nepal Industrial and Commercial Bank Ltd.
xiv. Machhapuchhere Bank Ltd.
xv. Kumari Bank Ltd.
xvi. Laxmi Bank Ltd.
xvii. Siddhartha Bank Ltd.
xviii. Agriculture Development Bank Ltd.
xix. Global Bank Ltd.
xx. Citizens Bank International Ltd.
xxi. Prime Commercial Bank Ltd.
xxii. Bank of Asia Nepal Ltd.
xxiii. Sunrise Bank Ltd.
xxiv. Development Credit Bank Ltd.
xxv. NMB Bank Ltd.

Out of above banks, two joint venture banks: Nabil Bank Ltd & Everest Bank Ltd and one private owned bank, Nepal Industrial and Commercial Bank Ltd. are taken as sample in the study. In addition, a government owned bank, Nepal Bank Ltd. is also taken for the study purpose in order to know the portfolio management of government sector in banking.

3.4 Data Collection Procedure

Most of the data collected in the research are secondary data. Annual reports of concerned commercial banks, publications of related banks, website of NEPSE and related banks and statistical report of NRB are used. Similarly, interview method and questionnaire method is also applied in order to collect primary data of sample banks.

3.5 Method of Analysis

Data collected from various sources are properly organized, analyzed and presented in the study. The analysis of sample banks' data are conducted according to the availability of data. Various financial and statistical tools have been applied to analyze the variables regarding the study. The analysis is also done by using ratio and risk analysis techniques for profitability and risk measures. Various calculated results obtained through financial and statistical tools are tabulated under different headings. After presentation of data, the results of sample banks are compared with each other and interpreted. Standard deviation and beta tests are used to test the risk of banks and correlation between these tests is done.

3.6 Tools for Analysis

3.6.1 Financial Indicators / Tools

I) *Investment to total deposit ratio*: Investment to total deposit ratio is calculated by dividing investment by total deposits. Investment includes investment in government securities, special bond of government treasury bill and others. The total deposit consists of total current deposit, fixed deposits, saving deposit.

II) *Loan and advance to total deposit ratio*: Loan and advance to total deposit ratio is calculated by dividing loans and advances by total deposits. Loan and advance consists of loans, advances, cash, etc. Total deposits consists of current deposits, saving deposits, fixed deposits, etc.

III) *Liquid fund balance to total deposit ratio*: The ratio is determined by dividing liquid fund balance by total deposits. Liquid fund balance includes cash in hand, foreign cash in hand, bank balance with NRB, balance with domestic bank balance.

IV) *Return on total assets ratio*: This ratio is calculated by dividing net profit after tax by total assets.

V) *Return of shareholder's fund ratio*: The ratio is calculated by dividing net profit available to equity shareholder by the total shareholders' fund. The shareholders' fund include paid up capital. General reserves and retained earning of surplus and general loss provision.

VI) *Market price per share (MPS):* There are mainly three types of market price available in Nepse index. They are high MP, low MP and closing MP. Closing Price is not an average price of high and low MP but rather it is calculated by considering the whole years' MP. For closing MP, trading report is followed. MP can be calculated as below:

Mathematically, MPS= $\frac{\text{Market Price of share}}{\text{No. of shares traded}}$

VII) *Return on common stock investment (R):*It is the annual realized return received on an investment and any change in market price , usually expressed in percentage of the beginning price of investment.

Mathematically, R= $\frac{D_t \Gamma (P_t - P_{t-1})}{P_{t-1}}$

Where, R= Actual realized return on common stock at time t

D_t= Cash dividend received at time t
P_t=Price of stock at time t (ending price)
P_{t-1}=Price of stock at time t-1 (beginning price)

3.6.2 Statistical tools

In order to evaluate the performance of an organization by creating ratios from the figures of different accounts consisting in balance sheet, profit and loss a/c, income statement, various statistical measures are used. These statistical tools will draw out the relationship between different variables related to the study. The brief description of each are as below:

i) *Mean /expected or average rate of return ($\overline{X}$)*

Average is one of the typical value around which others items of distribution congregate. It gives a bird's eye view of the image of huge mass of numerical data. In the study, we use mean value of dividend, lagged earning price ratio, stock price and retained earning. In case of probability, it is the weighted average rate using probability of each rate of return as weight. In case of historical data, it is the summation of rate of various years by number of years. The equation for calculating the mean value is :

$$\overline{X} = \frac{X_1 + X_2 + \ldots\ldots\ldots\ldots + X_n}{N} = \frac{X}{n}$$

Where,

$\overline{X}$ = mean
ΣX = sum of observation
N = no. of observations

ii) *Standard deviation*:

It is a statistical measure which is used to measure risk from holding a single asset. It gives the idea of homogeneity or heterogeneity of the distribution and measures large dispersion of return and high risk and vice-versa. It is defined as positive square root of the arithmetic mean of the square of the deviation of the given distribution from their A.M. and is denoted by small sigma (σ). Mathematically, standard deviation is calculated as below:

$$\sigma = \sqrt{\frac{\sum(X - \overline{X})^2}{n-1}}$$

where, σ= standard deviation of returns on stock during the time period n

iii) *Coefficient of variation (C.V):*

C.V. is the measure of dispersion that is used in comparing the risk of assets with expected return. It shows risk per unit of return and provides a basis for the comparison when expected return on the alternatives are same. It is the ratio of standard deviation of a distribution to the mean of that distribution and measures relative risk.

Mathematically, C.V.= $\frac{\pm}{\bar{X}}$

Higher C.V., higher risk.

Lower C.V., lower risk.

iv) *Linear trend analysis*:

It is important to analyze the trends to know whether the financial situation is likely to improve or deteriorate. To do a trend analysis, one simply plots a ratio overtime. Common size analysis and percent change analysis are other two techniques that can be used to identify the trends in financial statement. Common size analysis is also useful for comparative study.

v) *F- Distribution*

The Fisher's F-distribution is defined as a distribution of the ratio of two independent chi-square variable each divided by the corresponding degrees of freedom.

Like other statistics t, χ^2 etc., if the null hypothesis is true, then F statistic has a particular sampling distribution. The shape of F-distribution depends on the value of degrees of freedom and the value of F lies between 0 to ∞(zero to infinity). However, F-distribution is generally skewed to the right and tends to be more symmetrical as the number of degrees of freedom (v_1, v_2) increase.

F-TEST OR VARIANCE RATIO TEST

The F-test, sometimes called variance ratio test, is based on F-distribution. the steps used in testing the significance of two sample estimates of a population variance are as follows:-

Step 1. Formulate the null and alternative hypothesis.

$H_0: \sigma_1^2 = \sigma^2_2 = \ldots\ldots\ldots\ldots\ldots\ldots = \sigma^2$

i.e., the independent estimates of the common population variance do not differ significantly.

$H_1: \sigma^2_1 \neq \sigma^2_2$

Step2 Under H_0, compute the test statistic

$F = S_1^2/S_2^2$ If $S_1 > S_2$

$F = S_2^2/S_1^2$ if $S_2^2 > S_1^2$

where , $S_1^2 = 1/(n_1-1)*\Sigma(X_1-X_1)^2$

$S_2^2 = 1/(n_2-1)*\Sigma(X_2-X_2)^2$

Step 3. Write down the tabulated value of F for (n_1-1), (n_2-1) degree of freedom at α=5% level of significance.

Step 4. Make decision by following decision rules:

i. If the computed value of F is less than its tabulated value, H_0 is accepted.
ii. If the computed value of F is greater than its tabulated value, H_1 is accepted.

This testing is used for testing the hypothesis of the research study.

CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

4.1 INTRODUCTION:

This chapter includes the presentation of collected data and their analysis. The main object of this chapter is to compare and analyze the financial performance of NBL, NABIL BANK Ltd., NIC BANK and EBL over the fiscal year 2001 to 2007 and identify the portfolio investment pattern of sample banks. The financial performance of the sample banks is measured in terms of investment flow from its total deposit.

We shall study this chapter by dividing it into four parts. The first part includes calculation of various ratios like investment to total deposit ratio, loans and advances to total deposit ratio, return on total assets ratio, return on shareholder' fund ratio, etc. the second part includes investment portfolio analysis where composition of marketable securities is divided into government securities, share & debenture and NRB bond. The third part includes loan and advance portfolio analysis in which the loans and the advances provided by banks to various sectors i.e. government, private, priority and deprived sector, etc has been analyzed. The forth part includes risk and return analysis where the attempt has been made to estimate systematic risk and expected return. It also shows the trend about investment, loan and advances and total deposit of sample banks. Various tabulation and graphs are drawn for analysis and interpretation of data.

4.2 ANALYSIS OF RATIOS:

Ratio analysis is one of the most important tools of financial analysis which shows the significant relationships between various items of balance sheet and helps to know the financial position and performance of the company. It helps the company itself as well as the outside suppliers of capital investor and creditors to undertake financial analysis. Financial ratio involves two types of comparisons: first, comparison of present ratio with past and expected future ratio of same company and second, comparison of one company with another company.

Financial ratio can also be used for analyzing and assessing the performance and position of bank. Here we use financial ratio for second type of comparison i.e. the financial ratios of NBL, NABIL, EBL and NICBL are compared. But only certain important financial ratios are being discussed and analyzed.

4.2.1 INVESTMENT TO TOTAL DEPOSIT RATIO:

It is the ratio of investment & total deposit of bank. Investment includes investment in government bond, government treasury bills, NCB bond and others. Deposit includes current, saving, fixed, call deposit and other deposits.

The total investment and total deposit of sample banks i.e. NBL, NABIL, EBL and NICBL from 2001 to 2007 can be tabulated as below.

Table No. 4.1

Total Investment and Total deposit of sample banks

Fiscal Year	Total Investment				Total Deposit			
	NBL	EBL	NICBL	NABIL	NBL	EBL	NICBL	NABIL
2001	6776.30	826.70	511.40	2752.70	35528.60	4574.50	3575.80	15838.90
2002	7152.80	1628.60	753.40	5202.10	34060.10	5461.10	3165.30	15370.60
2003	11782.60	1616.50	1153.30	3687.80	34737.40	6694.90	3143.90	13437.70
2004	11023.70	2483.50	1760.70	3697.10	36288.50	8064	5146.40	14098
2005	13889.80	2119.70	1572.90	4353.30	34744.20	10097.80	6243.30	14586.80
2006	14421.40	4201.30	2479.90	6174.80	35444.90	13802.50	8765.80	19348.40
2007	16283.30	4985.10	1499.80	8952.30	38715.20	19097.70	10068.30	23342.40

{Source: Banking & Financial Statistical Report of NRB No.49}

Table No. 4.2

Total investment to total deposit ratio in %

Fiscal Year (Mid July)	**Sample Banks**			
	NBL (%)	EBL (%)	NICBL (%)	NABIL (%)
2001	19.07	18.07	14.30	17.38
2002	21	29.82	23.80	33.85
2003	33.92	24.15	36.68	27.44
2004	30.38	30.80	34.21	26.22
2005	39.98	20.99	25.19	29.84
2006	40.69	30.44	28.29	31.91
2007	42.06	26.10	14.90	38.35
Mean(X)	32.44	25.77	25.34	29.28
Standard Deviation(σ)	9.43	4.97	8.65	6.64
C.V.	0.29	0.19	0.34	0.23

Industry's average mean = 22.24%

Industry's average standard deviation = 5.01%

C.V. = 0.225

The comparative table No. 2 reveals that the mean investment to total deposit ratio of NBL is the highest i.e. 32.44% and NICBL is the lowest i.e. 25.34% which is near to the mean investment to total deposit ratio of EBL i.e. 25.77%. This shows that NBL has utilized the total deposit most effectively in investing in comparison to other three banks. But while comparing with the average mean of all the banks with the mean of all the commercial banks i.e. 22.24%, the deposit utilization of all the sample banks seem to be effective.

While comparing the C.V. of all the sample banks, the risk per unit of NICBL is the highest i.e. 0.34 which shows the highest fluctuation in investment to deposit ratio. While EBL has the lowest fluctuation i.e. 0.19. But while comparing the C.V. of sample banks with commercial banks' C.V. i.e. 0.225, the fluctuation of NBL, NABIL and NICBL seems to be greater while EBL has the minimum fluctuation i.e. 0.225. EBL seems to be consistent.

The above tabulated data of Table No. 2 can be shown graphically in following way.

