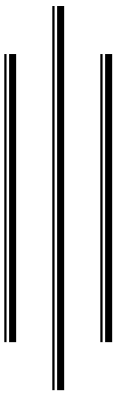
Investor's Risk and Return in
Commercial Bank of Nepal

(With reference to Nabil Bank, Himalayan Bank, Nepal Investment Bank and Everest Bank)

A Thesis



Submitted By
Mr. BAUDA HANG RAI
Shanker Dev campus
Ramshah Path, Ktm.
Campus Roll No: 461/063
TU Reg No: 7-1-11-253-99

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Tribhuvan University

In Partial Fulfillment of the Requirement for the Degree Of
Master of Business Studies (M.B.S.)
July 2010

TRIBHUVAN UNIVERSITY

Faculty of Management

SHANKER DEV CAMPUS

Ramshah Path Ktm. **Tel. no. 4226490**

Date: ……

VIVA-VOCE SHEET

We have conducted the viva - voce examination of the thesis presented by

BAUDA HANG RAI

Entitled

Investor's Risk and Return in

Commercial Bank of Nepal

(With Reference to Nabil Bank, Himalayan Bank, Nepal Investment Bank and Everest Bank)

And found the thesis to be the original works of the student written according to the prescribed format. We recommend the thesis to be accepted as Partial fulfillment of the requirements for the

Master's Degree in Business Studies (M.B.S.)

Viva -voce Committee

Chairperson, Research Committee : ……

Member (Thesis Supervisor) : ……

Member (Thesis Supervisor) : ……

Member (External Expert) : ……

TRIBHUVAN UNIVERSITY

Faculty of Management

SHANKER DEV CAMPUS

Ramshah Path Ktm. **Tel. no. 4226490**

Date: ……

RECOMMENDATION

This is to certify that the thesis:

Submitted by:

BAUDA HANG RAI

Entitled

Investor's Risk and Return in

Commercial Bank of Nepal

(With reference to Nabil Bank, Himalayan Bank, Nepal Investment Bank and Everest Bank)

has been prepared as approved by the Department in the prescribed Format of faculty of Management. This thesis is forwarded for examination.

……	**.. ……..……...……..**	**……..……**
(Prof. Snehalata Kafle)	**(Prof. Bishseshwor Man Sherstha)**	**Dr. Kamal Dip Dhakal)**
Thesis Supervisor	**Head of Reseach Department**	**Campus Chief**

……...…..

(Mrs. Sita Dhital)

Thesis Supervisor

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This thesis entitled "**Investor's Risk and Return in Commercial Bank of Nepal"** (With reference to Nabil Bank, Himalayan Bank, Nepal Investment Bank and Everest Bank)has been prepared for the partial fulfillment of the requirement of Master's Degree of Business Studies (M.B.S.) under the Faculty of Management, Tribhuvan University, is based on research models involving the use of quantitative and qualitative model to analyze the risk and return of selected commercial bank of Nepal.

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……..
Bauda Hang Rai
Shanker Dev Campus
Roll No. 461/063

TRIBHUVAN UNIVERSITY
Faculty of Management
SHANKER DEV CAMPUS
Ramshah Path Ktm.

DECLARATION

I hereby declare that the work reported in this thesis entitled "**Investor's Risk and Return in Commercial Bank of Nepal"** (With reference to Nabil Bank, Himalayan Bank, Nepal Investment Bank and Everest Bank) submitted to Shanker Dev Campus, Faculty of management, Tribhuvan University is my original work for the partial fulfillment for the requirements of Master's Degree in Business Studies (M.B.S.) under the supervision of **Mrs. Snehalata Kafle, Professor** and **Mrs. Sita Dhital Lecturer** of T.U. Shanker Dev Campus, Kathmandu.

Date: ……..…

…..……

Bauda Hang Rai
(Researcher)
Roll No: 461/063
T.U. Regd. No: 7-1-11-253-99

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List of Abbreviations

B	Beta Coefficient
B.S.	Bikram Sambat
CV	Coefficient of Variation
CAPM	Capital Asset Pricing Model
Div	Dividend
DPS	Dividend per share
EPS	Earnings Per Share
EBL	Everest Bank Limited
F/Y	Fiscal Year
HBL	Himalayan Bank Limited
LTD	Limited
MPS	Market Price Per Share
NABIL	Nabil Bank Limited
NEPSE	Nepal Stock Exchange
NIB	Nepal Investment Bank
NPR	Nepalese Rupee
NRB	Nepal Rastra Bank
OTC	Over the Counter
Rf	Risk Free Rate
Rj	Year end Market Return
RP	Risk Premium
SD	Standard Deviation
SR	Systematic Risk
SEBON	Securities Board of Nepal
TU	Tribhuvan University

CHAPTER I
INTRODUCTION

1.1 Background of the study

Modern development not happened all of a sudden. It has seen many ups and down to reach this stage. Population was very low in the beginning of human civilization. It was easy for men to meet their basic needs at that time. Peoples needs and aspiration grew higher as the process of development took place. It became very hard to produce all kinds as goods own needed. For this, people had to seek the help of others. The processes of exchanging things are started gradually among people. In addition, people developed in them the sense of working mutely and co-operating and helping one-another. It results in the vast change in production system. People started to claim the ownership of land, animals and equipment to survive independently. It supported to develop of banking system.

The history of commercial bank is not very long. The growth of commercial banks lasts two decades remained phenomenal particularly financial sector reformation in 1990's. The concept of the banking was formally executed after the establishment of the Nepal bank Ltd. in 1994 B.S. In 2014 B.S., the central bank named Nepal Rastriya Bank Ltd. was established with the objective of supervising, guiding and protecting the functions of banking sectors. As a result, the growth of commercial banks in Nepal has been mushroomed. The number of banks has been increased as per the requirement under the different acts like Agriculture development bank under the Agriculture development Acts in 2024 B.S. Commercial banks under the commercial Acts in 2031 B.S. Nepal Arab bank Ltd. is the first joint venture bank in Nepal which was established in 2041 B.S. Currently there are 27 commercial banks, 63 development banks, 77 financial institutions and 15 regional rural development banks.

The word Bank is originated from the Italian word ‘banco’ which means bench. In the earlier stage, bank was the place for keeping and lending money. But with the evolution of transaction and globalization, the meaning and function of bank is gradually changed. As the public enterprise, banking made its first beginning around the middle of the twelfth century in Italy and bank of Venice founded in 1157 was the first public banking institution. Then ,

followed bank of Barcelona established in 1401, Bank of Genoa established in 1407, Bank of Amsterdam established in 1609 and bank of England which was established in 1694.The ancestors of modern day banks have been attributed to the merchants, the goldsmiths and the moneylenders.

National development of any country depends upon the economic development of that country and economic development is supported by financial infrastructure of any country. Banks constitute an important role in the economic growth of a country. Banking, when properly organized, aids and facilities the growth of trade and industry and hence of national economy. In the modern economy, banks are to be considered not as dealers in money but as the leaders of development. Banks are not just the storehouses of the country's wealth but are the necessary for economic development.

Bank plays a significant role in the development of the nations. Economy bank is a financial institution which primary classes in borrowing and lending. Modern bank prefers varieties of functions. Therefore, it is difficult to decide the function of a modern bank because of their complexity and versatility in operation. Various authors have defined the 'Bank' in different ways. A commercial bank is dealer in money and it substitutes for money such a cheque or a bills of exchange, it also provides a variety of financial service. Investment pattern is an important ingredient of overall national economic development because it ensures efficient allocation of fund to achieve the materials and economic well being of the society as a whole. In this regard, investment policy of joint venture banks push drives to achieve priority of commercial sectors in the context of Nepal's economic development.

Now a day there is very much competition in banking sector, but less opportunity to make investment. In this situation joint venture banks can take initiation in search of new opportunities to survive in the competitive market and earn profit. But investment is a very risky job. For a purposeful, safe and profitable investment the bank must follow sound investment policy. The fundamental principles of investment must be followed thoroughly for profitable investment. Investment pattern should ensure minimum risk and maximum profit. Good investment pattern ensures maximum amount of investment to all sectors with proper

utilization. There is high liquidity in the market but there seems no profitable place to invest. At the same time, the banks and financial institutions are offering very low deposit interest rate. In this situation Nepalese commercial banks are required to explore new opportunities to make investment if they want to survive in the competitive market.

The prosperity of industry and trade is essential and more important for a country to step into development. Therefore, the banks must consider national interest and government emphasis for the economic growth of the country. Since, the prosperous economic condition of a country is represented by the development of industry, trade and business which is the main ground of the banks to conduct its activities and to fulfill its objective of profit making. The proper investment policy helps the commercial banks to make profitable investment and to develop country as well. Investment pattern provides several inputs to the banks through which they can handle their investment operation efficiently ensuring the maximum return with minimum exposure to risk, which ultimately leads the bank to the path of success.

The commercial banks have its own role and contribution in the economic development. It is a source for economic development; it maintains economic confidence of various segments and extends credit to people. Commercial banks formulate sound investment policies, which eventually contribute to the economic growth of the country. The sound policies helps commercials banks maximize quantity to investment and thereby active the own adjectives of profit maximization and social welfare. The banking sector has to play development role to boost the economy by adopting the growth oriented investment policy and building up the financial structure for future economic development formulation of sound investment policies and planning effort pushed forward the force of economic growth.

Banking sector is the most vibrant part of economy which has been playing very vital role in mobilizing the financial resources from the saver to users. It, in general, collects the idle funds from different savers and accumulated funds is further proceeds to the needy centers like households sectors, business sectors. It is the heart of trade, commerce and industry. It makes the smooth flow of funds in the circulation body of the economy. It makes various functions like assets and liabilities transformation, security trading, agency functions, and economies of

scale, corporate social responsibilities, and other day to day banking functions. Generally, risk and return analysis is concerned to identify the sustainable position of financial sector. Risk and return is the basic concept in the corporate finance and it guides the other modern theories and principal as well as it assists in taking various financial and qualitative financial decisions. The relationship between risk and return can be defined by the investors' perception about risk and the demand for compensation. No investor will take any investment position in risky assets unless they are convinced of adequate compensation for the percept risks. In fact, there is positive relation between risk and return. Risk has been defined as the chance that the actual return deviation from the expected returns and risk is the percept fact of life that is the product of uncertainty and it magnitude depend upon the degree of variability in future's uncertain cash flows. Risk and return is an indication of opportunity of losing investment value. It is insensible to talk about returns without talking about risks because investment decision involves the trade off between risk and return and the trade off between these two variables is positive. There is positive relation between risk and return. Thus an investor, in general, can attain more return through the selection of dominating assets that involves high risks.

Risk in a stock reflects the uncertainty about the future return i.e., actual return may be less than the expected return. The main source of uncertainty about future return is that, the price at which the stock can be affected by economics factors such as interest rates, economic growths, inflation liquidity, marketability, financial performance and strength of the dollar. The risk of stock can be measured by the price volatility. One of the main sectors of financial market is capital market where stocks and bonds are traded. Among all, stock market is seemed to very active market and basically concerned to maximize the wealth of stockholders. It plays vital role in economy. Financial market is the mechanism designed to facilitate the exchange of security by bringing buyer and seller in the trading floor. It allows supplier and demanders of funds to make transaction. Capital market is important intermediary through the networks of funds within the economy can be made active. In general, capital market refers to the market where various long-term securities are issued and traded for the tradeoff between liquidity position risk of their prospective portfolio in the response to availability of information and marketability of securities and its prices. If the

capital market is efficient, the current stock price fully reflects available information but full efficient market is very difficult to meet in the real corporate world.

So, investor should learn fully and carefully as possible as about actual investment world. Political, legal, economical, social, and technological factors affect the capital market. All financial institutions are also affected by capital market. Many financial institutions are listed with Nepal Stock But the present study however includes only listed commercial banks. This study has mainly focused on the risk and return analysis of common stocks investment of the selected listed banks.

1.2 Focus of study:

This study fills a research gap on the Investor's risk and return in commercial banks of Nepal. A deep and through study of it is always necessary and acceptable. It know that the commercial banks can effects the economic condition of the whole country, so effort is made to highlight the investment policy of commercial banks expecting that this study also provides information to the management of the bank that would help them to take collective action. Investor basic reason for investment activity is to maximize their personal happiness or utility. From the study would be able to provide information to the shareholders to make decision while making investment on shares of different commercial bank.

Generally, risk and return analysis is concerned to identify the sustainable position of financial sector. Risk and return is the basic concept in the corporate finance and it guides the other modern theories and principal as well as it assists in taking various financial and qualitative financial decisions. The relationship between risk and return can be defined by the investors' perception about risk and the demand for compensation. No investor will take any investment position in risky assets unless they are convinced of adequate compensation for the percept risks. In fact, there is positive relation between risk and return. Risk has been defined as the chance that the actual return deviation from the expected returns and risk is the percept fact of life that is the product of uncertainty and it magnitude depend upon the degree of variability in future's uncertain cash flows. Risk and return is an indication of opportunity of losing investment value. It is insensible to talk about returns without talking about risks

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Many financial institutions are listed with Nepal Stock Exchange (NEPSE). The total number of listed companies in F/Y 2008/09 was 158. There are 21 companies listed under commercial bank group, similarly there are 23 companies in development bank group, 58 finance companies, 21 companies in manufacturing and processing group, 4 companies in hotel group, 5 in trading and other group, 18 insurance companies and 26 other companies.(Annual report of SEBON, 2009). Now total listed companies in NEPSE are 171 in fiscal year

2009/010. There are 23 commercial bank, 36 development bank, 62 finance companies, 18 insurance companies, 18 manufacturing companies, 4 trading companies, 4 hydro powers, 4 hotels, 2 other. But the present study however includes only listed commercial banks of fiscal year 2008/09. This study has mainly focused on the risk and return analysis of common stocks investment of the selected listed banks.

1.3 Highlights of Sample Banks

NABIL Bank Limited:

Nabil bank is the first joint venture bank in Nepal. It was established in 1984. The data if established, it had known as Nepal Arab bank limited but now it is known as only Nabil bank limited. The bank was listed in NEPSE in the year 1985 A.D. The paid up capital of the bank in fiscal year 2009/10 was only Rs 9657 lakh.

Nabil was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, Nabil provides a full range of commercial banking services through its 19 points of representation across the kingdom and over 170 reputed correspondent banks across the globe.

Nabil continues to be among the largest tax payers in the industry, with the payment of NRs. 321 million corporate taxes during 2006/07. Nabil bank is one of the top ten tax payer in fiscal year 2008/9 as well. 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 Tele-banking system. Nabil has 39 branches across the country. Similarly, it issue the widest range of credit and debit cards under the brands of Visa and MasterCard to our account holders as well as non-account holders.

Himalayan Bank Limited:

Himalayan Bank was established in 1993 in joint venture with Habib Bank Limited of Pakistan. It is the fourth joint venture bank in Nepal and it was listed in NEPSE in 1993. The paid up capital of the bank in fiscal year 2009/10 was only Rs 12162 lakh. Himalayan bank has more than 31 branches all over the Nepal.

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

All Branches of HBL are integrated into Glob us (developed by Tremens), the single Banking software where the Bank has made substantial investments. This has helped the Bank provide services like ‘Any Branch Banking Facility’, Internet Banking and SMS Banking. Living up to the expectations and aspirations of the Customers and other stakeholders of being innovative, HBL very recently introduced several new products and services. Millionaire Deposit Scheme, Small Business Enterprises Loan, Pre-paid Visa Card, International Travel Quota Credit Card, Consumer Finance through Credit Card and online TOEFL, SAT, IELTS, etc. fee payment facility are some of the products and services. HBL also has a dedicated offsite ‘Disaster Recovery Management System’. Looking at the number of Nepalese workers abroad and their need for formal money transfer channel; HBL has developed exclusive and proprietary online money transfer software- Himal Remit TM. By deputing our own staff with technical tie-ups with local exchange houses and banks, in the Middle East and Gulf region, HBL is the biggest inward remittance handling Bank in Nepal.

Investment Bank Limited:

Nepal Investment Bank Ltd. (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one the largest banking group in the world. With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen, has acquired on April 2002 the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank ltd.

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

- A group of companies holding 50% of the capital
- Rashtriya Banijya Bank holding 15% of the Capital.
- Rashtriya Beema Sansthan holding the same percentage.
- The remaining 20% being held by the General Public

Nepal Investment bank was listed in NEPSE in 1987 A.D. Its paid up capital is Rs 24071 lakh in fiscal year 2009/10. Nepal investment bank limited has 39 branches all over the Nepal.

Everest Bank Limited:

Everest bank limited was established in 1994 A.D. with the joint venture of Punjab National Bank Limited, India. It was listed in NEPSE in 1996 A.D. Paid up capital of Everest bank limited are Rs.8388 lakh.

EBL has steadily growing in its size and operations and establish itself as a leading private sector Bank. It has been providing customer friendly services through a network of 37 branches across the nation. Largest Network among private sector banks spread across Nepal and all connected with ABBS HDFC bank India whereby instant payment is done on presentation of the instrument. Direct account credit in PNB branches connect with Central Banking System and RTGS member bank via speed remittance. There are more than 170

remittance payout location in Nepal with strong Joint Venture Partner providing Technical Support and representative office in India to facilitate remittance from India for Direct Drawing arrangement with PNB.

1.4 Statement of the problem

Generally, investors purchase financial assets such as stocks or bonds for their desire to increase their investment wealth i.e. earn positive rate of return on their investment. Risk and return analysis is worked out to identify the sustainable position of any organization and financial institution. Capital market in Nepal has grown rapidly after the establishment of the security market named NEPSE with in the very short period of time. However, the attitudes and knowledge of the most investors have not changed yet. They are influenced by liquidity position rather than information in the financial market. Investors usually lack any idea of risk and return because most of the investors appear to be least familiar with the financial market. They can make wrong investment decisions based on the hunches rather than on real term analysis. Though some investors follow the rational investment procedure and portfolio analysis but they still lack perfect awareness about the risk and return factors. Without getting theoretical knowledge about risk associated with investment, most of the investors are making investment on the stocks. This may be termed as improper practice. This situation motivates the present researcher to undertake a research project entitled "Risk and return analysis of selected commercial banks in Nepal".

If the bank issues shares, there becomes huge demand rather than the supply but if other sectors such as hotels insurance companies and manufacturing companies issue new shares, the least investors desire to invest their money. In Nepalese context, most of people deposit their saving in banks instead of making investment in the financial assets available in the capital markets like investment in shares, debentures and other derivative securities. Many investors are not rational towards their investment decision. They don’t know how to make rationale investment by assessing the risk percept in the investment and the level of return to compensate the percept risk. In Nepal, most of the financial institution issues only the common stocks and capital market is also dominated by the trading of the stocks.

On the basis of this, the study seeks to answer the following research questions.

- What is the level of un-diversifiable or systematic risk or market risk of Individual sample banks?
- What is the level of Diversifiable or unsystematic risk on common stocks of commercial banks?
- What is the average return on common stocks of commercial banks?
- What is the total level of risk and return on common stocks of commercial banks?
- What is the investors' perception on the risk and return on common stocks of commercial banks?
- What types of effect are facing the commercial bank of Nepal by market risk?

1.5 Objectives of the study

The primary objective of the present study is to analyze the risk and return of listed commercial banks in Nepal which were facing by investor. The investor must be known about the Bank which was investing. The specifics objectives of the present study are listed down as follows:

1. To analyze the systematic risk of the selected commercial banks.
2. To analyze the unsystematic risk of the selected commercial banks.
3. To analyze the risks and return of selected commercial banks.
4. To analyze whether the common stocks of selected banks are over or under priced.
5. To find out whether the investors analyze the risk and return while making investment in the common stocks of commercial banks.
6. To compare the Diversifiable or Unsystematic and Un-diversifiable or Systematic risk of selected Commercial Bank.

1.6 Significance of the study

Commercial banks occupy an important place in the framework of every economy because it provides capital for the development of industry; trade and business banks render services to their customers in view of facility their economics of social life. The study mainly fills a research gap on the study of commercial banks in Nepal. The study will provide useful

feedback to the policy makers of the bank, and becomes a useful reference for other commercial banks of Nepal and central bank for the formulation of appropriate strategies. The effort is made to highlight the investment pattern of commercial banks expecting that the study can be bridge which fulfils the gap between deposit and investment. On the other hand, the study would provide information to management of the bank that would help them to take corrective action and last but not least the study evaluated the investment pattern of commercial bank and finds loopholes and significantly contributes to make the policy sound.

The study is to point out the risk and return position of investing shares of commercial banks in Nepal. The study will be helpful for investors as well as commercial banks. It also provides proper guidelines for making choices of stocks and bonds on the basic of risk and return. It is also important to those people who are interested to know about risk and return and capital market in Nepal. It provides the consolidated basic data and information about the NEPSE and commercial banks under study. This study will cover the investors' perception upon the risk and return factors while investing in common stocks of commercial banks. It will provide the brief information on risk and return from the investors' perspectives.

1.7 Limitations of the study

Every research study has its own limitations. The present study has following limitations.

1. It covers only listed Commercial Bank in NEPSE reference to Nabil Bank, Himalayan Bank, Nepal Investment Bank and Everest Bank.
2. The study is based upon the secondary data for fundamental analysis and primary data for technical analysis.
3. The study is basically concerned only with the risk and return of the sample banks.
4. This study incorporates the data of only ten fiscal years from 15th July 2000 to 15th July 2009
6. This research used only the selective tools for analysis and interpretation of data.
7. There might be various recall biases from the side of the respondents which might have distorted of this study.

1.8 Organization of the study.

The whole study has been organized into five chapters. The chapter one to five conveys the following titles:-

Chapter 1: Introduction

Chapter one deals with General Background, Brief Introduction of Banks under Study, Statement of the Problem, Objectives of the Study, Focus of the Study, Limitations of the Study and Organization of the Study.

Chapter 2: Review of Literature

The second chapter of the study assures readers that they are familiar with important research that has been carried out in similar areas by earlier scholars in related areas. It also establishes that the study as link in a chain of research that is developing and emerging knowledge about concerned field.

Chapter 3: Research Methodology

The third chapter refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view. It describes the various research methods (i.e. research design, source of data, data collection techniques, data collection methods).

Chapter 4: Presentation and Analysis of Data

The developed information has finished in required form in fourth chapter. Information is presented and analyzed (i.e. both primaries as well as secondary source) by using various financial and statistical tools in specified form to meet the stated objective of study.

Chapter 5: Summary, Conclusions and Recommendations

On the basis of the results from data analysis, the researcher concluded about the research work. Besides, it also gives important suggestions to the concerned organization for better improvement.

CHAPTER II
REVIEW OF LITERATURE

This chapter includes the various reviews of literature concern with the study. It presents with the decision related to various theories and researched studies that are closely related studies and provides valuable inputs to conduct the present studies successfully. The whole chapter has been divided mainly into two parts- theoretical review and the research review. Theoretical review includes the definition and summary of published articles in different journals and past studies.