Figure No. 4.1

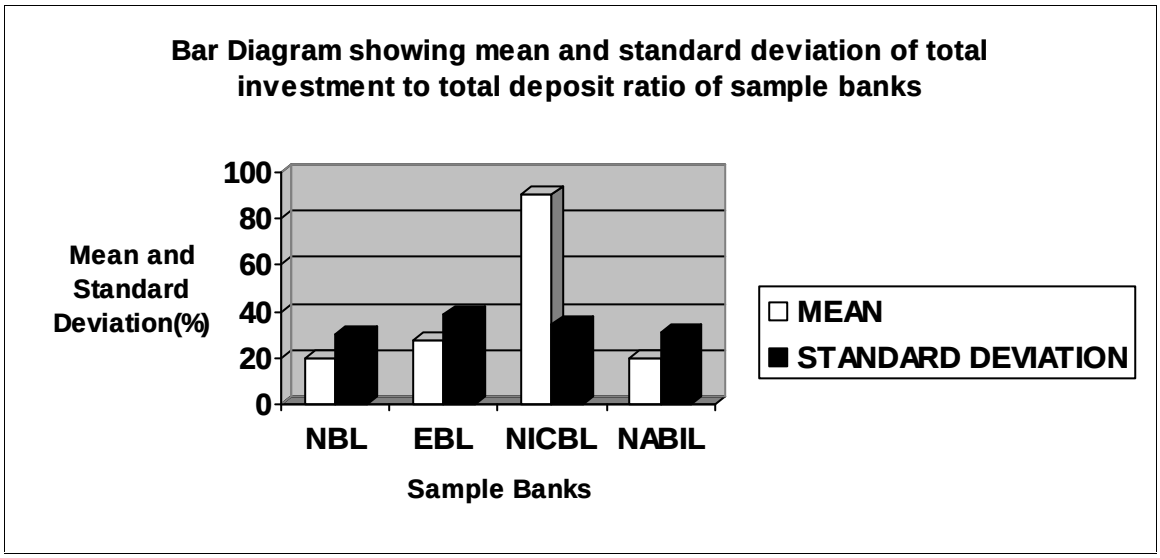
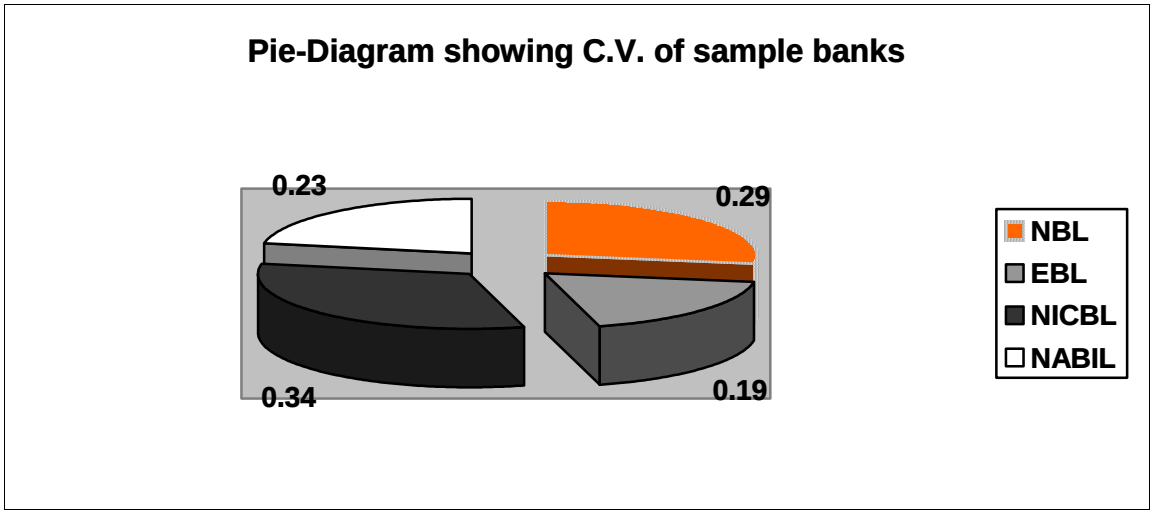


Figure No. 4.2



4.2.2 LOAN AND ADVANCES TO TOTAL DEPOSIT RATIO:

Loan and advances to total deposit ratio, is expressed as ratio of loan and advances to government, private sector and financial institution, bills purchased. Total deposit consists of current, saving, fixed, call deposit and other deposits. This ratio measures how effectively the bank utilizes its total deposit. Following table shows the ratio of loan and advances to total deposit ratio of sample banks:-

Table No. 4.3

Calculation of loans and advances to total deposit ratio in %.

Fiscal Year (Mid July)	Sample Banks (%)			
	NBL	NABIL	NICBL	EBL
2001	62.10	53.27	73.33	64.79
2002	61.65	47.68	74.87	72.69
2003	55.46	61.53	81.56	75.15
2004	52.75	62.21	72.80	75.85
2005	53.33	77.88	78.70	78.67
2006	36.09	68.63	78.74	73.57
2007	35.52	68.13	90.67	73.83
Mean (X)	50.99	62.76	78.67	73.51
Standard deviation(σ)	11	10.09	6.19	4.31
C.V.	0.22	0.16	0.08	0.06

{Source: Banking & Financial Statistical Report of NRB No.49}

Industry's average mean =62.34%

Industry's average standard deviation = 3.27%

C.V. =0.05

The loan and advances to total deposit ratio of sample banks during various fiscal years can be shown in following trend line:

Figure No. 4.3

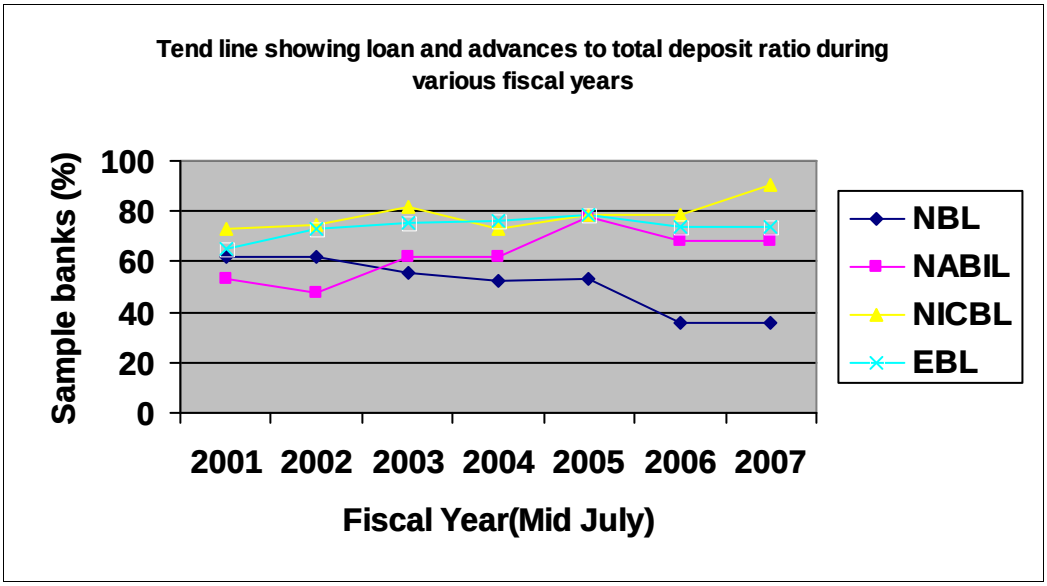


Figure No. 4.4

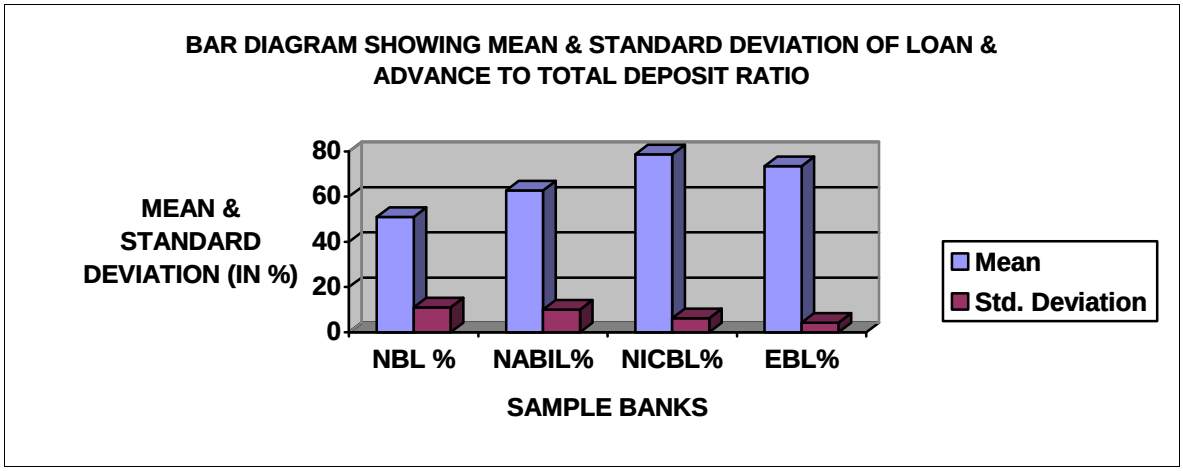
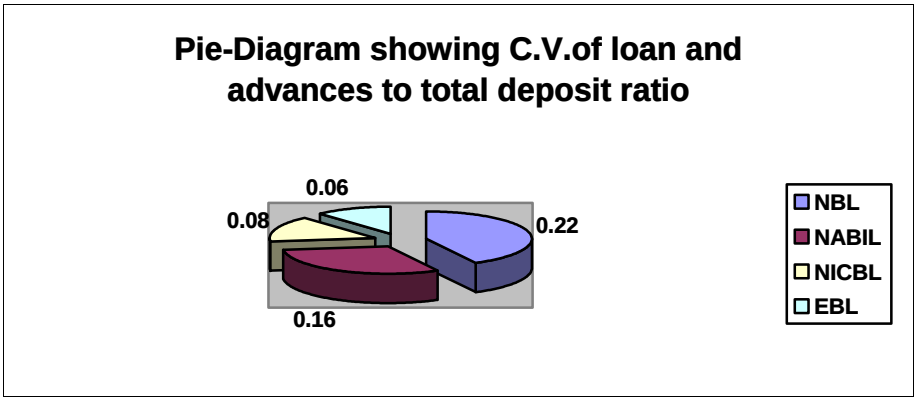


Figure No. 4.5



The above table and diagram indicate that among four sample banks, the mean loan & advances to total deposit ratio of NICBL is the highest i.e. 78.67% while NBL has the lowest i.e. 50.99% which shows that NICBL mobilizes its total deposit in loans & advances effectively among all the sample banks. But while comparing with industry's average i.e. 62.34% the three sample banks i.e. NABIL, NICBL, EBL have effective deposit utilization in loan & advances.

When we compare C.V. of all four sample banks, the C.V. of EBL is the lowest i.e. 0.06 while NBL has the highest i.e. 0.22. This indicates that the NBL has the highest fluctuation and EBL has the minimum fluctuation. But while comparing with industry's average C.V., the fluctuation of all the sample banks seems to be greater.

In conclusion, NICBL seems to have effective deposit utilization in loan & advances among all four sample banks. In contrary to it, NBL seems to have the lowest deposit utilization.

4.2.3. LIQUID FUND BALANCE TO TOTAL DEPOSIT RATIO:

It is the ratio which is calculated by dividing liquid fund balance by total deposit. This ratio shows how effectively the bank is maintaining its liquidity. Liquid fund balance includes cash balance, bank balance and money at call. Total deposit includes current, saving, fixed, call and other deposits. The liquid fund balance to

total deposit of sample can be shown by following table and then by different diagrams & graphs.