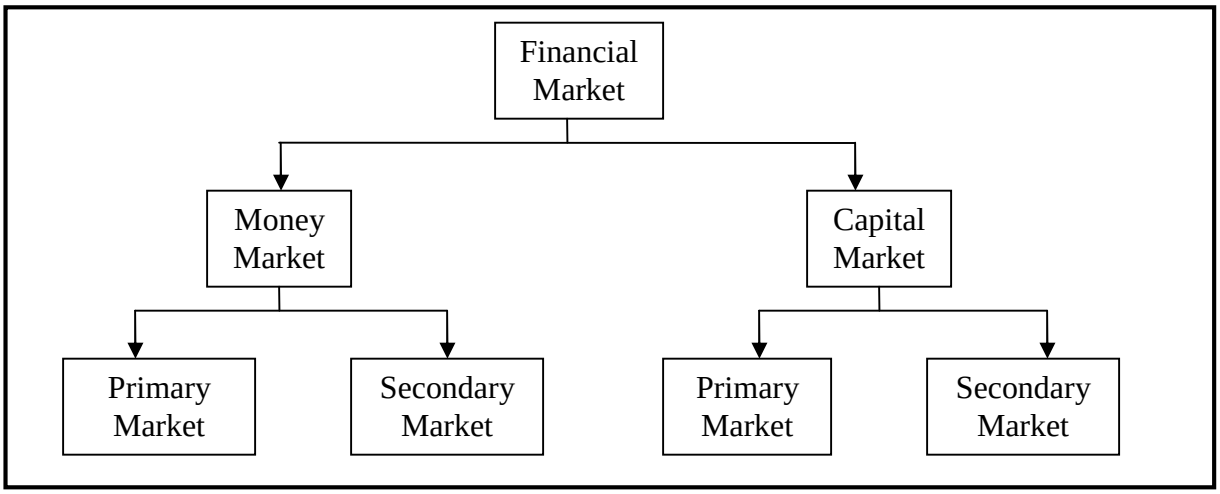
2.1 Theoretical Review

2.1.1 Concept of capital market

Capital market is also called security market as well as financial market. Capital market is the mechanism designed to facilitate the exchange the financial assets or securities by bringing buyer and seller of securities together. Precisely speaking, security market allows suppliers and demanders of funds to make transactions. It can be various types and forms classified as different bases capital market and money market, share and debenture market. For our research concern, capital markets--the market defined as anybody of the individuals, whether incorporated or not, constituted for the purpose of regulating controlling the business of selling or dealing securities. According to Brigham & Eharadt, 10th edition, “capital markets are the market for intermediate or long-term debt and corporate stocks. Intermediate term refers those financial assets having the maturity periods equal to five years and more than five years. Capital market consists of the security market and non security market implies mobilization of the funds through issuance of

Securities like share, debenture, and other derivative securities. These securities traded in the markets are generally negotiable and hence can be traded in secondary market. Non security market refers to the mobilization of the nonfinancial resources.

Figure 2.1 Capital market structure



Basically capital market can be divided into two parts:

1. Primary capital market

2. Secondary capital market

Primary capital market:

Primary market is the market is the market through which the funds are transferred from saver to demander. Hence, the transaction of securities issued first times takes place in primary markets. The primary for securities is new issue market, which brings together the supply and demand or source and use for new capital funds. In this market, the principal source of fund is domestic saving of individuals and firm, other suppliers include foreign investors and government. In highly developed capital market, the largest proportion of saving reaches the new issue market indirectly via a financial intermediary. For e.g. investment bankers and other similar nature of financial institutions. In contrast most of the investors are unfamiliar with issue markets and its institutions such as underwriting and selling syndicates which serve middlemen between the corporate demanders of funds and the individual investors.

Secondary capital market:

Once the have been issued in the primary market, investor may seller trade them in the secondary market called secondary capital market. It deals with previously issued share

mainly traded through the stock exchange, over the counter (OTC) market and the direct dealing. The majority of securities are transaction in stock market in general.

2.1.2 Development of capital market in Nepal

A stock investment practice in Nepal has been developed after the establishment of the Biratnagar Jute Industry and Nepal bank Ltd. in 1937 AD. Industrial development began in Nepal only in the mid-sixties, when the Government began establishing manufacturing industries such as the jute industry (i.e. Biratnagar Jute Mill), cement factories, and sugar factories. In order to support this industrialization process, government actively promoted financial institutions, such as commercial banks and capital market institutions. The Nepali capital market had its beginnings with the establishment of the Securities Marketing Center in 1976. Till 1980's the majority of shares issuing companies would belongs to the government ownership. In 1984, the Securities Exchange Act was promulgated and this institution was converted into the Securities Exchange Center (SEC) under the ownership of the Nepali Government, Nepal Rastra Bank - the Central Bank - and the Nepal Industrial Development Corporation – a government owned industrial development bank. The main function of SEC was to assist in the development of a capital market by performing the role of a broker, underwriter and share issuer, and to sell government bonds. It operated an over the counter market for company shares and government bonds. After the inception of the Securities Exchange Center, shares of various manufacturing, trading and banking companies became listed. Interestingly, the listed shares were dominated by public enterprises during this stage. Between 1984 and 1990, 42 companies were listed, out of which more than 25 companies had some form of government ownership. The real boost into the capital market in the form of a private sector led growth began with the financial sector liberalization. In the mid-eighties, Nepal opened its doors to foreign investors as joint venture partners in the banking sector, which revolutionized commercial banking services in Nepal. Since then, a variety of private sector based financial institutions have evolved. In 1992, the Finance Companies Act was amended .This enabled finance companies to be established to function in various areas such as leasing, housing finance, and hire-purchase. These institutions were also allowed to perform capital market functions such as share issue, portfolio management, market making and custodial services. The growth of these financial institutions was complemented by the

establishment of the Nepal Stock Exchange. In 1993, the Securities Exchange Act was amended. The Securities Exchange Center was converted into the Nepal Stock Exchange for securities trading by private brokers and the Securities Exchange Board was established for oversight functions as a regulatory body. This amendment also permitted private sector market intermediaries and set the operating guidelines for intermediary functions such as broking, market making, issue management, and portfolio management. The changes that were seen in the market with these regulatory and institutional changes were phenomenal. It is only since this change in 1993 that a true capital market has evolved where prices are actually determined on a market basis. This process of capital market development in Nepal holds valuable lessons for newly emerging markets.

Initial public Offerings (IPO's) were hardly found in practices and funds were collected through the direct placement of bonds. The prime objectives of the raising the fund would be the development of the infrastructure and public welfare programs. It has helped flourishing the primary government bond market. On the other hands, the share of Nepal Bank Ltd. were in existence but limited to ownership of the RANA's (Khadka, 2004). Government had issued treasury bills in 1962 AD for the first time to finance the infrastructure development. Furthermore, it was folded by the by the issuance of the development bonds in 1964 AD. Industrial policy has opened the door of the establishment of the institution name Security Market Center (SMC) in 1977 AD. Security Exchange Act (SEA) was approved by legislation and came into existence with effect from 13th April, 1984 AD. The former Securities Exchange Center was converted into Nepal stock Exchange (NEPSE) with the major objective of arranging marketability and liquidity of to the government and corporate securities. Floor trading through market intermediaries such as brokers' market makers has also evolved; restoration of democracy following the political movement of 1990 has brought lots of reforms in the finance sector. Liberalization in the real sense was initiated. Nepal launched 'Extended Adjustment Program' in 1992 AD by taking Extended Structural Adjustment Facility (ESAF) through the amendment in the SEA. This has led to established of the Securities Exchange Board Nepal (SEBO/N) and was given the responsibility of regulating and developing the transactions of the stocks and bonds in the floor through its

member intermediaries where NEPSE is to facilitate the transactions of the stocks and bonds in the floors through its member intermediaries.

2.1.3 Meaning of risk

Different investors define risk in different ways. In general, risk can be defined as the likelihood that actual return from an investment will be less than the forecast return. Stated differently, it is the variability of return from an investment. (Hampton, 1998:158)

Risk is defined in the Webster's dictionary as "a hazard a peril; exposure to loss of injury". Thus, risk refers to chance that some unfavorable events may occur. If we bet on the horses, we are risking our money. If we invest in speculative stocks we are taking a kind of risks in a hope of making appreciable returns. (Brigham, Capeskin and Erhards, 2001:160)

Risk can be thought of as the possibility that the actual return from holding a security will deviate from the expected return. The greater the magnitude of deviation and the greater the probability of its occurrence, the greater is said to be risk of the security.(James C. Van Horne, 2000:25)

In reality, Risk occurs when we cannot be certain about the possible future outcomes of particular activity or events. So, we are not sure that risk will occur in the future consequently. Risk results from the fact that the action such as investment can provide the more than one outcome in future. (Western Besley and Brigham, 1996:182)

According to Saunders and Cornett, 2002, "A major objective of the financial management is to increase the Financial Institutions' return for its owners. They often come however at the cost of increased risk. The effective management of this risk is central to a financial institutions' performance. Indeed, it can be argued that the main business of financial institution is to manage the risk for the purpose of maximization of return. So, financial institution manager must devote the significant time to understanding and managing the various risks to which their financial institutions are exposed".

In real sense, risk is the chance of losing future return and investment amount in future. Assets having great chance of loss are viewed as more risky than lesser chance of loss. More formally, the term risk is used interchangeably with uncertainty to refer the variability of return associated with the given assets. Risk is measured in many ways but commonly three methods are viewed as useful standard. These are:

Beta coefficient:

This is a mathematical value that measures the risk of one asset in term of its effect on the risk of group of assets called portfolio. It is concerned solely with market related risk as would be the concern for the investor holding stocks and bonds. It is derived mathematically so that a high beta indicates a high level of risk and low beta represents a low level of risk.

Standard deviation:

This is the measurement of the dispersion of forecast returns when such returns approximate a normal probability distribution. It is a statistical concept and widely used to measure risk from holding a single asset. The standard deviation is derived so that a high standard deviation represents a large dispersion of return and it involved high degree of risk. On the other hand, a low standard deviation is a small dispersion and represents low degree of risk. Subjective estimates a subjective risk measure occurs when qualitative rather than quantitative measures are used to measure dispersion. We will use the definition of risk that deals with dispersion of return. We will also note that mathematical approaches can be used to estimate such dispersion.

2.1.4 Sources of risk

An investment is commitment of money that is expected to generate addition money. Every investment entails some degree of risks. A major objective of financial institution is to increase the returns for its owner by taking minimum risk. The effective management of the risk is central to its performance. Indeed, it can be argued that the main business function of financial institution is managing these risks through the consumption of maximum time and efforts in understanding and managing the various source and kinds of risks factors with its

different natures and complexities. The primary risks factors that create investment uncertainties are as follows:

Interest rate risk:

Interest rate risk arises if interest rate mismatches in both the volume and maturity of interest sensitive assets, liabilities, and of f-balance sheet items. An unanticipated movement in interest rates can seriously affect the profitability of the banks.

Asset transformation function is the key functions of financial institution. It involves buying primary securities or assets and issuing secondary securities or liabilities to fund assets purchase. The primary security purchased by financial institutions often has maturity and liquidity characteristics which are different from those of secondary security that financial institutions sell. In mismatching the maturities of assets and liabilities as part of their asset transformation function. Financial institutions potentially expose themselves the interest rate risks. Suppose when interest rate increases and maturity period of assets is greater than the maturity period of liabilities. At that time, if interest rate increases it decreases the market value of assets in comparison of its liabilities. So, interest rate is defined as the potential variability of return caused potential variability of return caused by the changes in its market rate interest rate. Interest rate can be variable. If we consider the single period return formula for the bond and stock. In interest rate risk, if market interest rate raises the investment values and market prices falls and vice-versa. The variability of return results interest risk. The interest rate risk affects the prices of bonds, stocks, real estate, gold and other derivatives securities.

Bull-Bear market risks

Market risk is risk incurred in the trading of assets and liabilities due to changes in market forces like interest rates, exchange rates. Furthermore, market risk is the risk related to uncertainty on the earning on its trading portfolios caused by changes in the market condition. Saunders and Cornett in tenth addition have outlined two comments on market risk. These are as follows:

Comment 1: market risk is value at risk (VAR) which is related to uncertainty.

Comment 2: market risk is caused due to four major market forces. These are price of assets, interest rate, market volatility, market liquidity. Market risk can be also cleared in Bull-Bear approach. This approach advocates that risk can rise from the variability of the market return resulting from the alternating bull and bear market forces. Bull market creates when security index arises fairly and consisting from also point called trough for a period of time, the bull market ends when the market index reaches a peak and starts downward trend. The period during which the market declines to the next trough is called a bear risk.