Table No. 4.4

Liquid fund balance to total deposit ratio in %

Fiscal Year	NBL	NABIL	EBL	NICBL
2001	22.66	39.68	18.02	15.08
2002	23.68	32.53	28.18	19.16
2003	13.73	30.97	17.27	11.06
2004	17.76	27.78	10.78	8.72
2005	16.94	9.22	16.08	17.54
2006	15.57	12.22	11.73	12.52
2007	18.09	8.41	17.44	8.53
Mean(X)	18.35	22.97	17.07	13.23
Standard deviation(σ)	3.62	12.74	5.68	4.18
C.V.	.2	.56	.33	.32

{Source: Banking & Financial Statistical Report of NRB No.49}

Industry's Average Mean = 19.66%
Industry's Average standard deviation =6.79%
Industry's Average = .35

The above table of liquid fund to total deposit ratio can be shown in following trend line, bar-diagram and pie-chart:

Figure No. 4.6

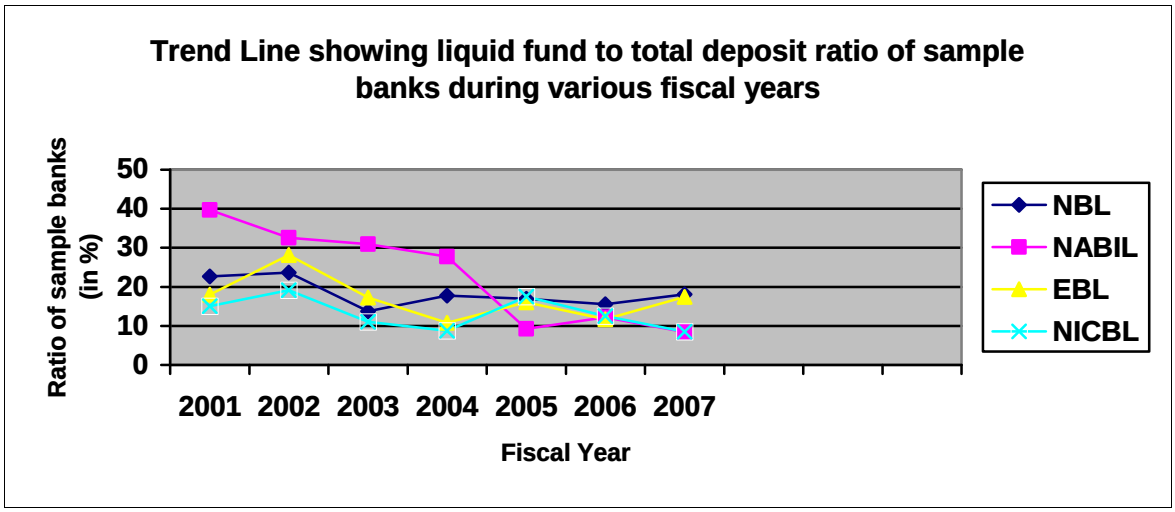


Figure No. 4.7

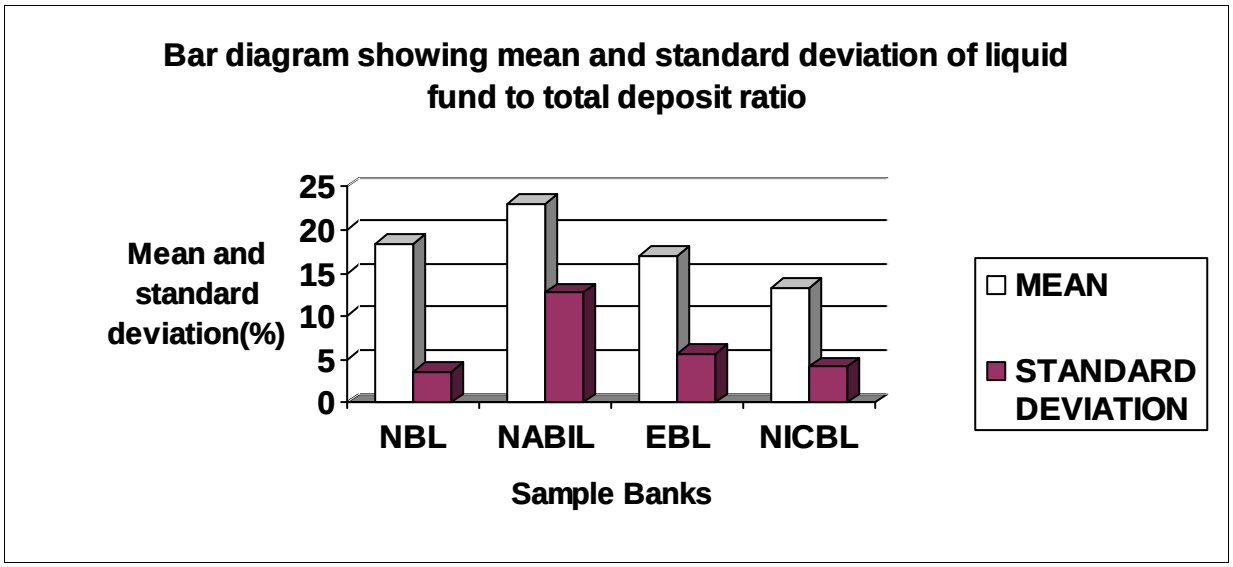
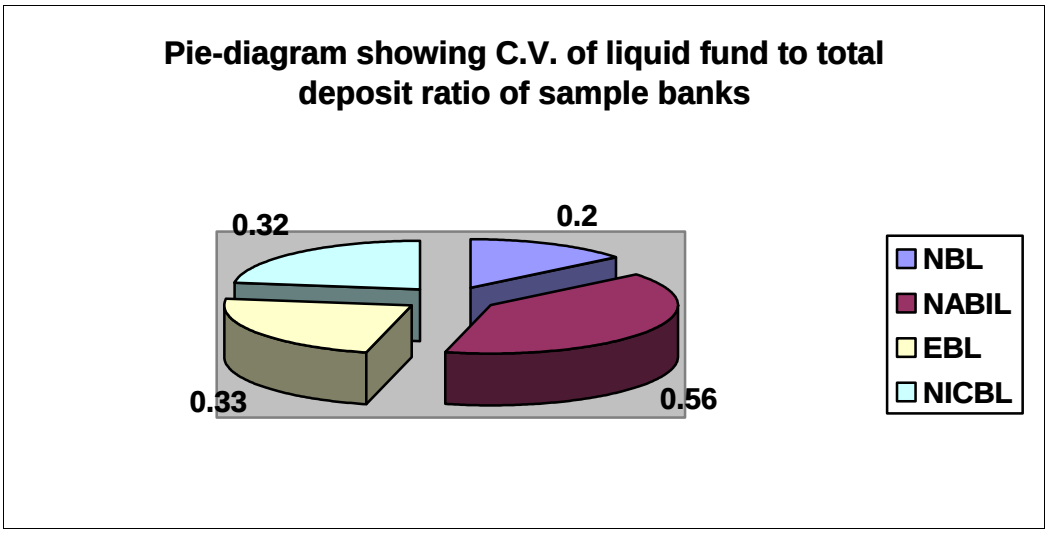


Figure No. 4.8



The above tabulation , diagrams and graphs indicates that the mean liquid fund to total deposit of NABIL bank is the highest i.e. 22.27% which is also greater than industry's average mean i.e. 19.6% which shows that liquidity position is affective in comparisons to other three sample banks.

When compared with C.V. of all four banks, NABIL bank has the highest C.V. i.e. 0.56 which is also greater than the industry's average C.V. i.e. 0.35 which indicate high fluctuation. The C.V. of NBL is the lowest i.e. 0.20 and is less than industry's C.V., which indicates the minimum fluctuation.

In conclusion, NBL seems to have effective liquidity position as its mean liquid fund to total deposit is near to 19.66% i.e.18.35% and has lowest fluctuation too.

4.2.4. RETURN ON TOTAL ASSETS RATIO:

It is the ratio of net profit after interest & tax and total assets. The ratio measures effectively financial resources are invested in firm's assets to generate profitability. Higher ROA reflects the efficiency of bank in using its overall resources

Table No. 4.5
Return to total assets ratio in % of sample banks

F.Y.	EBL	NABIL	NICBL	NBL
2003/04	1.49	2.72	1.15	NA*
2004/05	1.43	3.01	1.52	NA
2005/06	1.48	2.84	.93	NA
2006/07	1.38	2.47	1.35	NA
2007/08	.39	.52	.43	NA
Mean	1.23	2.31	1.08	NA
Standard deviation	.47	1.02	.42	NA
C.V.	.38	.44	.39	NA

Industry's average mean = 1.54%
Industry's average C.V. = 0.40
{Source: www.nepalstock.com}

***NA =Not Available**

The comparative Table listed in table No.5 shows that ROA of NABIL is the highest i.e. 2.31% while NICBL has the lowest ROA i.e. 1.08%. This shows that NABIL Bank has been utilizing the assets effectively than other sample banks.

While comparing C.V. of sample banks, NABIL Bank seems to have greater fluctuation than other 2 banks i.e. NABIL Bank has C.V. of 0.44 while comparing the calculated data with industry's average mean of 1.54%. NABIL Bank has the

greatest ROA than industry's average mean and other banks have lower ROA which shows good utilization of assets only by NABIL Bank and performance below standard by EBL & NICBL.

While comparing industry's average C.V. i.e. 0.40, NABIL Bank has greater fluctuation of 0.44 and other two Banks i.e. EBL & NICBL have lower fluctuation as compared to industry's average C.V.

In conclusion, it can be said that although NABIL has better mean ROA, it has more fluctuation and EBL & NICBL although have moderate ROA they have low fluctuation.

4.3. INVESTMENT PORTFOLIO ANALYSIS:

Investment is a commitment of money and other resources that are expected to generate additional money and resources in future. The investment can be of real assets i.e. tangible assets and/or financial assets. In order to generate profit, banks also invest their resources certain sectors. Their major share of investment is in government securities, NRB Bond and shares & debenture. Here, we shall attempt to analyze and compare the investment portfolio of sample banks on the basis of these three investment areas.

The investment portfolio of sample banks can be tabulated as below:-

Table No. 4.6
Investment portfolio of sample banks in %.

F.Y. (Mid July)	NBL			NABIL			NICBL			EBL		
	Govt. securities	***NRB Bond***	***Share & Debentures***	***Govt. securities***	***NRB Bond***	***Share & Debentures***	***Govt. securities***	***NRB Bond***	***Share & Debentures***	***Govt. securities***	***NRB Bond***	***Share & Debentures***
2001	99.17	-	0.83	99.28	-	0.72	100	-	0	99.55	-	0.45
2002	99.47	-	0.53	79.21	-	20.79	90.26	-	9.74	99.23	-	0.77
2003	99.49	-	0.51	99.34	-	0.66	29.23	-	6.77	98.94	-	1.06
2004	96.10	-	3.90	99.34	-	0.66	70.16	-	29.84	99.31	-	0.69
2005	99.55	-	0.45	61.26	-	38.74	75.93	-	24.07	99.08	-	0.92
2006	81.66	-	18.34	37.67	-	62.33	70.83	-	29.17	84.46	-	15.54
2007	81.23	-	18.77	57.22	-	42.78	66.97	-	33.03	94.37	-	5.63
Mean	93.81	-	6.19	76.19	-	23.80	81.05	-	18.95	96.42	-	3.48
Standard deviation	8.54	-	8.51	24.77	-	24.76	13.16	-	13.16	5.58	-	5.59
C.V.	.09	-	1.32	0.33	-	1.04	0.16	-	0.69	0.06	-	1.61

[Source :Banking and financial statistics, NRB, Mid July 2007, No.49]

The mean and standard deviation of investment portfolio of sample banks of above comparative table No.6 can be shown in following bar diagram and trend line:

Figure No. 4.9

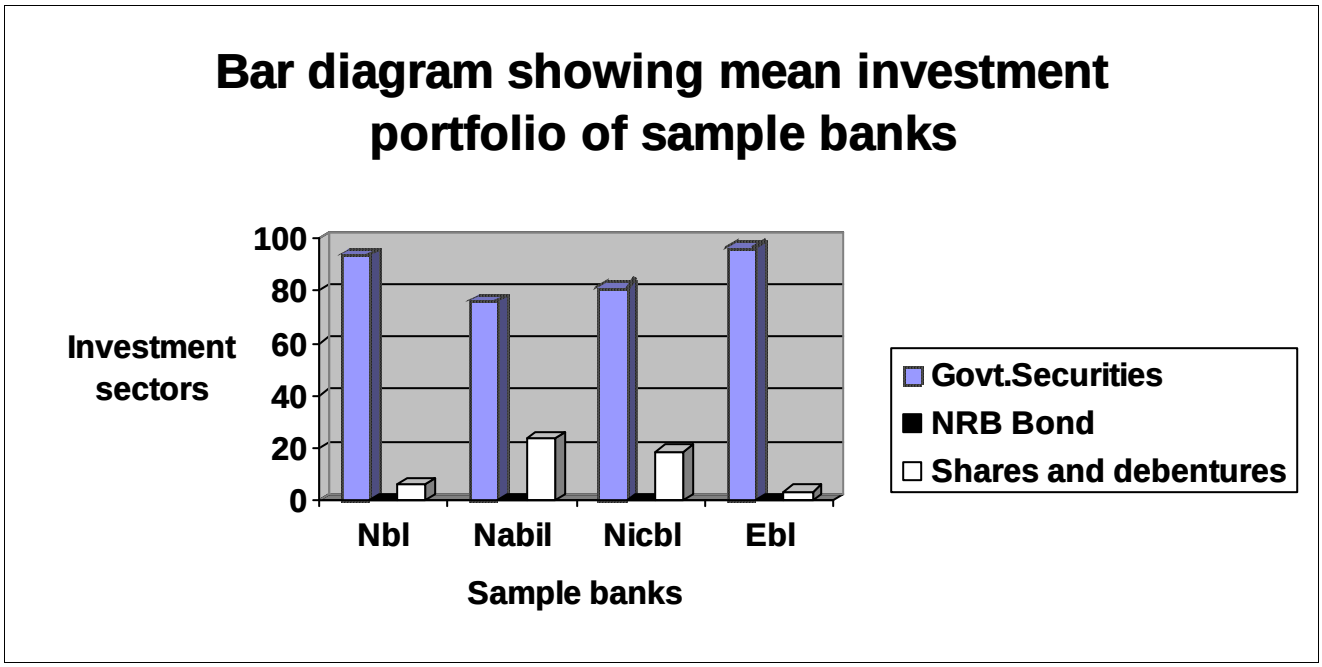
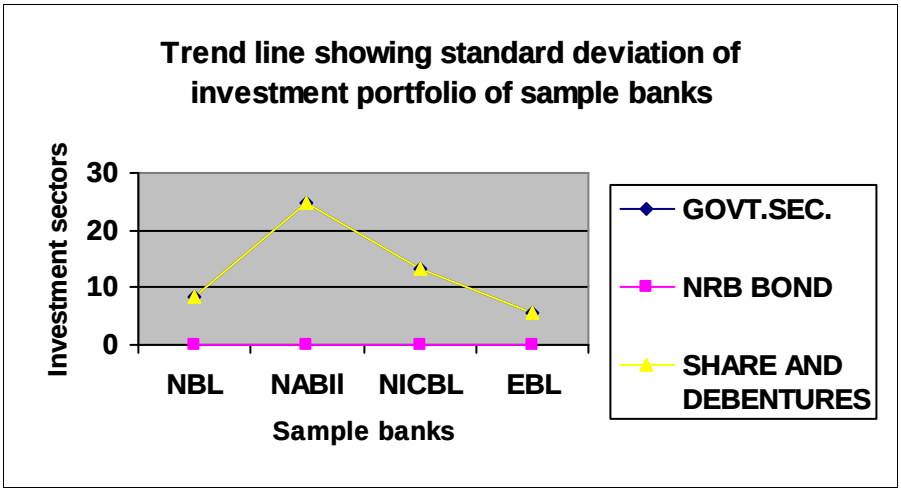


Figure No. 4.10



The C.V. of investment portfolio of sample banks can be shown following pie-chart:

Figure No. 4.11

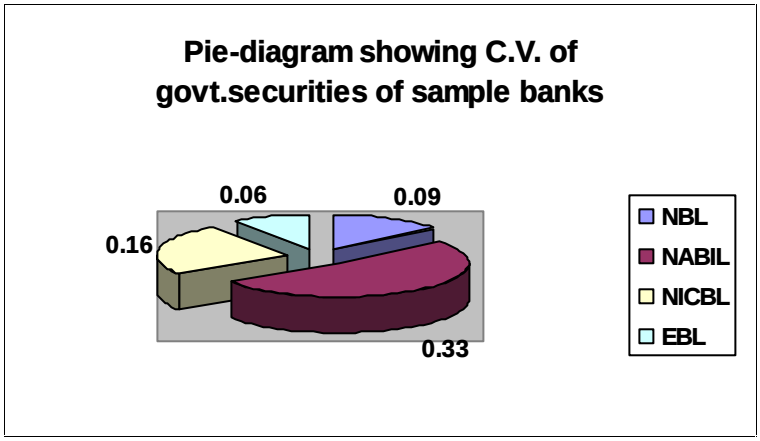
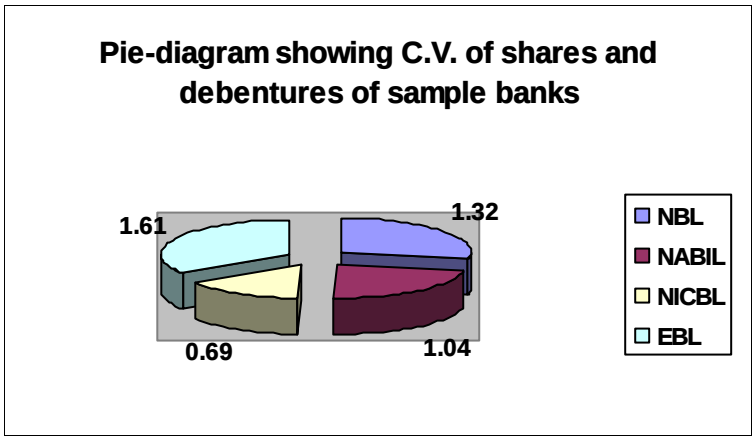


Figure No. 4.12



From the above table and figures, it is clear about the fact that the investment by banks in NRB bond is NIL. Most of the investment of banks is in government securities and minimum is in shares and debenture.

Now, let's analyze the sample banks in brief.

- NBL: - The table No.-shows that NBL is investing high amount in government securities. The mean % of investing in government securities

is 93.81% while of share and debenture is 6.19%. The C.V. in government securities & shares and debenture is 0.09 and 1.32 respectively. The investment in share & debenture has greater fluctuation than in government securities.

- NABIL: - Like NBL, NABIL Bank's most of the investment is in government securities. The mean % of investment in government securities is 76.19% and in share is 23.8%. The C.V. of government securities and share is 0.33 & 1.04 respectively which shows greater fluctuation in share than in government securities.
- NICBL: - Similar to NBL & NABIL, NICBL most of the investment is in government securities. The mean % is 81.05% & 18.95% for government securities and shares respectively. The C.V. of government securities and shares is 0.16 & 0.69 respectively which shows greater fluctuation is shares.
- EBL: - Most of investment is in government securities. The mean % is 96.42 & 3.48 for government securities and shares respectively. The C.V. of government securities and shares is 0.06 & 1.61 respectively which also shows greater fluctuation in shares.

In conclusion, it can be said that the fluctuation of all the four sample banks in investing in share is greater. But in comparing all the sample banks, NICBL is investment seems to be consistent enough than other three banks.

4.4 LOAN AND ADVANCE PORTFOLIO ANALYSIS:

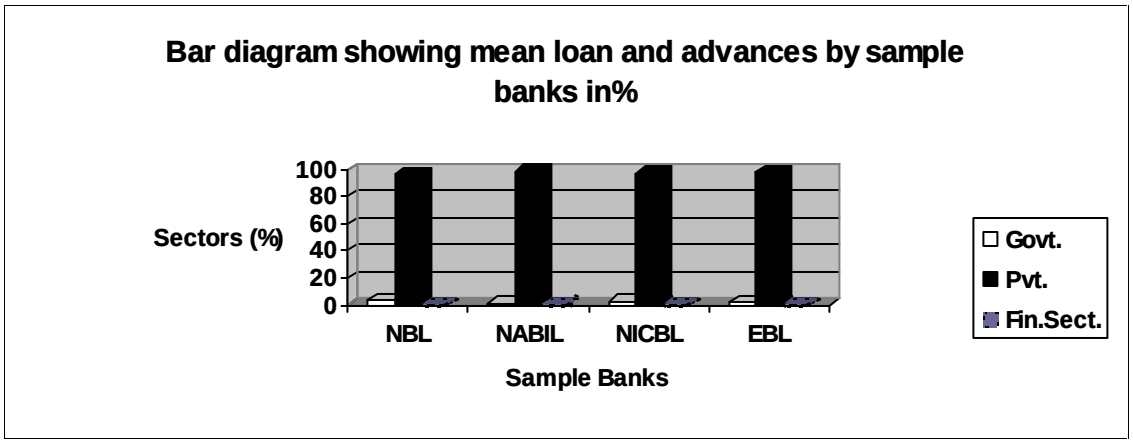
Since the main purpose of this report is to analyze the portfolio management of sample banks. In this chapter we shall also attempt to compare and analyze the loan and advance portfolio. Generally, commercial banks provide loan and advances to government organ, private sector and financial institutions against securities of movable and immovable assets of borrowers. Following table shows loan and advances of sample banks during various years.

Table No. 4.7
Loan and advances in %

F.Y. (Mid July)	NBL			NABIL			NICBL			EBL		
	Govt.	*Pvt.*	*Financial Sector*	*Govt.*	*Pvt.*	*Financial Sector*	*Govt.*	*Pvt.*	*Financial Sector*	*Govt.*	*Pvt.*	*Financial Sector*
2001	2.75	97.25	-	1.28	98.72	-	5.83	94.17	-	-	100	-
2002	3.14	96.86	-	0.95	99.05	-	2.15	97.85	-	-	100	-
2003	0.40	99.60	-	0.27	99.73	-	1.98	98.02	-	1.19	98.81	-
2004	2.57	97.43	-	0.24	99.76	-	1.21	98.79	-	1.13	98.87	-
2005	3.28	96.72	-	0.54	99.46	-	2.55	97.45	-	-	100	-
2006	6.28	93.72	-	2.76	97.24	-	1.53	98.47	-	4.88	95.12	-
2007	5.55	92.87	1.58	0.39	97.07	2.54	1.57	94.71	3.72	4.57	92.66	2.77
Mean	**3.42**	**96.35**	**0.23**	**0.92**	**98.72**	**0.36**	**2.40**	**97.07**	**0.53**	**1.68**	**97.92**	**0.40**

The above table of loan and advances portfolio of sample banks can be shown in following bar diagram given below: -

Figure No. 4.13



From above table and diagram, it is clear that most of the commercial banks provide loans and advances to private sector and least to financial institution.

In case of NBL, the mean of loan and advance portfolio in government sector, private sector and financial sector is 3.42%, 96.35% and 0.92% respectively.

In case of NABIL, the mean of loan and advance portfolio in government sector, private sector and financial sector is 0.92%, 98.72% and 0.36% respectively.

In case of NICBL, the mean of loan and advance portfolio in government sector, private sector and financial sector is 2.40%, 97.07% and 0.53% respectively.

In case of EBL, the mean of loan and advance portfolio in government sector, private sector and financial sector is 1.68%, 97.92% and 0.40% respectively.

4.5 ANALYSIS AND COMPARISON OF SAMPLE BANKS ON THE BASIS OF MPS & EPS: -

In this part, we shall analyze the sample banks (NICBL, NABIL BANK AND EBL) on the basis of MPS and EPS of respective fiscal years and compare with each other. Comparative analysis of return and unsystematic risk is performed here.

NABIL Bank Ltd. : -

Table No. 4.8
Calculation of expected return (X), standard deviation (σ) and coefficient of variation (C.V.)

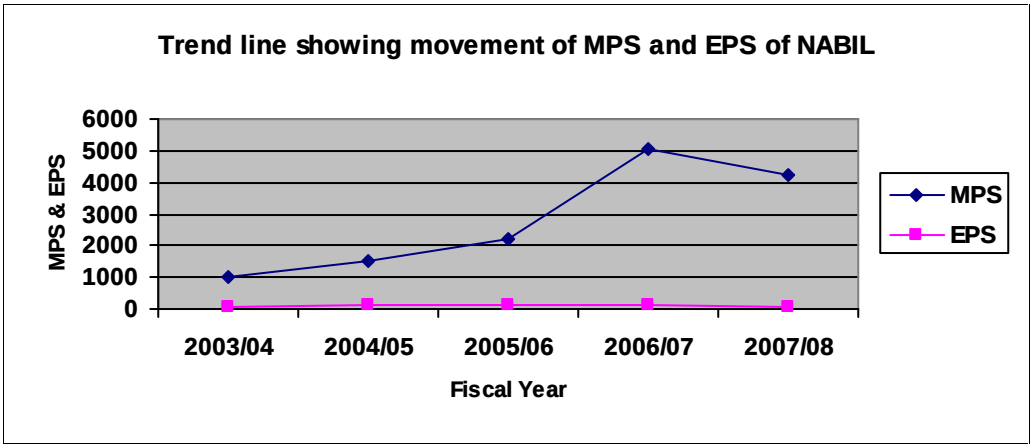
F.Y.	Closing MPS	Total Dividend	$R = \frac{D_t + (P_t - P_{t-1})}{P_{t-1}}$	(R – X)	$(R - X)^2$	EPS
2003/04	1000	65	-	-	-	92.61
2004/05	1505	70	0.58	0.36	0.1296	105.41
2005/06	2240	85	0.55	0.33	0.1089	129.21
2006/07	5050	100	0.13	-0.09	0.0081	137.08
2007/08	4263	-	-0.16	-0.31	0.0961	31.68
					0.3427	

Expected return, $\overline{X} = \frac{R}{n} = \frac{1.1}{5} = 0.22 = 22\%$

Standard Deviation, $\pm \sigma = \sqrt{\frac{(R - \overline{X})^2}{n - 1}} = \frac{0.3427}{4} = 0.2927 = 29.27\%$

$$C.V. = \frac{\pm \sigma}{\overline{X}} = \frac{0.2927}{0.22} = 1.33$$

Figure no. 4.14



The realized return of NABIL Bank is the highest in the F.Y. 2004/05 i.e. 58%. The highest MPS is in the year 2006/07 i.e. Rs. 5050. The highest EPS is in the year 2006/07. This may be due to distribution of cash dividend rather than stock dividend by the bank and also due to highest MPS.