Credit risk

It is also called default risk. Default risk is probability that the borrower is unable to fulfill the term promised under the loan agreement. Saunders and Cornett have outlined three principles as follows:

Principle 1: It is the risk losing principal and interest amount.

Principle 2: When financial institution makes loans or buys securities with longer maturities. There is chance of higher credit risk where principal plus interest earned may not recover adequate in full amount.

Principle 3: Credit risk can be firm specific and systematic risk.

Liquidity risk

Liquidity risk is sudden surges in liability with drawl may leave as financial institution in a position of having to liquidate assets in a very short period of time and at low prices. Liquidity risks arises when on its liability holders such as depositor or insurance policy maker etc. demand immediate cash for the financial claim they hold with financial institution or when holders of loan commitment or credit line suddenly exercise their right to borrow or draw down their right their loan commitments. At that situation the financial institutions must either borrow additional funds or sells assets to meet the demands for the withdrawal of funds. In most cases financial institution has to face the liquidity crisis at the time when liability holder demands higher cash consequently. In other sense, liquidity risk is that position of an assets total variability of return which results from the prices discount given on sales. Commission paid in order to sale without delay. Perfectly liquid assets are highly marketable

either price discounts must be given or these cost must be incurred by seller, in order to find a new investor for an assets is the larger the prices discount and /or commission which must be given up by the seller in order to affect a quick sale.

Foreign Exchange or Currency risk:

Under flexible exchange rates, any net short or long open position in a given currency will expose the bank to foreign exchange risk, a special type of market risk. A bank with global operations experiences multiple currency risk, which arises from adverse exchange rate fluctuations.

Callable risk

Some bonds and preferred stocks are issued with a provision that allows the issuer to call them in for repurchase. Issuer like the call provision because it allows them to buyback outstanding preferred stock and /or bond with funds from a newer issue if market interest rate drop below the level being paid on the outstanding securities. There is chance of creating callable risk. That portion of a security's total variability of returns which derives from the possibility that the issue may be called is the callable risk. Callable risk commands a risk premium that comes in the form of a slightly higher average rate of return. This additional return should increase as the risk that the issue will be called increase.

Convertibility risk

Call ability risk and convertibility risks are in two aspects. First both are contractual stipulations that included in the term of original security issue. Second, both of these provisions alter the variability of return from the affected security. Convertibility risk is that portion of the variability of return from a convertible bond of convertible preferred stocks. That reflects the possibility that the investment may be converted into the issuer's common stocks at a time or under terms harmful to the investor's best interest.

Industrial risk

An industry may be viewed as a group of companies that compete with each other to market homogenous products. Industry risk is that portion of risk that can be an investment variability of return caused by events that affects the product and firms that make up of an industry. The stage of industry cycle, international tariffs and/of quotas on the product produced by an industry related taxes, industry wide labor union problems, environmental restriction, raw materials acts and affect all the firms in the industry simultaneously. As a result of these commonalities, the prices of the securities issued by competing firms tend to rise and fall together.

Political risk

Political risk arises from the exploitation of a politically weak group for the benefits of politically strong group, with the efforts of various groups to improve their relative positions increasing the variability return from the affected assets. Regardless of whether the changes that cause political or by economic interests, the resulting variability of return is called political risk if it is accomplished through legislative, judicial or administrative branches of government. Political risk can be classified as international political risk and domestic political risk.

Global Banking risk

Global diversification of assets often allows a bank to improve upon its risk management, thereby raising profitability and shareholder value added. The banks with branches or subsidiaries in other Countries part of their infrastructure exposed to currency, exchange Control, and political risk.

Other risks

Besides these above mentioned risks, there are other risks like off balance sheet risk, technological and operational risk, country and sovereign risk, insolvency risk etc.

2.1.5 Types of risks

Total risk or total variation of the rate or return for an individual security or portfolio is measured by the standard deviation or variance of the rate of return. According to Capital Asset Pricing Model (CAPM), total risk can be divided into two parts i.e. systematic risk and unsystematic risk.

Systematic risk

It is the also called non-diversifiable risk. The systematic risk is market related. In other words, it arises from the changes in the economy and market condition. For example, high inflation, recession, impact of political factors, wars, depression, long-term changes, etc, which are beyond the control of company management. It affects all the firms in the market. The portion of risk is non-diversifiable and cannot be reduced. The systematic risk is rewarded in the form of risk premium. Sometimes, systematic risk is called market risk. Systematic risk affects almost all assets in the economy, at least to some degree, whereas systematic risk affects at most a small number of assets. The principle of diversification has an important implication to a diversified investor, only systematic risk matters. It follows that in deciding whether or not buy a particular individual asset, a diversified investor will only concerned with that asset's systematic risk. This is a key observation and it allows us to say great deal about the risks and returns on individual asset, in particular, it is the basis for a famous relationship between risk and return called the security market line. To develop the SML, we introduce the equally famous Beta coefficient one of the measurement unit of modern finance. Beta coefficient and SML are the key concepts because to get supply us with at least part of the answer to the question of how to go about determining the required return on an investment.

Unsystematic risks

The unsystematic risk is non market factors related. In other word, it arises from the project specific factors for example inefficiency of management failure in new product in production, employee strikes, lawsuits and any other event that is unique to the company. It is inherent individual companies or projects. This portion of risk is diversifiable and it is possible to

reduce or eliminate through diversification of the investments. It is called unique or asset specific risk.

2.1.6 Meaning of return

The meaning of return is defined as different investors. The rate of return from capital investment is a concept that has different meaning to different investors. Some competitive seek near term cash inflow and give less value to more distant returns. Return can be expressed by cash dividend or capital gain or loss. Still some investors measure return using financial ratios. Single holding period return may be defined as all possible future cash flows that can be earned holding securities up to holding period. It can be also defined as the changes in the value plus any cash distribution expressed as a percentage of the beginning of the period of investment value. An investor can obtain two kind of income from the investment is a share or bonds. They are as follows:

1. Income from price appreciation or losses from price depreciation. It is called capital losses and gain.
2. Cash flows income from cash dividend or coupon interest payment.

Return shows financial position of any organization. The company position of any organization may be better if it has higher return. Return is rewards for an investor from his or her organization. Investors always want to maximize expected return subject to their tolerance for risk. Return is motivating forces and it is the key method available to investors in capering investment alternatives. Realized rate of and expected rate of return which are often used in language of investment. Realized rate of return is after the fact return that was earned or it is the historical return.

The return on investment can be measured as the total gain and losses expressed on the behalf of owner over the given period of time. It is commonly stated as the change in value plus any cash distribution expressed as percentage of the beginning period investment value. The expression for calculating the rate of

Return (Ks) earned any assets over the period (t) is commonly defined as

$$Kt = \frac{Pt - Pt - 1 + Ct}{Pt - 1}$$

Where,

Kt = actual or expected or realized rate of return

Pt = price or value of asset at time (t) or beginning price

Pt-1 = price or value of assets at time t-1 or ending price

Ct = cash flows received from the investment in the time period t-1 to t

2.1.7 Expected rate of return

The expected rate of return or holding period return is based upon the expected cash receipts over the holding period and expected ending or selling price. Depending upon the assumption made about cash receipts and ending price, a number of expected returns rate are possible. These possible rates estimated by the investors are summarized in the expected rate of return. According to (Cheney and Moses, 1995:212) “the expected rate of return must be greater or equal to the required rate of return in order for the investor to find the investment acceptable.”

2.1.8 Capital Asset Pricing Model (CAPM)

CAPM provides a framework for measuring the systematic risk of an individual security and relate it to the systematic risk of well diversified portfolio. CAPM is used in finance frequently to analyze the relationship between the risk and rate of return. The conclusion of the CAPM is: the relevant risk of an individual stock is contribution to risk of a well-diversified portfolio. Indeed, in 1990 AD, the greatest world prize the Nobel Prize was awarded to the developers of CAPM, Professor Harry Markowitz and William F. Sharpe. In the context of CAPM, the risk of individual security is defined as the volatility of the security returns vis-à-vis the return of market portfolio. CAPM is simple concept and has real world applicability. The model describes the relationship between risk and return or expected return. In this model, a security’s expected return is the risk free rate plus a premium based on systematic risk of the security. Beta coefficient is the heart of CAPM model. It is the better measure of risk, the most important aspect of risk is the overall risk significantly affects

investment opportunities and even more important, the owner wealth. The basic theory that links together risk and return for all assets is called Capital Asset Pricing Model.

The CAPM equation on security market line (SML) is usually written as:

$$\mathbf{E\ (Rj) = RF + \beta j\ [E\ (Rm) - Rf\ ]}$$

Where,

E (Rj) = the required rate of return on the assets

Rf = the rate of return of risk free assets

E (Rm) = the expected or ex-ante return on the market portfolio

βj = a measure of the non-diversifiable risk of the J^{th} security called assets beta. It can be calculated as

$$\beta j = \frac{\mathbf{COV\ (Rj\,Rm)}}{\mathbf{VAR\ (Rm)}}$$

Where,

COV (Rj Rm) = covariance between risk free return and market return

VAR (Rm) = variance of market returns

There are some assumptions under the CAPM model. According to (Sharpe, Alex, and Bailey 1998:145) has outlines eight assumptions as follows.

1. Investors evaluate portfolio by looking at the expected return and standard deviation of the portfolio over one period horizon.
2. Individual assets are infinitely divisible. It implies that an investor can buy a fraction of a share of s/he so desires.
3. There is a risk free rate at which an investor may lend i.e. invest money or borrow money.
4. Taxes and transaction costs are irrelevant.
5. All the investors have the same one person horizon.
6. The risk free rate is the same for all investors.
7. Information is freely and instantly available to all the investors.

8. Investors are homogenous expectations. It implies that everyone has same perception in regard to the expected returns, standard deviation and covariance of the securities.

CAPM provides a measure of risk and return. The systematic risk or market risk of a security is measured in term of its sensitivity to the market movement. This sensitivity is referred to security's Beta (β). Beta reflects systematic risk that can't be eliminated. Investor can eliminate unsystematic risk when they invest their wealth in a well diversified portfolio. A beta of 1.00 indicates average level of risk while more than 1.00 means risk more than market portfolio. A zero beta coefficient means no risk. The graphical presentation of CAPM is called the Security Market Line (SML).

2.1.9 Over, under and fairly pricing of securities

The securities can be either under priced or overpriced. It can be known calculating through required rate of return and average rate of return. When average return exceeds the excepted return then, the securities is under priced and vice versa. Required rate of return can be used as a discounting factor to determine the intrinsic value of stock. It means there is inverse relationship between required rate of return and intrinsic value of stock.

2.2 Research review

Problems of risk management return maximization are very much on the agenda in banking and finance. There is a clear sense that risk exposure of the financial system has been increased by the changes that have taken place over the past two decades. The changes may be due to the incapability of accumulating the credit, interest rate positions taken or derivative exposures that may or may not have been assumed to hedge balance sheet risk. For the minimization of this risk and maximization of return, commercial banks have felt the need of upgrading their risk management and control system.

These days information highway or the internet has become to the most easily accessible medium to gain information in subject matter. Different books and article have been consulted while conducting the research to derive the comparative and analytical conclusion of this

study. The review of relevant articles publish in different journals are available online on international Network for the Availability of Scientific Publication (NASP). In this section has been reviewed and presented all about past study about same research.

2.2.1 Review of journal

Financial economics has been defined as the application of economic theory to financial markets (Smith, 1996). It is largely body of theory including such well known models as modern portfolio theory (Markowitz, 1952), the capital asset pricing model (CAPM) (Sharpe, 1964), the efficient market hypothesis (Samuelson and Fama, 1965) and option pricing model (Black and Scholars 1973). Though these models are all included in institute of faculty education limited in 1995, their acceptance or use is controversial.