The expected return is 22 %, standard deviation is 29.27% and C.V. is 1.33.

NIC Bank Ltd. : -

Table No. 4.9

Calculation of expected return (X), standard deviation (σ) and coefficient of variation (C.V.)

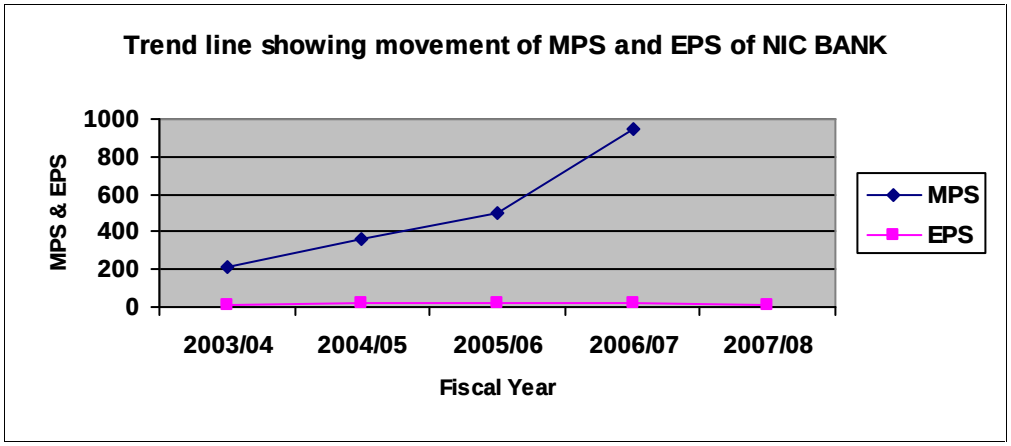
F.Y.	Closing MPS	Total Dividend	$R = \frac{D_t + (P_t - P_{t-1})}{P_{t-1}}$	(R – X)	$(R - X)^2$	EPS
2003/04	218	-	-	-	-	92.61
2004/05	366	10	0.72	0.36	0.1296	105.41
2005/06	496	0.53	0.36	0.33	0.1089	129.21
2006/07	950	1.05	0.92	-0.09	0.0081	137.08
2007/08	-	-	-	-0.31	0.0961	31.68
			2		0.3744	

Expected return, $\overline{X} = \frac{R}{n} = \frac{2}{5} = 0.4 = 40\%$

Standard Deviation, $\pm X\sqrt{\frac{(R Z \overline{X})^2}{n Z 1}} X\frac{0.3744}{4} X0.31 X31\%$

$$C.V. X\frac{\pm}{\overline{X}} X\frac{0.31}{0.4} X0.77$$

Figure No. 4.15



The realized return of year 2006/07 is the highest i.e. 92%. Similarly, MPS & EPS of the same year is the highest i.e. Rs. 950 & Rs. 240 respectively. This may be the reason for the declaration of the 'Bank of the Year 2007' from London.

The bank has the expected return of 40%, standard deviation of 31% and C.V. is 0.77.

EBL: -

Table No. 4.10

Calculation of expected return (X), standard deviation (σ) and coefficient of variation (C.V.)

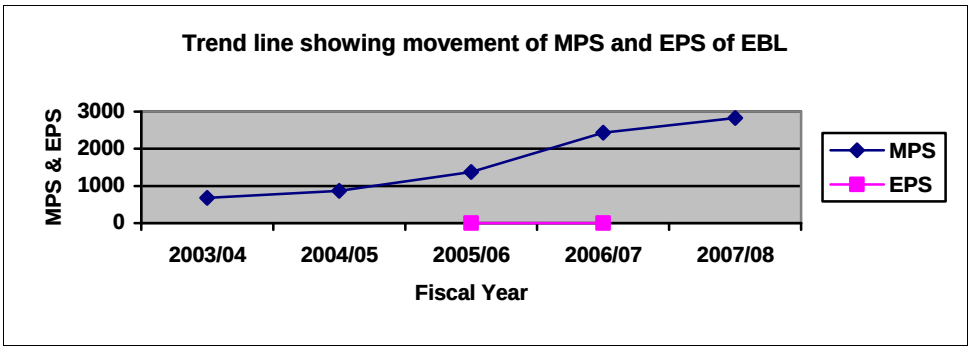
F.Y.	Closing MPS	Total Dividend	$R = \frac{D_t + (P_t - P_{t-1})}{P_{t-1}}$	$(R - X)^2$	EPS
2003/04	680	-	-	-	-
2004/05	870	-	0.28	0.13	-
2005/06	1379	25	0.61	0.06	0.4
2006/07	2430	10	0.77	0.17	0.13
2007/08	2830	-	0.16	0.0016	-
			1.82	0.3616	

Expected return, $\bar{X} = \frac{R}{n} = \frac{1.82}{5} = 0.36 = 36\%$

Standard Deviation, $\pm \sigma = \sqrt{\frac{(R - \bar{X})^2}{n - 1}} = \frac{0.3616}{4} = 0.3 = 30\%$

$C.V. = \frac{\pm \sigma}{\bar{X}} = \frac{0.3}{0.36} = 0.83$

Figure No.4.16



The highest realized return is 77% in the year 2006/07. The bank has declared dividend only in 2005/06 and 2006/07. The highest EPS is in the year 2006/07 i.e. 0.13 which may be due to declaration of stock dividend. The highest MPS is in the year 2007/08 i.e. Rs. 2830.

The expected return of EBL is 36%, standard deviation is 30 % and C.V. is 0.83.

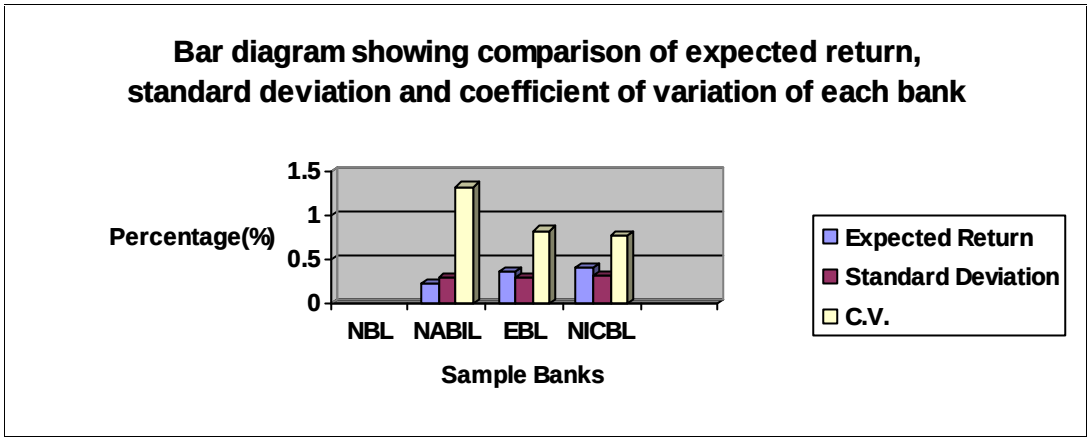
Comparative analysis of return and unsystematic risk is performed here. Following table shows expected return, standard deviation and coefficient of variance of each bank.

Table No. 4.11

Banks	Expected Return	Standard Deviation	Coefficient of variation	Remarks
NBL	NA	NA	NA	-
NABIL	22%	29.27%	1.33	Lowest return, high risk
EBL	36%	30%	0.83	Moderate return, moderate risk
NICBL	40%	31%	0.77	Moderate return, moderate risk

The above table indicates that investors expect low return and high risk from NABIL Bank. On the other hand, moderate return and moderate risk is expected by investors from EBL & NICBL.

Figure No.4.17



4.6 PRODUCT PORTFOLIO OF SAMPLE BANKS

Today banks are on their toes trying to woo customers by catering to their every need. Its services with a smile, no queues and a consumer's paradise in the world of banking with the number of private sector banks now in business, the traditional concept of banking in Nepal is being revolutionized. Banks are all out to retain their share of the market by improvising and customizing their services to suit the customers' banking needs. Traditionally, banks in Nepal have looked at general masses for deposits and at the corporate sectors for loans. However, today the view has drastically changed where general consumers are valued as both depositors and borrowers due to macro economic situation in Nepal. Today different types of deposits schemes and various financing loans like direct housing finance, car loan, auto loan, etc are being facilitated by banks. In addition to acceptance of deposits and granting loans, various products and services are launched by banks. Some products and services of sample banks have been mentioned in brief below:

- **NEPAL INDUSTRIAL AND COMMERCIAL BANK(NIC):**

Products and services:

The bank offers a wide range of retail, SME and Corporate banking products both on the liability and assets sides. Its product range includes personal and institutional deposits, consumer loans, trade finance, SME and Corporate financial products and advisory services, L/C and guarantees/bonds, transaction banking services including drafts, funds transfers, remittances, ATM/debit cards, traveler's cheques, etc. The bank feels proud to forefront in introducing innovative products in consumer loans, deposits and SME finance.

1. CORPORATE/ BUSINESS BANKING:

Corporate Banking comprises Transaction Banking, Trade, Foreign Exchange and Corporate Financing Solutions including Project & Infrastructure Finance,

Working Capital & Term Loans, Structured Finance, Bills Purchase, Cash Management Services, International Trade, Treasury and Advisory Services

2. **CONSUMER BANKING:** Consumer Banking Services include Current, Savings, Call and Fixed Deposit Accounts, Home Loans, Auto Loans, Personal Loans, Education Loans, Travel Loan, Debit Cards, ATMs, Safe Deposit Lockers, SMS Banking and Bill Payment Services.

3. NIC PURE SILVER PURITY GUARANTEED:

NIC Bank repeats the history again by becoming the first among financial institutions in Nepal to import **99.9% pure silver** granules from the international mint and making it available in the local market in 10 Kg pack after already becoming the first commercial bank to import 99.9% pure gold from the international mint.

4. NIC Pure Gold:

NIC Bank is pleased to announce the launch of yet another new product **"NIC Pure Gold"**. NIC Pure Gold is a first-of-its-kind innovative product ever introduced by a bank in Nepal. Though there is a sizable demand of gold in Nepal, hardly any quantity is imported officially. The majority of gold consumed in Nepal is believed to be brought in through the porous border without declaration and a huge amount of Indian currency is believed to be flowing out from Nepal due to this reason NIC seems to bring this scheme. It is available in 100gm and kilo bars from New Road, Kamaladi, Dharan, Biratnagar, Birgunj and Pokhara branches with a processing cost of 1%.

5. **NIC Shareholder Savings Account:**

A new era in banking calls for a new and value added service to customers. With commitment to quality and value to the shareholders premier savings account especially for their valued Shareholders numbering more than 33,000 has been

introduced – **NIC Shareholder Savings Account** – with attractive interest rate and many other attractive features. The main attraction of this product is that Shareholders can open an account with an initial deposit of only Rs. 1000.00 and 4%p.a.

6. NIC USD Super Savings Account:

NIC USD Super Savings Account is a high yield US dollar savings account scheme with unique features never before introduced in the Nepalese Market. The product is especially designed to cater to the needs of a wide-range of individuals with USD earning/savings with its unique features and flexibility which will fill a long-felt void and help cater to the aspirations of the valued customers to maximize their returns on their hard earned USD Savings! This account can be opened with USD 1000 only.

7. NIC Small Business Loan Easy process / Attractive Interest Rate:

"NIC Small Business Loan" is a simple and cost effective loan product aimed at catering to the financing needs of a wide range of small and medium business enterprises. It has been felt that businesses in these segments generally do not have easy access to bank finance and even where available, cumbersome procedures, lengthy paper work and high cost of finance are believed to be major deterring factors. NIC Small Business Loan has been designed specifically addressing these factors and offers a loan product to best suit the needs of small and medium sized businesses. People owning small businesses or self-employed professionals now will no longer need to feel intimidated about going to a bank for a loan. The paper work for a NIC Small Business Loan is minimal and once the loan is approved there will be no need to provide any other information to the Bank periodically as long as the repayment is regular.