Pagano's (2001) has a study on how theories of Financial Intermediation of Corporate Risk-Management Influence Bank Risk-Taking Behavior. This paper has based on the relation for the risk taking and risk management behavior from a both corporate finance and banking perspective. That data set covers the period from 1986-94, 1986-90 and 1991-94 but overall time of the study is 9 year period. In this study, the research scholar has used mathematical tools that are the model beta, standard deviation, total risk (systematic and unsystematic risk), and interest rate risk. The main objective of the study is to examine the relation for risk taking and risk management behavior for both corporate financial and a banking perspective. After combining the theoretical insights from the corporate finance and banking literatures related to hedging and risk taking the paper reviewed empirical tests based on these theories to determine which of these theories are best supportive by the data. Management incentives appear to be must consistently supported rational for the describing how bank manage risk. In particular, moderate/high levels of equity ownership reduce bank risk while positive amount of stock option grants increase bank risk-taking behavior. The empirical tests of theory of corporate risk management need to consider individual subcomponents of total risk and the bank ability to trade these risks in a component financial market.

Berkowitz and Brien's (2002) in their research paper "How Accurate are Value- At-Risk Models at Commercial Banks" has focused on first direct evidence on the performance of

value at risk model for trading firms. The result shows that VAR forecasts for six large commercial banks have exceed nominal coverage levels over the past two years and for the some banks, VARs we substantially removed from the lower range of trading P & l. While such conservative estimates imply higher levels of capital coverage for trading risk, the reported VARs are less useful as a measure of actual portfolio risk.

They have used standard deviation, means, correlation coefficient VAR correlation coefficient, and Beach Mark and Portfolio model. To a certain extent, the study is limited by the fact that banks only forecast a single percentile of the portfolio distribution significant more could be learned about the empirical performance of internal valuation models of density forecast were recorded. Density forecast evaluation techniques described in Disbold, Gunther and Tay (1998) and Berkowitz (2001) provide researchers with substantially more information to assess the dimension in which models need improvement and those in which models do well.

Akhigbe and Whyte (2004) in their research paper, The Gram-Leach-Billey Act" of 1999: Risk implications for the Financial Service Industry have focused on risk implication of banking and private sectors. The research paper has included many other studies some of the studies find that banjo expansion into banking activities can affect of events that permitted only limited entry by banks into nonbanking activities. The study is conducted on systematic, unsystematic and total risk, such risk are calculated by using statistical tools i.e. variance and standard deviation, T-statistical and signed rank which is recently by Amend, Delong and Saunder in 2002. The study has included 340 banks for the sample size than they partition two sub- samples: 46 large banks and 294 small banks. The major finding of the study is that evidence of a significant decline in systematic risk for the banks securities firm and insurance companies but a significant increase in total and unsystematic risk for the banks and insurance companies. The study has included five years period data. The study also found that bank and insurance companies are less risk than other securities business. If security wants to decline in risk, security firm can be explained by their ability to diversify into less risky banking and insurance activities. The research paper result suggests that regulators should carefully

monitor and supervise banking activities in new era of financial modernization to mitigate adverse effects from the increase in risk.

2.2.2 Review of related Unpublished Thesis

Mishra (2001) analyzed risk and return on common stock investment of commercial bank in Nepal with special reference to five listed commercial banks. The main objective of the study was to promote and distribution of the securities and purchase, sales or exchange of securities. He also tried to render contribution to the development of capital market by making securities transaction fair, healthy, efficient and responsible. In this study, the researcher has used mathematical tools that are expected return, standard deviation, coefficient of variance, dividend per share, portfolio return beta coefficient, required rate of return. The period of the study was taken six years data from (2051-2057). On his study, it was notifies that there is positive correlation between risk and return. Character of the company, Nepalese capital market being inefficient, the price index itself is not sufficient to give the whole information about the prevailing market situation and the company. It was also noticed that investors do not have any idea about the producers of securities issuance. Neither company nor the stockbrokers transmit any information to the investor about the current market situation and hence it becomes different for a common investor to invest in the securities. Mishra also has focused that Nepalese banks and government should try to promote healthy practices so that the stockbrokers do not give false information to the investor for their personal benefit, which is a common practice in Nepal. Investors should get regular information about the systematic risk (beta), return on equity and P/E ratio of various listed companies in the same way as it has given in economies times of companies listed in Indian stock exchange.

Gopal Prasad Satyal (2002) "An Assessment of the performance of the listed companies in Nepal" has a study on Risk and return analysis of listed companies for the analysis, among listed companies eight are taken into account. Among them two are from banking sectors, two financial companies, two insurance companies, one trading and one manufacturing and processing company. The main objectives of the study were to analyze risk, return and other relevant variables that help in making decision about investment on securities of listed companies and to examine the movement of market price of share, also to provide suggestions

on the basis of findings. He has used holding period return and expected rate or return to calculate the returns the companies. Calculation of standard deviation, coefficient variation (CV) and data were used to measure risk and CAPM for portfolio analysis. The expected return of Nepal investment is 36 percent, CV in 1.06 and risk is 38.3 percent. The beta of its share is 0.66.Expected return of Himalyan bank limited is 52.66 percent, risk is 29.3 and CV is 0.556. the beta is 1.567 so HBL is less risky then NIB. For the study, the researcher has taken 5 years period.

Buddhi Raj Tamang (2003)" Risk and Return analysis of Development bank in Nepal" has a study on risk and return analysis of development banks in Nepal. The main objects of the study is to determine whether the share of the development banks are correctly priced or not by analyzing the required rate of return using the capital assets pricing model also to measure the systematic and unsystematic risk of the development banks. In this study, the researcher has used mathematical tools i.e. market model, single period return, expected rate of return, standard deviation, coefficient of variation, beta coefficient (B).The period of the study has taken 5 years data from 1997-2002. The major finding of study, the systematic Nepal Arab bank has the highest un systematic risk but total risk or variance of Bangladesh is the highest i.e. 10 percent. From the study, it was also found that the shares of Nepalese commercial bank are heavily trade in NEPSE. None of the bank's share price are correctly priced.

Deepak Raj Joshi (2004) "Risk and return analysis of common stock of five listed investment commercial bank" has conducted a research on risk and return analysis of common stock of five listed commercial banks. The main objective of the scholar's study was to assess the risk associated with return on common stock investment of the basis of selected tools. For the study, the researcher is used five years data 1997 -2003.

He has used arithmetic mean to calculate the return, standard deviation and coefficient of variations, which are used to measure unsystematic risk and beta coefficient. The measurement explains sensitivity or volatility of the stock with market and individual banks. Correlation is a statistical tool i.e. is used to measure relationship between risk and return. The

researcher also used t-test to calculate hypothesis. The major findings of his study are that banking sector has the expected return is 21.77 percent, risk is 36.1 percent and CV is 1.66, similarly finance and insurance sector has 21.77 percent and 1.66, hotel sectors has 10.16 percent, 72.4 percent, 7.123, trading sectors has 6.68 percent, 80.68 percent, 11.76, other sectors has -16.61 percent, 50.45 percent and 3.037. Market expected return of 10.2 percent and risk of 39.57 percent, CV of 3.88. SCB has maximum market capitalization and NBBL has the minimum market capitalization. Market capitalization as well as NEPSE index has heavily influenced by banking sector. If investors wish to generate higher return then they should bear higher risk and invest in the share of SCBL and if they are risk averters and they want to invest in single assets. They can invest in the share of NBL or HBL because these two stocks have lower risk that of portfolio risk.

Ram Hari Khadka (2005) "A**nalysis of risk and return on selected Nepalese commercial banks listed in NEPSE**" has a study on analysis of risk and return on selected commercial banks listed in NEPSE. The main objective of the study is to measure systematic and unsystematic risk of commercial banks. The study has covered 6 years period and used expected return, coefficient to calculate the risk and return of commercial banks. The major finding of the study, based on the coefficient of variation, which measures risk/unit of the stock individually, Standard Chartered Bank Nepal Ltd. has the lowest coefficient of variation i.e. 1.89 and NABIL bank has the highest one i.e. 3.35. The total systematic risk has related due to the individual shares and correlation coefficient with the market portfolio. The residual risk or unsystematic risk is company specific is rather than market pervasive. Though the share of commercial banks in Nepal is heavily trade in NEPSE, none of the share price is correctly priced.

Hari Narayan Sheresth (2006) "Analysis of Risk and Return on selected Nepalese cooercial bank" has a study on risk and return on common investment of banking sectors in Nepal. The main objective of the study was to analysis the systematic and unsystematic risk associated with security. The study was covered six years data from 1996-2001.

In this study, the researcher has used analytical tools i.e. return of common stock, expected return, standard deviation, beta coefficient, CAPM coefficient of determinants and hypothesis (t-test). The major findings of his study are NBBL's common stock is yielding the highest realized rate of return with 71.80 percent where as it is the lowest 26.6 percent in case of NIB Ltd. The banking industry average 47.85 percent, the commercial banks NBBL, BOKL and EBL respectively rate of return are 71.8 percent, 67.6 percent, and 65.6 percent. All the commercial banks required rate of return is less than expected rate of return which means that they are all under price therefore it will be beneficial to the study, it has found that investment in banking sectors is beneficial instead of other financial sectors.

Sarita Thapa (2007) "**Risk and Return in Stock Market Investment in Nepal: Issue and Challenges"** has carried out a research on this title. Her major objectives of the study were to find out and analyze the risk and return as well as to examine the trend of risk, return, total paid up value, annual turnover and capitalization of twenty three companies out of listed companies. Five companies of each sector from Banking, Finance and Insurance sector; two of each from Hotel, Trading, Manufacturing and Processing and other companies, are included in this study. Her research has been based on the collected data from secondary source as well as some information primary source (2054/55 to 2062/63). For analyzing data, she has applied various statistical tools in her study to find out the risk and return.

She has concluded with findings which are as follows:

- Most of the investors are found to be risk averters. They are investing in portfolio having more than four securities.
- Most preferable sector for investors is banking and finance sectors.
- Stock brokers are major source of information to the investors which show they have a remarkable role in share market.
- Increasing trends of share price and surplus money for investors are the influencing factors to buy share by investors.
- Profitability and marketability has equal influence for motivation to invest.
- The level of investor's satisfaction towards the present trading system (open out cry system) has found low. Most investors are not satisfied with it, because

- whim and rumors influenced every time. Thus, most of investors wish to have automation trading system.
- The expected return of securities market as a whole by using NEPSE index is 11.72 percent. Banking and other sectors stand higher expected return then market, while Manufacturing and Processing, Finance, Insurance, Hotel and Trading sectors have lower the expected return compared to the market return.
- In terms of CV, market has 2.70 CV. All sectors have found highest CV in comparison with market relative risk.

Ramesh Shrestha (2008) "Risk and Return Behavior of listed Commercial Banks in NEPSE." has carried out a research on this title. His major objectives of the study were to find out and analyze the risk and return behavior. His research has been based on the collected data from secondary source as well as some information primary source. For analyzing data, he has applied various statistical tools in her study to find out the risk and return. He has concluded with findings which are as follows:

- Risk and Return of the selected commercial banks are not consistence. The average risk of selected commercial banks is 40.07% whereas return is only 9.23%. The highest risk is 67.61 % of Bank of Kathmandu Ltd. whereas higher return is 23.49% of NABIL Bank Ltd.
- The selected commercial bank having higher risk pose fewer rates of return and Bank having low risk have higher return.
- The portfolio analysis provides empirical evidence of disparity between risk and return of selected commercial banks.
- The average risk of the commercial bank combination under portfolio analysis is 28.21% but return is -0.23%.
- Most of the selected commercial banks have sensitive stock with market. Among 8 selected commercial banks, 5 of the banks have value of beta greater than 1 and 3 of them have value of beta is less than 1.
- Bank of Kathmandu Ltd has the higher value of beta (2.25). Similarly it has the highest risk of 67.61% and return is 22.04%.

- In comparison of overall market return of NEPSE and average return of selected commercial banks shown that there is no significantly difference.