8. NIC Sikshya Kosh Ensure your child's higher education**:**

"NIC Sikshya Kosh" is a deposit product with an aim of inculcating the habit of putting aside small amounts of money every now and then to ensure one's children's future university education, which can be very expensive and difficult to meet if one does not plan ahead. Furthermore, in normal accounts there is either no or very little return on the money saved and it does not "GROW" over time. NIC Sikshya Kosh is the perfect savings solution for such parents as once parents open the account they know that it is a future fund for a dedicated purpose and the temptation to withdraw for other purposes would be low and there is complete flexibility to deposit any amount, and time and at any NIC Bank branch.

9. NIC Ghar Subidha **Never before- 6.99% p.a**:

"NIC Ghar Subidha" is a personal Property-finance suite of products with unique features never before introduced in the Nepalese market. It aimed at helping to make it possible for every middle class Nepali family's dream of living in one's own house come true. With the low pricing and other features bundled in the product, a middle class family will not have to wait until retirement to fulfill their dream.

10. NIC Life Savings Account **5% p.a nothing less:**

A new era in banking calls for a new and value added service to customers. With commitment to quality and value to our clients, we have introduced our prime saving account **"NIC Life Savings Account"**. This is the first and only deposit product in the banking industry in the country bundled with life insurance cover.

11. NIC SMS Banking **Your Bank account always moves with you:**

The Bank launched **"NIC SMS Banking"** services which allow NIC customers to access their account through mobile phones at a true “anywhere, anytime, anyhow” convenience.

12. NIC Cash Card **Smartest way to carry Cash :**

In order to access accounts through networked ATMs and POS terminals, **"NIC Cash Card"** has been launched in association with Smart Choice Technologies (SCT). NIC Cash card allows its holder to withdraw cash, enquire balances and make payments.

13. **NIC Travel Loan** Enjoy Now Pay Later:

"NIC Travel Loan" will get you where you want to go, whether it's business or pleasure, don't worry about money, and just enjoy the trip.

14. NIC Auto Loan Move in Style:

"NIC Auto Loan" is a reliable bridge leading to the possession of vehicle of own choice.

15. NIC Education Loan:

It is specially designed to provide financial support for funding the cost of higher education.

16. Karmashil Bachat Khata:

It is a tailor made savings account which is specially designed for working individuals.

- **NABIL BANK LTD:**

Products and Services

Nabil provides a full range of commercial banking services through its outlets spread across the nation and reputed correspondent banks across the globe.

Moreover, Nabil has a good name in the market for its highly personalized services to customers. The services it provides to its customers are:

- Open and closing of current , fixed savings and call deposits
- Credit and advances such as overdraft, guarantees, term loan, deprived sector loan and priority sector loans etc.
- Letter of credit
- Cash remittance
- Credit cards
- Tele banking
- Safe deposit locker
- Automated Tailor Machine(ATM)
- Funds transfer
- Anywhere Branch Banking System(ABBS) to facilitate its customers for providing banking services from any branches

Cards & ATMs:

Nabil Bank is the pioneer in introducing credit cards in Nepal. They are the principal member of Visa and MasterCard International since early 1990. Nabil Bank is proud to be the bank having the widest range of services in cards which includes acquiring of all kinds of cards under Visa and MasterCard brands. They also acquired Diners Cards being a sole agent for the country and have arrangement of POS (Point of Sales) sharing with American Express Cards. Similarly, they also issue the widest range of credit and debit cards under the brands of Visa and MasterCard to their account holders as well as non-account holders. Nabil Bank has the state of art technology in cards to provide online services. The popular cards provided by Nabil Bank are Master card local, master card international, VISA local, Diners Card, for travel (against passport facility), VISA Electron, ATM Card, Nabil Prepaid Card.

Master card local:

Features of MasterCard Local are as follow:

- Valid in Nepal and India
- Can be used for purchases of merchandise / services or cash withdrawal
- Accepted in over 300,000 POS terminal merchants and paper merchants
- Competitive interest, late fee and service charges
- No auto debit reversal fee
- No compulsion of maintaining account with Nabil Bank
- Flexibility of choosing convenient payment option
- Simplified assessment process
- Delivery of the card within 5 working days
- Validity of the card - 1 year
- Capability of same day card issuance in urgent cases

Master card International:

Features of MasterCard International are as follow:

- Valid worldwide except in Nepal and India
- Can be used for purchases of merchandise / services or cash withdrawal
- Accepted in millions of POS terminal merchants and paper merchants
- Issued to USD account holders of Nabil Bank
- Competitive interest, late fee and service charges
- No auto debit reversal fee
- Payment of 100% of billed amount by due date
- Simplified assessment process
- Delivery of the card within 5 working days
- Validity of the card - 1 year
- Capability of same day card issuance in urgent cases

VISA Local:

Features of VISA Local are as follow:

- Valid in Nepal and India
- Can be used for purchases of merchandise / services or cash withdrawal
- Accepted in over 300,000 POS terminal merchants and paper merchants
- Accepted in over 5,000 ATMs
- Competitive interest, late fee and service charges
- No auto debit reversal fee
- No compulsion of maintaining account with Nabil Bank
- Flexibility of choosing convenient payment option
- Simplified assessment process
- Delivery of the card within 5 working days
- Validity of the card – 2 years
- Attractive scheme for reversal of card issuance fee

For Travel (against passport facility):

We issue MasterCard International for your worldwide travel purposes except for travels in India. The features of this card are as follow:

- Valid worldwide except in Nepal and India
- Can be used for purchase of merchandise / services or cash withdrawal
- Accepted in millions of POS terminal merchants and paper merchants
- Easy to obtain being a pre-paid card
- Issued against the facility of passport by endorsing the air ticket and passport
- Simplified assessment process
- Delivery of the card within 2 working days
- Validity of the card - 1 year
- Capability of same day card issuance in urgent cases

Visa Electron/ATM Card:

The features of Visa Electron are as follow:

- Valid in Nepal and India
- Can be used for purchases of merchandise / services or cash withdrawal
- Round the clock service
- Prompt service / No queue
- Accepted in over 100,000 POS terminal merchants
- Accepted in over 5,000 ATMs
- No interest, late fee or penalty
- No hassle of limit
- Secured transactions due to electronic environment
- Highly economical to obtain and use
- Added facility of balance inquiry and PIN change
- No service charge on use at Nabil ATMs and all POS terminals

Other services:

Acquiring business:

Nabil Bank offers the acquiring of Visa, MasterCard and other products under their brands. They have ATM network, Point of Sale (POS) terminals network and manual imprints for acquiring of local and international credit and debit cards. It is the only bank in Nepal to provide the agency support on acquiring of Diners Cards and they do share the POS network with AMEX cards. Payments for the submitted claims are made on the same day. They credit the accounts of the merchants or provide Managers who do not have accounts with them. If the merchant has USD account and is authorized for foreign exchange transactions, the payment can be made in USD. Individually they are the largest institution in the country with a wide spread merchants and ATM network throughout the country.

E-banking:

In keeping with their commitment to be the "Bank of 1st Choice" Nabil Bank is constantly moving towards enhancing customer services by providing enhanced products and services. Along the same line, they are pleased to provide their customers with NabilNet, our Internet banking system (online banking), NabilTele, the telephone banking system.

Nabil Net:

Through a computer connected to the Internet, we can log on to the NabilNet site and do various banking transactions from the comfort of our house or office. The features of NabilNet are as follows:

Fund Transfer: You can transfer your funds from your account to any other account in Nabil Bank. All Nabil branches are connected to the centralized database through VSAT link and use state-of-art, world-renowned software.

Statement: You can view, download or print your statement at your convenience.

Balance Inquiry: You can view your balance at any time.

Cheque Status: You can enquire/confirm which of the issued cheques are paid by the bank and which are not.

Access: You can access all your accounts under your customer ID for balance enquiry, fund transfer, statement etc.

Email: You can send emails to your relationship manager for banking services or follow-ups in a secure environment.

Nabil tele:

The bank facilitates also to know the balance by the help of telephone.

- **Everest Bank Ltd.:**

Products and services

EBL offers a wide array of deposits schemes in both local and foreign currencies to help you earn competitive interest rates in order maximize higher returns on investments. Some of them are as below:

- Current account
- Saving account
- Saving premium account
- Fixed deposit
- Cumulative deposit scheme
- Sunaulo Bhausyo Yojana
- Saral Samriddi Bachat
- Unfixed fixed deposit scheme
- USD account

EBL also provides services like: trade financing, letter of credit, remittances facilities(which can be made to any part of the world by way of SWIFT Transfer instantly in addition to the conventional facilities like demand drafts, travelers cheques etc. EBL has drawing arrangements with more than 170 PNB branches all over India.)

EBL Debit Card:

EBL Debit Card is your key to ultimate convenience regarding day to day monetary transactions providing you the power of real cash in form of card. Associated with the Smart Choice Technology (SCT), it facilitates wide sharing of ATMs under SCT network. Therefore, EBL Debit card can be accessed at any ATMs linked with SCT for withdrawing cash and also at any of the merchant establishments (POS) having SCT logo, for purchasing goods and services.

Everest Bank Ltd (EBL), a joint venture partner of Punjab National Bank (PNB) is always committed towards excellent service for the people who believe in quality banking. Introduction of EBL Debit card is a step in the same direction. Currently, Smart Choice has signed SCT-Network software & subscription agreements with the following banks in Nepal. Some of the other banks have signed the MOU and some are awaiting board approval.

Eligibility for the EBL debit card

EBL Debit card is eligible for all existing customers of Everest Bank Ltd.The individual customers having Saving Account, Current Account and Saving Premium Account maintaining the minimum balance is eligible for the EBLDebit Card.New customers, who have opened their accounts after launch of EBL debit card, shall also be eligible for the issuance of debit card at the time of opening the account itself.EBL Debit card can also be issued in joint accounts. It can be issued to both the account holders and they may operate their transaction through ATM into the same account.In joint accounts where account has to be jointly operated, Debit Card shall not be issued unless mandate for operation of account is changed to "Either or Survivor" basis.

Features of EBL Debit Card:

- Can be accessed in India through any of Punjab National Bank's ATMs.
- No charges are levied for using EBL Debit card at EBL's ATM counters
- Cash withdrawal at other SCT Network ATMs other than EBL's ATM counter: Rs. 25 per transaction
- Balance inquiries through any ATMs: Free of cost.
- Charge for issuing a fresh pin: Rs. 50.00
- Charge for lost card: Rs. 200.00

- Annual Charge: Nil
- POS Transaction charges: Nil
- Transaction Limit
  (i) Maximum withdrawal limit per transaction Rs. 16,000.00
  (ii) Maximum limit of withdrawal for the day Rs. 50,000.00
- You can access your EBL Debit Card at any ATMs of SCT Network 24 hours everyday.

EBL Debit card shall be issued free of cost for to all the Saving Premium account holders.

NEPAL BANK LTD.

Products & services:

Nepal Bank Ltd. provides wide range of products and services. Some of them are as below:

1. Deposits
2. Loans & advances
3. Remittances
4. New services:
   a. SMS Banking b. ABBS (Anywhere Branch Banking Service)
5. New products:
   a. Education Loan b. Mortgage loan.

4.7 Trend Analysis:

The main aim of this chapter is to analyze loan, investment and deposits of NBL, NABIL, EBL and NICBL during the fiscal years 2001 to 2007. Trend analysis is a statistical tool which highlights the previous trend of the financial performance

and helps to forecast or predict the financial performance of forthcoming years. One of the important duties of commercial banks is to protect the deposits of their depositors and repay their principal along with interest. Interest can be paid to their depositors if only they invest their deposits in profitable sectors or lend to their borrowers at profitable interest rates. Loan and advances includes loan and advances to various sectors, bill purchased (local and foreign) and investment includes investment in government securities, NRB bond, share and debentures, etc. Total deposits include current, saving, fixed, call and other deposits.

Following table shows loan, advances and investment and total deposits of sample banks during various fiscal years:

Table No. 4.12

Year	X=X-2004	NBL		NABIL		EBL		NICBL	
		Loan & Invest.	Deposits	Loan & Invest.	Deposits	Loan & Invest.	Deposits	Loan & Invest.	Deposits
2001	-3	28838.6	35528.6	11190.3	15838.9	3790.4	4574.5	3133.6	3575.8
2002	-2	28150.3	34060.1	12530.3	15370.6	5598.2	5461.1	3123.3	3165.3
2003	-1	31048.7	34737.4	11955.6	13437.7	6647.4	6694.9	3717.6	3143.9
2004	0	30165.4	36288.5	12466.8	14098.0	8600.1	8064.0	5507.3	5146.4
2005	1	32420.4	34744.2	16953.6	14586.8	10063.8	10097.8	6486.2	6243.3
2006	2	27212.5	35444.9	19453.6	19348.4	14356.2	13802.5	9382	8765.8
2007	3	30033.9	38715.2	24855.3	23342.4	19085.1	19097.7	10628.5	10068.3
Σx=	**0**	**207869.8**	**249518.9**	**109405.5**	**116022.8**	**68141.2**	**67792.5**	**41978.5**	**40108.8**

(Source: Statistical Report of NRB of various commercial banks.)