Sarita Baniya (2009) "Performance Analysis of Selected Commercial Banks in Nepal" concluded a study on performance analyze of common stock investment by taking three commercial banks (BOK, EBL and NABIL). She has used the data from Fiscal Year 2001/2 to 2007/8 and her study based on Ratio analysis. She has found following condition in her study.

- The liquidity position of the BOK is comparatively better than that of NABIL and EBL.EBL has maintained highest cash and bank balance ratio to meet the customer demand. EBL has good deposit collection and has made enough investment in government securities but it has maintained investment pattern on loan and advances.
- The interest earned to total outside assets and return on total working fund ratio of BOK is higher than all two banks. But overall analysis of profitability ratios, EBL is average profitability in comparison to other compared bank i.e. BOK and NABIL.
- The return on loan and advances ratio and return on total working fund of NABIL is in better position. The ratio suggests that the earning capacity of the bank's loan and advances is satisfactory. The return on assets of the bank is good in average; it indicates the good earning capacity of the bank assets and good utilization of its assets.
- The total interest paid to working fund ratio of NABIL is less than other two banks. Lowest interest paid shows it is profitable position as it is getting higher return that is interest cost.
- The degree of risk of BOK is higher than those two banks. And EBL has a highest liquidity risk ratio.
- Trend analysis of loan and advances, total investment, net profit and total deposit are in increasing trend of all banks.
- Test of hypothesis concludes that there is no significance difference between mean ratio of loans and advances to total deposit, total investment and investment on government securities to current assets, loan and advances to current asset, interest earned to total outside asset and return on loan and advance of EBL , NABIL and BOK.

- EBL shows better performance among three banks during the study period (fiscal year 2001/2 to 2007/8)

2.3 Research Gap

The previous studies can't be ignored because they provide the foundation to the present study. In other words, there has to be continuity in research. This continuity in research is ensured by linking the present study with the past research studies. But past couldn't cover all gaps. Therefore, to fulfill this gap, this research is selected. To complete this research work: many books, journals, articles and various unpublished dissertations are followed as guideline to make the research easier and smooth. To achieve this main objective, various financial and statistical tools are used. Therefore, this study is expected to be useful to the concerned banks as well as different persons; such as shareholders, investors, policy makers, stockbrokers, state of government etc.

Previous researchers analyzed the Risk and Return by using secondary source of information in terms of Risk return practices. But actually speaking, risk can be determined by various factors which eventually affect the return. In this study Risk and Return of selected commercial is measuring by using secondary as well as primary data applying various statistical tools and Questionnaires. Among of them, primary analysis in terms for risk and return may be the strong determinant for investing in banks. In present context, these are the heart issue in Nepalese commercial banks. Most of the investors are found to be investing in the share of banks only believing on whim and humors. The previous scholars could not submit the present facts. Present study tries to define risk and return analysis by applying those various facts. It can be very useful or important in this area. Thus, present study may be valuable piece of research work.

CHAPTER III
RESEARCH METHODOLOGY

This chapter gives the theoretical foundation of data collection and analysis for the research study. It represents the highlight of research design, population, sample size, data collection techniques, sources of data and data analysis tools. Research methodology has been used to fulfill the objectives of the study.

3.1 Research design

The present study is based on descriptive and analytical research design. Descriptive research design is used to describe the relationship between risk and return from tables, graphs, trend lines, and figures with basic calculation of present collected data. Similarly analytical research design is used to analyze the standard deviation, correlation coefficient, coefficient of variation, beta coefficient, risk premium, expected return, and average rate of return, of sampled banks. Analytical research design evaluates the present data clearly. The study has been carried out the ten years periods from 15th July 2000 to 15th July 2009.

3.2 Population and sample

Total populations of commercial banks are 27 but listed in NEPSE is only 23. The study is carried out those commercial banks which are listed before 15th July 2009 A.D, in NEPSE. For research purpose, Himalayan Bank Ltd, Everest Bank Ltd, Nabil Bank Ltd and Nepal Investment Bank Ltd are selected for comparative study. The sampled banks have been selected from the random sampling technique. The study covers overall 25 percent of total population. These banks have the large volume of transactions and they also have many branches in different sectors of the country. So, the large numbers of employees are also involved in commercial banks. Therefore, the present study could not cover all the employees of selected banks. However, the researcher tried to cover as many employees as possible.

3.3 Sources of data

The data for the study depends upon the secondary sources as well as primary data. The main source of secondary data is the reports of NEPSE, reports of the SEBO/N, websites, and annual reports of commercial banks and periodicals published data of NRB. Annual report of NEPSE has been used to take financial statement and trading report of listed commercial banks. The data has been taken from NEPSE to with draw the opening and closing prices. Similarly, SEBO/N has been visited to collect annual report of sampled banks. Websites have been clicked to take the operational data of commercial banks. For the primary data, a survey on the risk and return on common stock from the investors' perspective has been conducted. Questionnaire was distributed for 100 respondents for their opinion. The numbers of respondents are 60 who respond the questionnaire properly.

3.4 Data collection techniques

The data for the present study have been collected from secondary sources for the fundamental analysis and primary data has been collected for technical analysis. The annual reports of commercial banks have been taken from SEBO/N. Similarly; NEPSE price and sector price have been taken from NEPSE. NRB was visited to collect the Treasury-Bills rate and banking and financial statistics. The research has made ample efforts to explore information about how investors' are making decision for stock investment on commercial bank from the perspective of risk and return factor. A structured questionnaire was distributed to 100 investors asking to provide their views and information on the point expressed in the question. The numbers of respondents are 60 who respond the questionnaire properly. After that collected data were recorded in mater sheet manually then data were entered to spread sheet to work out statistical and financial analysis ratios. These data are also used to prepare figures and tables. To process the data of the present study manual and computer based program were used like Microsoft word and excel.

3.5 Data analysis tools

All the data are presented and analyzed to fulfill the objectives developed in the introduction chapter to illustrate the research. Worksheets and figures have been used for the data

presentation to evaluate risk and returns. Categorically, the present study has used financial and statistical tools.

3.5.1 Financial tools

3.5.1.1 CAPM or Security Market Line (SML)

Using CAPM, the investors can estimate the required rate of return of the stock. The intrinsic value of the stock is inversely relates to the required rate of return. Other thing remaining the same, the higher the required rate of return will lower the intrinsic value of the stock. CAPM helps for pricing implication of common stock. The relationship between as asset return and its systematic risk can be expressed by CAPM, which is also called security market line showing the relationship between the systematic risk index (beta) and the required rate of return.

The equation for the CAPM or SML is

E (Rj) = Risk free rate + risk premium

E (Rj) = Risk free rate + quantity of risk × price of risk

E (Rj) = Rf + βj [E (Rm) - Rf]

Where,

E (Rj) = the required rate of return on the assets

Rf = the rate of return of risk free assets

E (Rm) = the expected or ex-ante return on the market portfolio

Bj = a measure of the non-diversifiable risk of the Jth Security called assets Beta. It can be calculated as,

$$\beta j = \frac{COV\ (Rj\,Rm)}{VAR\ (Rm)}$$

where,

COV (Rj Rm) = covariance between risk free return and market return

VAR (Rm) = variance of market returns

3.5.1.2 Risk premium

Risk premium is a reward for bearing risk. In other word, risk premium as the different between the return on a risky investment and that a risk free investment. To calculate risk premium, Treasury bill rates (TBs) has been used as a risk free rate. Treasury bills are short term government securities. It can buy and sold any time, thus, they have liquidity. Also, they don't have the default risk. Treasury bills are also called risk free securities where variation is always zero. For the study, Treasury bills period has taken 364 days. The equation of risk premium can be as follows:

Risk premium = Rj - Rf

Where,

Rj = year end return on risky assets

RF = return of risk free assets

3.5.1.3 The expected rate of return

The expected rate of return is the expected after tax increase in the value of initial investment over the holding period. The overall tax of return can be decomposed into capital appreciation and dividend components. Capital appreciation is the difference between investor's end of period price and the beginning of period price. Single holding period return refers to the one year holding period return. Thus, the expected on realized or ex-post rate of return can be calculated as follows:

$$\textbf{Expected rate of return } (\overline{R}_j) = \frac{P_{t+I} - P_t + Ct}{P_t}$$

Where

P_{t+I} = Beginning price

P_t = Ending price

Ct = Cash Dividend

3.5.1.4 Beta Coefficient

The beta coefficient is an idea of systematic risk. It may be used for ranking the systematic risk of different assets. If beta is large than 1, then the assets are more volatile than the

market, which is called aggressive assets. If beta is less than 1, the assets are considered as defensive assets as its price fluctuations are less volatiles than market. On the other hand, if the beta is equal to 1 then the asset is said to be average as its price move proportional to the market changes. Beta of market is always one. (Clark 1997:198)

The beta coefficient can be calculated as follows,

$$\beta j = \frac{COV\ (j, m)}{\sigma\ m2}$$

Where,

βJ = the beta value of security J

$\sigma\ m^2$ = variance of market

COV (j,m) = covariance between security J and market. It can be calculate as follows,

$$\textbf{Covariance of } (Rj, \overline{Rm}) = \frac{\sum [\ Rj - \overline{R}\ j]\ 1 \times [Rm - \overline{Rm}\ ]}{N - 1}$$

3.5.1.5 Systematic risk

It gives us the proportion of risk that can be diversified away. In other words, it is the out of control of management. So it is called un-diversifiable risk. It can be calculated as follows,

Systematic risk = total risk – Unsystematic risk

Or Systematic risk = $\beta^2 \times \sigma_m^2$

3.5.1.6 Unsystematic risk

It gives us the proportion of risk that can be diversified away. In other words, it is the under the control of management. So, it is called diversifiable risk. It can be calculated as follows,

Unsystematic risk = total risk (variance) – systematic risk

Or Unsystematic risk = $\sigma_i^2 - \sigma_e$

where

σ_i^2 = **Total risk of i^{th} assets**

σ_e = **Variance of standard error**

3.5.1.7 Correlation coefficient

Correlation coefficient is the relationship between two variables where one variable is independent and other variables are dependent. Correlation coefficient always lies in the range of +1 to -1. Karl Pearson's method is used to calculate correlation coefficient. A positive correlation coefficient indicates that the returns from two securities generally move in the same direction or vice-versa. Correlation is used to test the significant relationship between risk and expected return. Microsoft Excel is used to calculate correlation between risk and return. It can be calculates as follows,

Correlation coefficient between security 'j' and market 'm'

$$(r\,jm) = \frac{COV\,(j,m)}{\sigma j\ \sigma m} \quad Or \quad \frac{bi\ \sigma m}{\sigma i}$$

3.5.1.8 Coefficient of determination

The coefficient of determination is the proportion of systematic risk in total risk. The higher the systematic risk the higher will be the coefficient of determination and vice versa. The following equation justifies that the coefficient of determination and the proportion of systematic risk are the same.

$$\text{Coefficient of Determination } (\beta im^2) = \frac{\text{Systematic Risk}}{\text{Total Risk } (\acute{o}i^2)}$$

3.5.2 Statistical tools

3.5.2.1 Average rate of return

Average rate of return is calculated by using the air thematic mean instead of geometric mean.

$$\text{Average rate of return } (\overline{Rj}) = \frac{\sum Rj}{N}$$

Where,

Σ Rj = summation of all annual reports

N = number of the observation (year)

3.5.2.2 The standard deviation

It is quantitative measure of the total risk of assets. It provides more information about the risk of the assets. It is a measure of the dispersion of returns around the mean. The formula for calculating the standard deviation is,

$$(\sigma j) = \left[\frac{\Sigma(Rj - \overline{Rj})^2}{N-1}\right]^{1/2}$$

Where,

σ j = Standard deviation of return on stock j during the time period N

Rj = expected rate of return

(Rj) = the average rate of return

N = number of observation

3.5.2.3 The coefficient of variation (CV)

The coefficient of variation is the ratio of the standard deviation of a distribution to mean of the distribution. It is a measure of relative risk. The formula for calculating correlation coefficient is,

$$\mathbf{C.V} = \frac{\text{S.D}}{\text{Mean}} \mid 100$$

Where,

S.D = standard deviation of return on stock j during the time period N

mean= the average rate of return on stock j

CHAPTER IV
PRESENTATION AND ANALYSIS OF DATA

This is an analytical chapter, where an attempt has been made to analyze and evaluate major financial items. It focuses on the data analysis and data presentation of the sampled banks. Categorically this chapter has been divided into two sections. First section deals with the analysis of risk and return on common stocks of selected bank based on fundamental approach. For this, the required data has been obtained from the secondary source. Similarly, second section deals with the analysis of risk and return on common stocks of selected bank from the investors' perspective. For this the required data has been obtained from the primary source.