Now, in order to find the trend values for each year and predict the values after 10 years ie.2017 A.D., we shall use the trend line equation:

$Y = a + bx$----------(1)

Where, y = trend value.

$$a = \frac{\Sigma y}{n} \qquad b = \frac{\Sigma xy}{\Sigma x^2}$$

The trend values for each sample bank and their prediction for 2017 A.D. can be shown by following table:

Table No. 4.13

Trend Values of NBL, NABIL, EBL & NICBL for various fiscal years (Rs. In millions)

F.Y.	NBL		NABIL	
	Loan & Invest (Y=29695.69+110.07x)	**Total deposit (Y=35645.56+2921.82x)**	**Loan & Invest .(Y=15629.36+2137.13x)**	**Total deposit (Y=16574.69+1129.11x)**
2001	29365.48	26880.1	9217.97	13187.36
2002	29475.55	29801.92	11355.1	14316.47
2003	29585.62	32723.74	13492.23	15445.58
2004	29695.69	35645.56	15629.36	16574.69
2005	29805.76	38567.38	17766.49	17703.8
2006	29915.83	41489.2	19903.62	18832.91
2007	30025.90	44411.02	22040.75	19962.02
2017	**31126.6**	**73629.22**	**43412.05**	**31253.12**

F.Y.	EBL		NICBL	
	Loan & Invest (Y=9734.46+2386.30x)	**Total deposit (Y=9684.64+2273.40x)**	**Loan & Invest .(Y=5996.93+1348.95)**	**Total deposit (Y=5729.83+1206.35x)**
2001	2575.56	2864.44	1950.08	2110.78
2002	4961.86	5137.84	3299.03	3317.13
2003	7348.16	7411.24	4647.98	4523.48
2004	9734.46	9684.64	5996.93	5729.83
2005	12120.76	11958.04	7345.88	6936.18
2006	14507.06	14231.44	8694.83	8142.53
2007	16893.36	16504.84	10043.78	9348.88
2017	**40756.36**	**39238.84**	**23533.28**	**21412.38**

From the above table, it can be concluded that NBL's loan and investment is increasing by Rs.110.7 million every year. It is expected to reach Rs.**31126.6**

million by 2017 A.D. Similarly, NBL's total deposit is being increasing by Rs.2921.82million every year and is expected to reach Rs.**73629.22**million by 2017 A.D. Other things remaining the same, the ratio of loan and investment to total deposits of NBL in 2017A.D. will be 42.27%.

NABIL's loan and investment is increasing by Rs.2137.13 million every year. It is expected to reach Rs. **43412.05**million by 2017 A.D. Similarly, NABIL's total deposit is being increasing by Rs.1129.11million every year and is expected to reach Rs. **31253.12**million by 2017 A.D. Other things remaining the same, the ratio of loan and investment to total deposits of NABIL in 2017A.D. will be 138.91%.

EBL's loan and investment is increasing by Rs.2386.30 million every year. It is expected to reach Rs. **40756.36**million by 2017 A.D. Similarly, EBL's total deposit is being increasing by Rs.2273.40million every year and is expected to reach Rs. **39238.84**million by 2017 A.D. Other things remaining the same, the ratio of loan and investment to total deposits of EBL in 2017A.D. will be 103.87%.

NICBL's loan and investment is increasing by Rs.1348.95 million every year. It is expected to reach Rs. **23533.28** million by 2017 A.D. Similarly, NICBL's total deposit is being increasing by Rs.1206.35million every year and is expected to reach Rs. **21412.38**million by 2017 A.D. Other things remaining the same, the ratio of loan and investment to total deposits of NICBL in 2017A.D. will be 109.91%.

Finally, it can be said that NABIL has the highest ability to utilize the deposits in loan and investments as it has the highest ratio of 138.91% among selected four banks. On contrary, NBL has the lowest ability to utilize its deposits in loan and investments as it has the lowest ratio of 42.27% among selected four banks.

4.8 Testing of Hypothesis

The study has proposed certain hypothesis. The last four hypothesis are being tested. The hypothesis are being tested on the basis of **Fisher's distribution** i.e., F-test.

Hypothesis I

H_0 :$\sigma^2_1 = \sigma^2_2$ i.e. there is no significant relationship between portfolio investment and profitability of the sample banks.

H_I:$\sigma^2_1 \neq \sigma^2_2$ i.e. there is positive relationship between portfolio investment and profitability of the sample banks.

F test statistics:

$n_1 = 3$, $\Sigma(X_1 - \overline{X_1})^2 = \Sigma(X_1 - 26.796)^2 = 9.34$

$n_2 = 3$, $\Sigma(X_2 - X_2)^2 = \Sigma(X_2 - 32.67)^2 = 178.67$

$S_1^2 = 1/2 * 9.34 = 4.67$

$S_2^2 = 1/2 * 178.67 = 89.34$

Since, $S_2^2 > S_1^2$,

$F = S_2^2 / S_1^2$

$= 89.34/4.67 = 19.43$

d.f. for larger estimate i.e. $v_1 = 3-1 = 2$

d.f. for smaller estimate i.e. $v_2 = 3-1 = 2$

The tabulated value of F at 0.05 level of significance is 19.

Decision: Since the computed value of F is more than the tabulated value, null hypothesis is rejected and alternate hypothesis is accepted. Thus, there is direct relationship between portfolio investment and profitability of banks.

Hypothesis II

H_0 :$\sigma^2_1 = \sigma^2_2$ i.e. there is no significant relationship between risk and return of sample banks.

H_I:$\sigma^2_1 \neq \sigma^2_2$ i.e. there is direct relationship between risk and return of sample banks i.e., higher the risk , higher will be the return and vice-versa.

F test statistics:

$n_1 = 3$, $\Sigma(X_1 - \overline{X_1})^2 = \Sigma(X_1 - 32.67)^{2=} 178.67$

$n_2 = 3$, $\Sigma(X_2 - \overline{X_2})^2 = \Sigma(X_1 - 30.09)^2 = 1.5086$

$S_1^2 = 1/2 * 178.67 = 89.34$

$S_2^2 = 1/2 * 1.5086 = 0.75$

Since, $S_1^2 > S_2^2$,

$F = S_1^2 / S_2^2$

$= 89.34 \div 0.75 = 119.11$

d.f. for larger estimate i.e. $v_1 = 3-1 = 2$

d.f. for smaller estimate i.e. $v_2 = 3-1 = 2$

The tabulated value of F at 0.05 level of significance is 19.

Decision: Since the tabulated value of F is less than the computed value, null hypothesis is rejected and alternate hypothesis is accepted. Thus, the relationship between risk and return is significant.

Hypothesis III

H_0 :$\sigma^2_1 = \sigma^2_2$ i.e. there is no significant relationship between diversification of assets and financial performance of banks (i.e., profitability)

H_I:$\sigma^2_1 \neq \sigma^2_2$ i.e. there is positive relationship between diversification of assets and financial performance of banks or more diversification of assets, better will be the financial performance of banks.

F test statistics:

$n_1 = 2$, $\Sigma(X_1 - \overline{X_1})^2 = \Sigma(X_1 - 49.98)^2 = 2390.16$

$n_2 = 3$, $\Sigma(X_2 - \overline{X_2})^2 = \Sigma(X_1 - 32.67)^2 = 178.67$

$S_1^2 = 1/1 * 2390.16 = 2390.16$

$S_2^2 = 1/2 * 178.67 = 89.34$

Since, $S_1^2 > S_2^2$,

$F = S_1^2 / S_2^2$

$= 2390.16 / 89.34 = 26.75$

d.f. for larger estimate i.e. $v_1 = 3-1 = 2$

d.f. for smaller estimate i.e. $v_2 = 2-1 = 1$

The tabulated value of F at 0.05 level of significance is 19.3.

Decision: Since the computed value of F is more than the tabulated value, null hypothesis is rejected and alternate hypothesis is accepted. Thus, there is direct relationship between diversification of assets and financial performance of banks.

Hypothesis IV

H_0 :$\sigma^2_1 = \sigma^2_2$ i.e. there is no significant relationship between diversification of investment and risk of sample banks.

H_I:$\sigma^2_1 \neq \sigma^2_2$ i.e. there is inverse relationship between diversification of investment and risk of sample banks.

F test statistics:

$n_1 = 2$, $\Sigma(X_1 - \overline{X_1})^2 = \Sigma(X_1 - 49.98)^2 = 2390.16$

$n_2 = 3$, $\Sigma(X_2 - \overline{X_2})^2 = \Sigma(X_1 - 30.09)^2 = 1.5086$

$S_1^2 = 1/2 * 2390.16 = 2390.16$

$S_2^2 = 1/2 * 1.5086 = 0.75$

Since, $S_1^2 > S_2^2$,

$F = S_2^2 / S_1^2$

$= 2390.16/0.75 = 3186.88$

d.f. for larger estimate i.e. $v_1 = 3-1 = 2$

d.f. for smaller estimate i.e. $v_2 = 3-1 = 2$

The tabulated value of F at 0.05 level of significance is 19.3.

Decision*:* Since the computed value of F is more than the tabulated value, null hypothesis is rejected and alternate hypothesis is accepted. Thus, there is inverse relationship between diversification of investment and risk of sample banks.

From the above analysis, it shows that out of four assumptions tested all assumptions were sustained. The results indicated that there is direct relationship between portfolio investment and profitability, higher risk will yield higher return, more diversification of assets increases the financial performance and decreases the risk of the sample banks.

(Note : The detail calculation of $\overline{X_1}$ and $\overline{X_2}$ has been done in appendix.)

Chapter V
Summary, Conclusion & Recommendations

The main aim of this research study is to analyze the portfolio performance of commercial banks of Nepal. For this purpose, four commercial banks of Nepal i.e., NBL, NABIL, EBL & NICBL are being taken as the sample banks for the study. This part of the study focuses to summarize, conclude the analysis of previous chapters and provide necessary and relevant recommendations for the portfolio management of banks.

5.1. Summary

The business world of today is entirely different from the past. The changing life standard has always been the challenging part to the business community and also has given opportunities to produce different types of goods and services to fulfill the changing needs of the people. To balance between these changing scenarios, continuous flow of investment is required. No investor invests his/her capital until he/she is fully assured that investment is safe. Investors are of different natures. According to the risk bearing capacity some are risk seeking, some are risk averse and some may be neutral. Risk is the fact of life and return is reward for bearing the risk.

Risk and return is getting considerable attention in financial management. Risk and return is the key factor to analyze the financial condition of the company for investors. The relationship between risk and return is described by investor's perception about bearing the risk and compensation demanded for bearing that risk. No investors will be ready to invest their capital on risky assets unless they are not assured of adequate compensation for accepting the risk. Investors often ask about the total risk they will be assuming in an investment and like to know if

the risk premium provided is enough. Higher risk command higher premium and assumes the linear relationship between risk and risk premium.

NEPSE is the only stock market in Nepal. Although it has been established, more effort is necessary for the better development of stock market. Investors still hesitate to invest in securities due to lack of proper knowledge and guidance in the field. Investors want full information about risk and return from their investment in order to feel confident about the fact that their investment has been utilized in secured sectors. In order to make their investors secured, banks should invest in portfolio i.e. diversification of assets must be done.

This research study aims to examine the portfolio areas of banks in relation to risk and return in relation to profitability. For this purpose, it was hypothesized that there would be positive relationship between portfolio investment and profitability, risk and return and diversification of assets and return of banks while inverse relationship between diversification of assets and risk of banks. F-test has been done for hypothesis testing. Historical, descriptive and analytical research design had been used. Four commercial banks are taken as sample and their financial ratios, investment portfolio, loans & advances are calculated analyzed individually to find the performances of each bank. The risk & return of each bank on the basis of MPS & EPS is also calculated and analysis & comparison of sample banks has been done. To make the analysis easy to understand some related studies are reviewed. Scientific methods are used to make the analysis more effective. Table, pie-chart, bar-diagrams are used to present the data and result. In addition, trend analysis is done to forecast about the investment and deposits position of each bank. Secondary data are collected from NEPSE, statistical report of NRB, annual reports of related commercial banks and magazines and certain primary data are collected through interview method too.