4.1 Data presentation and analysis based on secondary data

First section deals with the analysis of risk and return on common stocks of selected bank based on fundamental approach. The study covers ten years period from 15th July 2000 to 15th July 2009. This chapter consists of historical return, average return, coefficient of variation, standard deviation, correlation coefficient and beta coefficient of sampled banks. Beta coefficient of banks is used to measure market sensitivity. The standard deviation is used to measure diversify risk. Similarly, yearend return and average return are used to evaluate the return position of sampled banks. It has demonstrated the figures and table to analyze the present data.

4.1.1 Analysis of Return of sample banks

The present study includes four commercial banks listed with NEPSE. They are NABIL, HBL, NIB and EBL. The study periods covers 15th July 2000 to 15th July 2009. To analyze the risk and return of commercial banks, various return figures and tables has been used. Historical return of samples banks is calculated by using dividend per share and closing and opening price of sampled banks. This chapter also makes the comparative analysis of return of all four sampled banks.

4.1.1.1 Analysis of Return of NABIL bank

The yearend return of NABIL over the study period, closing price of common stock per share and total dividend which is sum of cash and stock dividend: converted into monetary value based on market price of respective year have been presented in Table 4.1

Table 4.1 Historical return and average rate of return on Common stock of NABIL

Years	Closing price per share	DPS	Year end return (Rj)
1999/00	**1400**	**405**	**0**
2000/01	**1500**	**40**	**0.1**
2001/02	**735**	**20**	**-0.49**
2002/03	**735**	**50**	**0.07**
2003/04	**1000**	**65**	**0.45**
2004/05	**1505**	**70**	**0.58**
2005/06	**2240**	**85**	**0.54**
2006/07	**5050**	**140**	**1.32**
2007/08	**527**	**100**	**0.06**
2008/09	**4899**	**85**	**-0.12**
Total			**2.51**

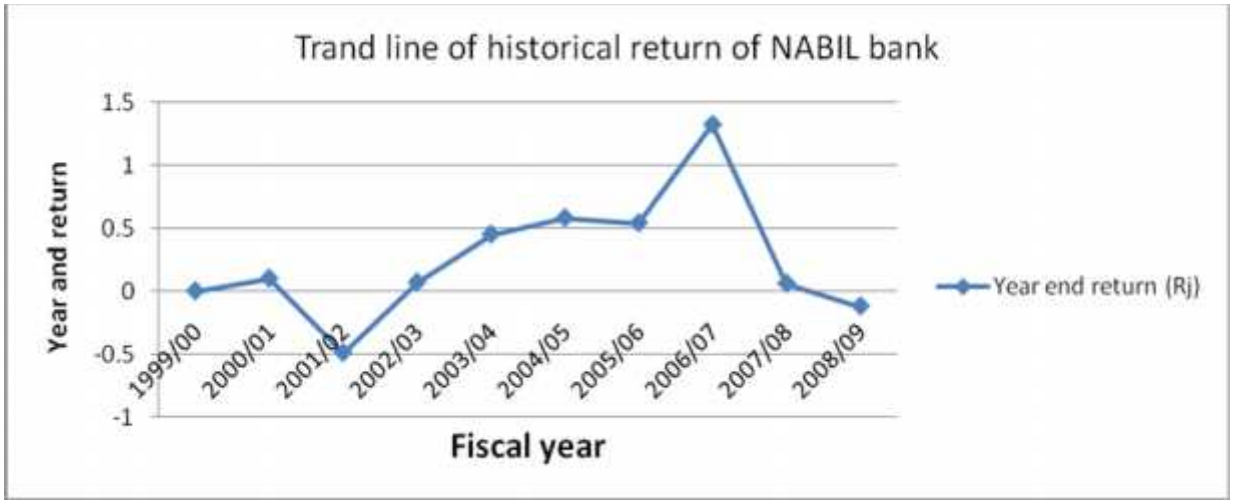
Source:-Appendix 4

$$\text{Average rate of return (Rj)} = \frac{\sum R_j}{N} = \frac{2.51}{10} \times 100\ \%$$

$$Rj = 25.10 \text{ percent}$$

From the table 4.1 shows yearly Closing price per share, DPS & Yearend return (Rj). Closing market price per share from 1999/00 to 2008/09 are 1400, 1500, 735, 1000, 1505, 2240, 5050, 527 & 4899 respectively. Closing market price per share is highest in F/Y 2007/08 i.e. Rs 5275 and minimum in F/Y 2001/02 which is Rs. 735. However, bank had declared the stock dividend in same year and results high year end return in this. Figure 4.1 shows the graphical representation of the year end return with its time line.

Figure 4.1 Trend line of Historical return on common stock of NABIL bank



Source:-Table 4.1

From the Figure 4.1, the fiscal year and year end return is shown in the x-axis and y-axis respectively. The graph reflects that NABIL bank has maximum year return is in F/Y 2006/07, i.e. 132 percentages and least returns is in F/Y 2001/02 and 2008/09, i.e. – 49 and -0.12 percentages which is negative.

4.1.1.2 Analysis of Return on common stock of Himalayan bank

The yearend return of HBL over the study period, closing price of common stock per share and total dividend which is sum of cash and stock dividend; converted into monetary value based on market price of respective year, have been presented in Table 4.2

Table 4.2 Historical return and average rate of return on Common stock of HBL

Years	Closing price per share	DPS	Year end return (Rj)
1999/00	**1700**	**50**	**0**
2000/01	**1500**	**27.5**	**-0.10**
2001/02	**1000**	**25**	**-0.31**
2002/03	**836**	**1.32**	**-0.16**
2003/04	**840**	**0**	**0**
2004/05	**920**	**11.58**	**0.10**
2005/06	**1100**	**30**	**0.23**

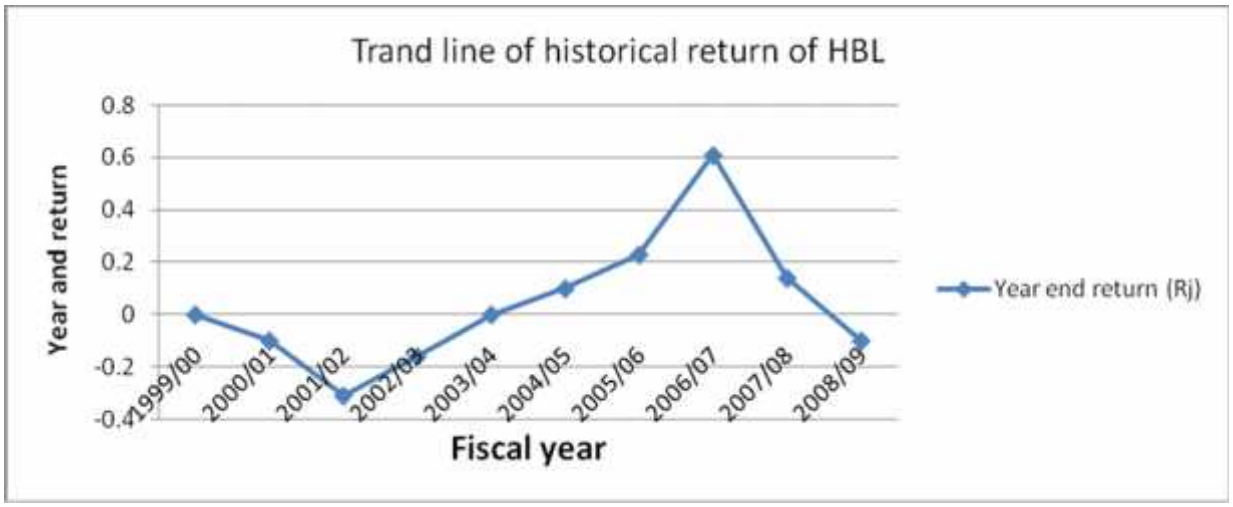
2006/07	**1760**	**15**	**0.61**
2007/08	**1980**	**25**	**0.14**
2008/09	**1760**	**12**	**-0.10**
Total			**0.41**

Source:-Appendix 5

Average rate of return (Rj) = $\frac{\sum Rj}{N}$ = 4.10 percent

From the table 4.2 presents yearly Closing price per share, DPS & Yearend return (Rj). Closing market price per share from 1999/00 to 2008/09 are 1700, 1500, 1000, 836, 840, 920, 1100, 1760, 1980 & 1760 respectively. Closing market price per share is highest in F/Y 2007/08 i.e. Rs 1980 and minimum in F/Y 2002/03, which is Rs 836. The bank has been adopting a policy of distributing stock dividend for a number of fiscal year except in year 2003/04. On an average, the bank is able to earn 38.15 percent return over the period. The figure 4.2 shows the graphical representation of the year end return with its time line.

Figure 4.2 Trend line of Historical return on common stock of HBL



Source:- Table 4.2

From the figure 4.2, Historical return of HBL is seemed to be fluctuating ups and down over the sampled period enormously and highest rate of return is in F/Y 1999/00 which is 75 percent and lowest rate of return over the period is in F/Y 2001/02 which is negative and bank

has almost downward trend of earning historical return over the period of time how ever there is slight increase in return in the succeeding years. The graph reflects that HBL Bank has maximum year return is in F/Y 2006/07. The banks return is going on very variable trends.

4.1.1.3 Analysis of Return on common stock of Nepal Investment bank

The yearend return of NIB over the study period, closing price of common stock per share and total dividend which is sum of cash and stock dividend; converted into monetary value based on market price of respective year have been presented in Table 4.3

Table 4.3 Historical return and average rate of return on common stock of NIB

Years	Closing price per share	DPS	Year end return(Rj)
1999/00	**1401**	**25**	**0**
2000/01	**1150**	**0**	**-0.17**
2001/02	**760**	**0**	**-0.33**
2002/03	**795**	**20**	**0.07**
2003/04	**940**	**15**	**0.20**
2004/05	**800**	**12.50**	**-0.13**
2005/06	**1260**	**20**	**0.6**
2006/07	**1729**	**5**	**0.37**
2007/08	**2450**	**7.50**	**0.42**
2008/09	**1388**	**20**	**-0.42**
Total			**0.61**

Source:-Appendix 6

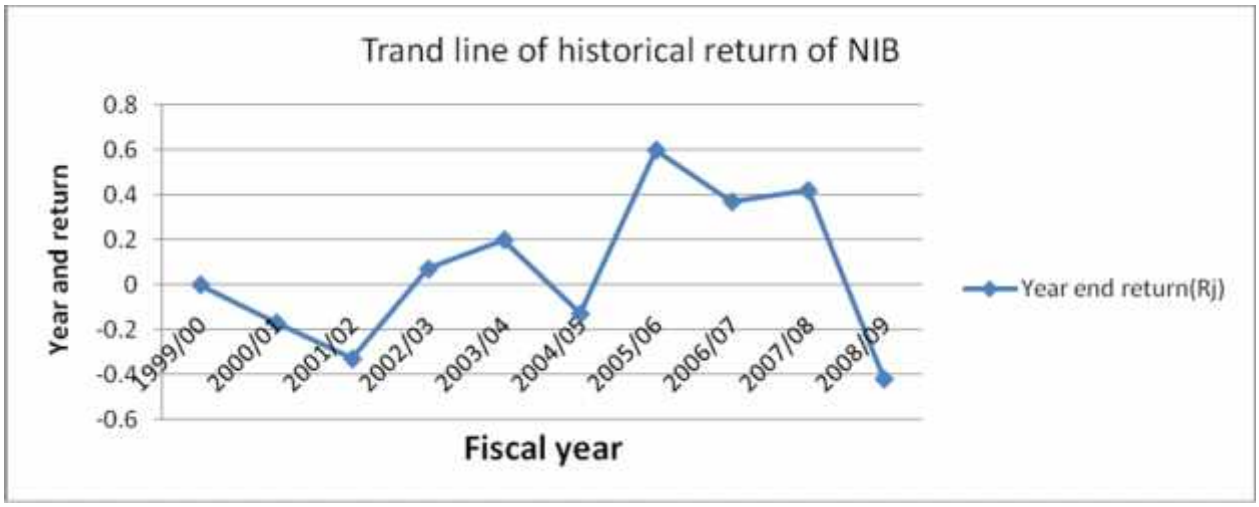
Average rate of return (RJ) = $\frac{\Sigma Rj}{N} = \frac{0.61}{10} \times 100\%$

$\Sigma Rj = 6.1$ percent

The table 4.3 shows yearly Closing price per share, DPS & Yearend return (Rj). Closing market price per share from 1999/00 to 2008/09 are 1401, 1150, 760, 795, 940, 800, 1260, 1729, 2450 & 1388 respectively. Closing market price per share is highest in F/Y 2007/08 i.e.