5.2. Findings & conclusion

After collecting the necessary data, presenting & analyzing the data, following findings are being summarized and their conclusions are given below:-

The mean investment to total deposit ratio of NBL,EBL,NICBank & NABIL are 32.44%,25.77%,25.34%& 29.28% respectively. This shows that NBL has highest mean ratio which concludes that the deposit has been utilized most effectively by NBL in comparison to other three banks. Similarly, the std.deviation of investment to total deposit of NBL,EBL,NICBank & NABIL are 9.43,4.97,8.65 & 6.64 respectively which shows that NBL has highest fluctuation i.e. among all four sample banks. The C.V of NICBank is the highest i.e. 0.34 which shows per unit risk is the highest of NIC Bank and has lowest consistency.

The mean loan to total deposit ratio of NBL, NABIL, NICBL & EBL are 50.99%, 62.76%, 78.67% & 73.51% respectively in which NBL has the lowest mean in comparison to other three banks as well as industry's average. This shows that the deposit has not been utilized effectively in loan and advances sector by NBL. Since the highest mean is of NICBL i.e. 78.67%, it concludes that NICBL has utilized the deposit in loan &advances sector most effectively. The std.deviation of loan & advances to total deposit ratio of NBL, NABIL, NICBL & EBL are 11%, 10.09%, 6.19% & 4.31% respectively. The per unit risk of respective bank are 0.22, 0.16, 0.08 & 0.06 respectively. The std.deviation & C.V of industry is 3.27% & 0.05 respectively. While comparing the risk status of each bank with each other, EBL seems to be running in the lowest risk. But while comparing with industry, all the four banks seem to be running under risky mode.

The liquid fund balance to total deposit ratio of NBL,NABIL,NICBL & EBL are 18.35%,22.97%,13.23% & 17.07% respectively. The industry's mean is 19.66%. While comparing data of sample banks with each other and industry, NABIL seems to have the good liquidity position with 22.47%. NICBL has the lowest liquidity position.

The standard deviation of liquid balance to total deposit ratio of NBL, NABIL, NICBL, EBL & industry are 3.62%, 12.74%, 4.18%, 5.68% & 6.79% respectively. The C.V of respective bank & industry are 0.20, 0.56, 0.33, 0.32 & 0.35 respectively. While comparing the data with each other, it can be concluded that NABIL has the highest risky position and lowest consistency. NBL has the lowest risk position with 0.20 per unit risk.

The mean return on total assets ratio of EBL, NABIL & NICBL is 1.23%, 2.31% & 1.08% respectively in which NABIL the highest mean return on total assets i.e. 2.31% has. This shows that NABIL bank has utilized the assets most effectively among all the three banks.

The standard deviation of EBL, NBL & NICBL is 0.47%, 1.02% & 0.42% respectively. This shows that the consistency of return of total assets of NABIL bank is the lowest as it has the highest C.V with 0.44 while EBL has the highest consistency of return as it has lowest C.V with 0.38. Although NABIL has the lowest consistency the overall effectiveness, to utilize the assets is good. It should also be noted that NBL's return on assets could not be calculated due to unavailability of data.

While analyzing the investment portfolio of banks it has been found that banks invest their major funds in government securities, NRB bond and shares and debentures. The mean investment in govt. securities by NBL, NABIL, NICBL and EBL is 93.81%, 76.19%, 81.05% & 96.42% respectively. Similarly, the mean investment in shares and debenture by NBL, NABIL, NICBL & EBL is 6.19%, 23.8%, 18.95% & 3.48% respectively. While the investment in NRB bond by all sample banks is zero (0). From the above findings, it can be concluded that all the sample banks invest most of their funds or major share in govt. securities in which EBL invests the highest with 96.42% and NABIL invests the lowest with 76.19%. The minor fund is invested by all sample banks in share & debenture of other sectors in which NABIL has the highest proportion with 23.80% and EBL has lowest proportion with 3.48%. None of the sample banks invest in NRB bond. The std. deviation of NBL,NABIL,NICBL & EBL in govt. securities is 8.54%,24.77%,43.16% &

5.58% respectively while in share & debentures of respective banks is 8.51%,24.76%,13.16% & 5.59% respectively. The C.V of NBL,NABIL,NICBL & EBL in govt. securities is 0.09,0.33,0.16 & 0.06 respectively while in share & debentures of respective banks is 1.32,1.04,0.69 & 1.61 respectively. From the comparison of data, it can be noted that the sample bank's investment in share & debentures has greater fluctuation than govt. securities. While comparing the C.V of govt. securities each sample banks, NABIL has greater fluctuation with 0.06. Similarly, while comparing the C.V of share & debentures of each sample banks, EBL seems to have greater fluctuation with 1.61 and NICBL has the lowest fluctuation with 0.69.

Loans & advances is the one of the most important sectors through which banks raise their incomes by collecting the interest for the amount borrowed. The banks provide their loans & advances to govt. org, private org & financial institutions. The mean loan & advances of NBL,NABIL,NICL & EBL in govt. organization sector is 3.42%,0.92%,2.40 & 1.68%,in private sector is 96.35%,98.725%,97.07% & 97.92%, in financial institution is 0.23%,0.36%,0.53% & 0.40% respectively. This shows that most of the banks provide their loans & advances to private sector and very little portion are provided to financial sector. While comparing the mean loan & advances of sample banks in govt. org, it has been detected that NBL provides the highest proportion among all the four sample banks though less proportion is provided to govt. org. While comparing the mean loan & advances of the sample banks to private sectors, NABIL provides highest among all the sample banks with 98.72%.

The expected is an income usually expressed in percentage. The mean or expected return of NABIL, EBL & NICBL is 22%, 36% & 40% respectively. The C.V of NABIL, EBL & NICBL is 1.33, 0.83 & 0.77 respectively. While comparing the data of each sample banks, it can be concluded that NABIL has low return with high risk, EBL has moderate return with moderate risk & NICBL has high return with moderate risk among three sample banks. This shows that NICBL is performing better in comparison to NABIL & EBL. The

study finds that there is high return for high risk and vice versa as per the assumption of this study.

While comparing the product portfolio of all the four sample banks, all the banks seems to be focusing mostly on deposit marketing by creating varieties of accounts for the creation of funds. The banks are also providing facilities like ATM card, VISA electron, master card facilities, SMS banking, e-banking, ABBS facilities in order to attract the customers.

Lastly, after the overall analysis of the findings of the research study, it can be concluded that NABIL seems to be in the best position or the leading position for the investment portfolio, EBL seems to be leading in second position and NBL & NICBL seems to be in moderate position among four sample banks.

5.3 Recommendations & suggestions

The mean investment to total deposit ratio of NICBL is the lowest as well as the fluctuation is highest, it is recommended to increase the investment to get better performance and low fluctuation to NICBL.

The mean loan and advances to total deposit ratio of NBL is lowest as well as the fluctuation is the highest among four sample banks. This shows that the deposit is not mobilized properly in loan & advances and the sector where it has been mobilized has greater risk. So it is recommended to NBL to give priority to loan & advances and be cautious while investing in loan & advances.

The liquid fund balance to total deposit ratio of NICBL & EBL is in unsatisfactory position i.e. it shows that there is lack of liquidity in both the banks. So, it is recommended to increase the liquidity fund to meet the demand of deposit by both the banks.

The return on total assets ratio of NICBL is the lowest among three private commercial banks. So, it is recommended to NICBL to mobilize its total assets to the greatest extent in order to increase its profitability.

The large amount of loan and advances is provided to private sector by all the four commercial banks. Investing only in private sector increases high amount of risk to the banks and dependency on private sector. So, it is recommended to all four banks to make portfolio investment of loan & advances to decrease its risk and dependency in private sector.

In this age of digital technology, NEPSE is having trading on open cry system. The trading system of NEPSE should be modernized. Effective information channel should be launched. Up–to-date data should be made available in the website of NEPSE so that it becomes easier for researchers. The concept of on-line trading should be developed.

The suggestions given above are widely based on the secondary data of financial aspect of sample banks. Reformation steps should be taken after considering all the aspect of the corporate requirement of master degree. So, exhaustive research should be taken for the fundamental changes of the procedures and methodology of banks.

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APPENDIX

Calculation of mean portfolio investment, expected return and risk of sample banks for the testing of hypothesis

For hypothesis I,

Table No.1
Calculation of mean portfolio investment(X_1) and expected return(X_2) of sample banks

Banks	**X_1**	**X_2**
EBL	25.77	36
NICBL	25.34	40
NABIL	29.28	22
ΣX=	**80.39**	**98**

$X_1 = \Sigma X_1 / n = 80.39/3 = 26.796$
$X_2 = \Sigma X_2 / n = 98/3 = 32.67$

(Note: The data of X_1 & X_2 has been taken from table no.4.2 and table no.4.11 respectively.)

For hypothesis II,

Table No.2
Calculation of expected return (X_1) and risk (X_2) of sample banks

Banks	**X_1**	**X_2**
EBL	36	29.27
NICBL	40	30
NABIL	22	31
ΣX=	**98**	**90.27**

$X_1 = \Sigma X_1 / n = 98/3 = 32.67$
$X_2 = \Sigma X_2 / n = 90.27 = 30.09$

(Note: The data of X_1 & X_2 has been taken from table no.4.11.)

For hypothesis III,

Table No.3

Calculation of investment portfolio of sample banks

Banks	Government Securities	Shares and debentures
NABIL	76.19	23.80
NICBL	81.05	18.95
EBL	96.42	3.48
Total	**253.66**	**46.23**
Mean	**84.55**	**15.41**

Calculation of mean diversification of assets

X_1 = (84.55+15.41)/2 =99.96/2 = 49.98

Calculation of mean return

X_2 = 98/3 =32.67 (The calculation is as per X_1 of hypothesis II)

(Note: The data has been taken from table no. 4.6 and table n.4.11 for calculation of X_1 and X_2 respectively.)

For hypothesis IV,

Calculation of mean diversification of assets

X_1 = 49.98 (The calculation is as per X_1 of hypothesis III of table no.3)

X_2 = 30.09 (The calculation is as per X_2 of hypothesis II of table no.2)

Table No. 1

List of Class A Licensed Financial Institution (Commercial Banks)

Mid-July, 2007

Names	Operation Date (A.D.)	Head Office

1. Nepal Bank Ltd.	1937/11/15	Dharmapath, Kathmandu
2. Rastriya Banijya Bank	1966/01/23	Singhdarbarplaza, Kathmandu
3. NABIL Bank Ltd.	1984/07/16	Kantipath, Kathmandu
4. Nepal Investment Bank Ltd.	1986/02/27	Durbar Marg, Kathmandu
5. Standard Chartered Bank Nepal Ltd.	1987/01/30	Naya Baneshwor, Kathmandu
6. Himalayan Bank Ltd.	1993/01/18	Thamel, Kathmandu
7. Nepal SBI Bank Ltd.	1993/07/07	Hattisar, Kathmandu
8. Nepal Bangladesh Bank Ltd.	1993/06/05	Naya Baneshwar, Kathmandu
9. Everest Bank Ltd.	1994/10/18	Lazimpat, Kathmandu
10. Bank of Kathmandu Ltd.	1995/03/12	Kamaladi, Kathmandu
11. Nepal Credit and Commerce Bank Ltd.	1996/10/14	Siddharthanagar, Rupandehi
12. Lumbini Bank Ltd.	1998/07/17	Narayangadh, Chitwan
13. Nepal Industrial & Commercial Bank Ltd.	1998/07/21	Biratnagar, Morang
14. Machhapuchhre Bank Ltd.	2000/10/03	Prithivichowk, Pokhara
15. Kumari Bank Ltd.	2001/04/03	Putali Sadak, Kathmandu
16. Laxmi Bank Ltd.	2002/04/03	Adarshnagar, Birgunj
17. Siddhartha Bank Ltd.	2002/12/24	Kamaladi, Kathmandu
18. Agriculture Development Bank Ltd.	2006/03/16	Ramshahapath, Kathmandu
19. Global Bank Ltd.	2007/01/02	Birgunj, Parsa
20. Citizens Bank International Ltd.	2007/06/21	Kamaladi, Kathmandu

Questions for interview:

1. What types of investment policy are adopted by your bank?
2. Do you think that the policy adopted by your bank need reform?
3. What are the sectors in which your bank invests at most and at least?
4. What type of deposit schemes are launched by your bank?
5. What types of loan and advances schemes are launched by your bank?
6. Is any investment been done for public welfare purpose and how?
7. To what extent does the portfolio investment pattern affect the return of your bank?
8. How is the portfolio investment managed by your bank?

9. How do the external environmental factors effect the portfolio management of your bank?
10. What are the main difficulties and obstacles encountered in effective portfolio management?