Rs 2450 and minimum in F/Y 2001/02 which is Rs 760. The price of stock per share is in increasing trend in very minimal way. On an average, the bank is able to earn 6.1 percent return over the period. The figure 4.3 shows the graphical representation of the year end return with its time line.

Figure 4.3 Trend line of Historical return on common stock of NIB



Source:- Table 4.3

From the figure 4.3, Historical return of NIB is seemed to be fluctuating slightly ups and down over the sampled period and highest rate of return is in F/Y 2005/06 which is 60 percents and lowest rate of return over the period is in F/Y 2008/09 which is negative and bank had earned negative returns in F/Y 2000/01, 2001/02, 2004/05 and 2008/09.

4.1.4 Analysis of Return on common stock of Everest bank

The yearend return of EBL over the study period, closing price of common stock per share and total dividend which is sum of cash and stock dividend; converted into monetary value based on market price of respective year, have been presented in Table 4.4

Table 4.4 Historical return and average rate of return on common stock of EBL

Years	Closing price per share	DPS	Year end return (Rj)
1999/00	**980**	**195**	**0**
2000/01	**750**	**0**	**-0.23**
2001/02	**430**	**86**	**-0.312**

2002/03	**445**	**20**	**0.08**
2003/04	**680**	**20**	**0.57**
2004/05	**870**	**0**	**0.27**
2005/06	**1379**	**25**	**0.61**
2006/07	**2430**	**10**	**0.76**
2007/08	**3132**	**20**	**0.29**
2008/09	**2455**	**30**	**-0.20**
Total			**1.838**

Source:-Appendix 7

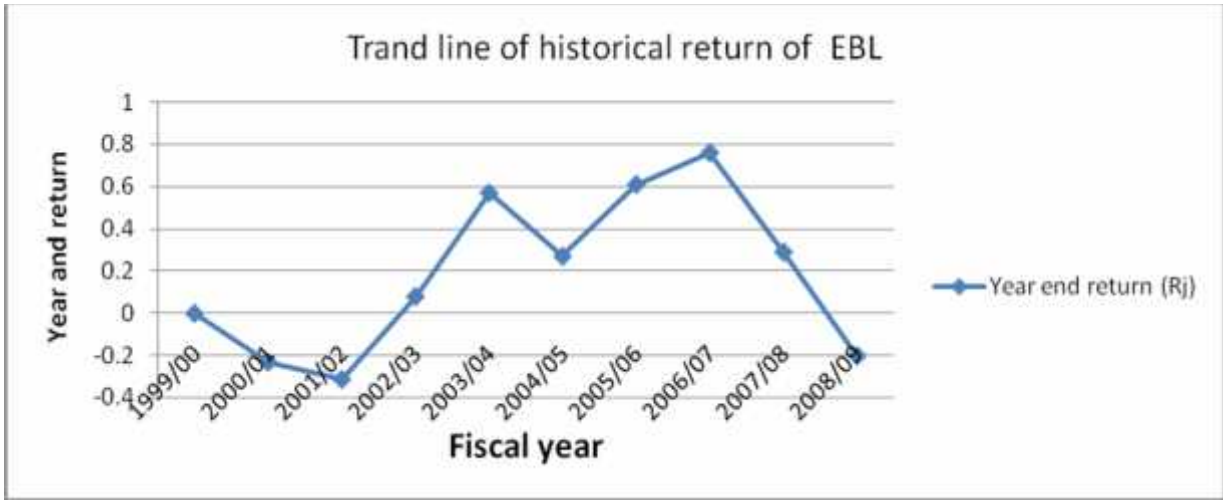
Average rate of return (Rj) = $\frac{\Sigma R j}{N}$

= 18.38 percent

The table 4.4 presents yearly Closing price per share, DPS & Yearend return (Rj). Closing market price per share from 1999/00 to 2008/09 are 980, 750, 430, 445, 680, 870, 1379, 2430, 3132 & 2432 respectively. Closing market price per share is highest in F/Y 2006//07 i.e. Rs 2430 and minimum in F/Y 1997/98 which is Rs 184. In year 1999, closing price has been more than doubled than previous year. However, bank had declared the stock dividend in F/Y 1999/00 and 2005/06. Moreover, the bank has not provided any dividend in F/Y 2000/01 and in F/Y 2004/05.

The price of share has been increased steadily over the period though there was little bit ups and down over the period. On an average, the bank is able to earn highest rate of average return among sample banks that is 18.38 percent. The figure 4.4 shows the graphical representation of the year end return with its time line.

Figure 4.4 Trend line of historical return on common of EBL



Source:- Table 4.4

From the figure 4.4, Historical return of EBL is seemed to be fluctuating significantly at the beginning of the years and reached at minimum in F/Y 2000/01, 2001/02 and then again started to fluctuate moderately in increasing trends in the successive years. It has not provided any sorts of dividend in F/Y 2000/01. The price of stock has been declined twice at the same time. As a result, bank has to earned negative rate of historical return in the respective year.

4.1.2 Comparative analysis of Return on common stock of sampled banks

Comparative analysis of historical returned of sampled banks over the study periods has been presented in table 4.5.

Table 4.5 Comparative analysis of historical return on common stock of sampled banks

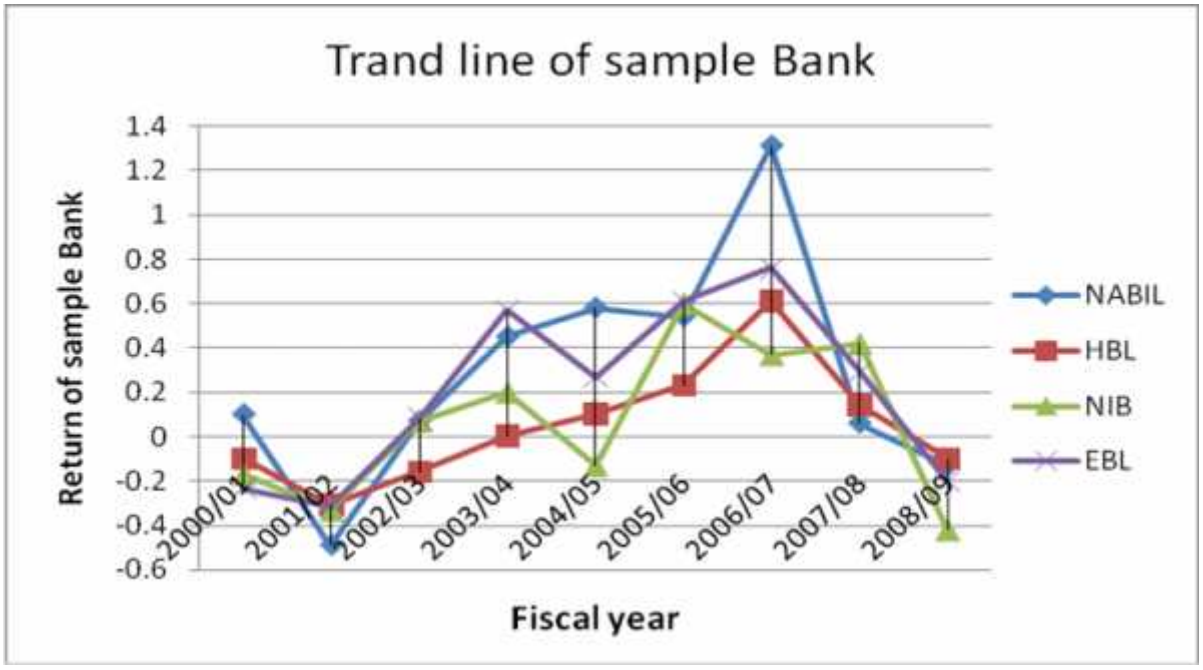
Years	**NABIL**	HBL	**NIB**	**EBL**
2000/01	**0.1**	**-0.1**	**-0.17**	**-0.23**
2001/02	**-0.49**	**-0.31**	**-0.33**	**-0.312**
2002/03	**0.07**	**-0.16**	**0.07**	**0.08**
2003/04	**0.45**	**0**	**0.20**	**0.57**
2004/05	**0.58**	**0.10**	**-0.13**	**0.27**
2005/06	**0.54**	**0.23**	**0.6**	**0.61**
2006/07	**1.31**	**0.61**	**0.37**	**0.76**

2007/08	**0.06**	**0.14**	**0.42**	**0.29**
2008/09	**-0.13**	**-0.10**	**-0.42**	**-0.20**
Total	**0.251**	**0.41**	**0.61**	**1.838**
Average	**0.28**	**0.05**	**0.07**	**0.22**

Source:-Tables 4.1, 4.2, 4.3& 4.4

From the table 4.5 show yearly returns and average return of NABIL, HBL, NIB & EBL. Average return of NABIL, HBL, NIB & EBL is 0.251, 0.41, 0.61 & 1.838 respectively. It is revealed that EBL has the highest average rate of return that is 18.38 percent and NABIL has the lowest rate of return that is 2.51 percent, based on the study periods of time. All of sampled banks have earned negative rate of return in the F/Y 2001/02. Highest rate of historical return is earned by NABIL in F/Y 2006/07 and lowest rate of return is earned by NABIL which is 4.9 percents in F/Y 2001/02. It can be further presented in line chart to make a comparative analysis of historical returns of sampled banks.

Figure 4.5 Comparative analysis of Return on common stock of sampled banks.



Source:- Table 4.5

The Figure 4.5 presents the overall overview of historical return of all sampled banks and its common trend in the financial market. When figure has been taken under consideration then it

can be seen that all of the banks has same trends of the up and down fluctuation. First of every bank return has increasing trend as all the curve is moving upward slope till the F/Y 1999/00 and curve line starts to slope downward up to F/Y 2001/02 where each bank are able to earn minimal or negative rate of return but after the F/Y 2001/02 there is increasing trend of historical return of every banks but increasing ratio is not same which is reflected by the curve line of returns of different banks which has been again start to move in upward slopping. If we see the curve then, it can be easily seen that NABIL has the highest return and HBL has the lowest return.

4.1.3 Analysis of return on common stock with market rate of return

Capital market indicates overall share price of listed companies where 158 companies were listed till the study period but commercial banks sector index indicates share price of listed commercial banks only. In this section, the study has described the relationship between market index and commercial index sector. The data for the study has been taken from NEPSE annual report. To calculate annual return, the study has been using opening and closing index, capital market annual return and commercial banks sector index. Capital market annual return and commercial banks index return over the study period has been presented in Table 4.6

Table 4.6 Expected market return and commercial banks return on common stock

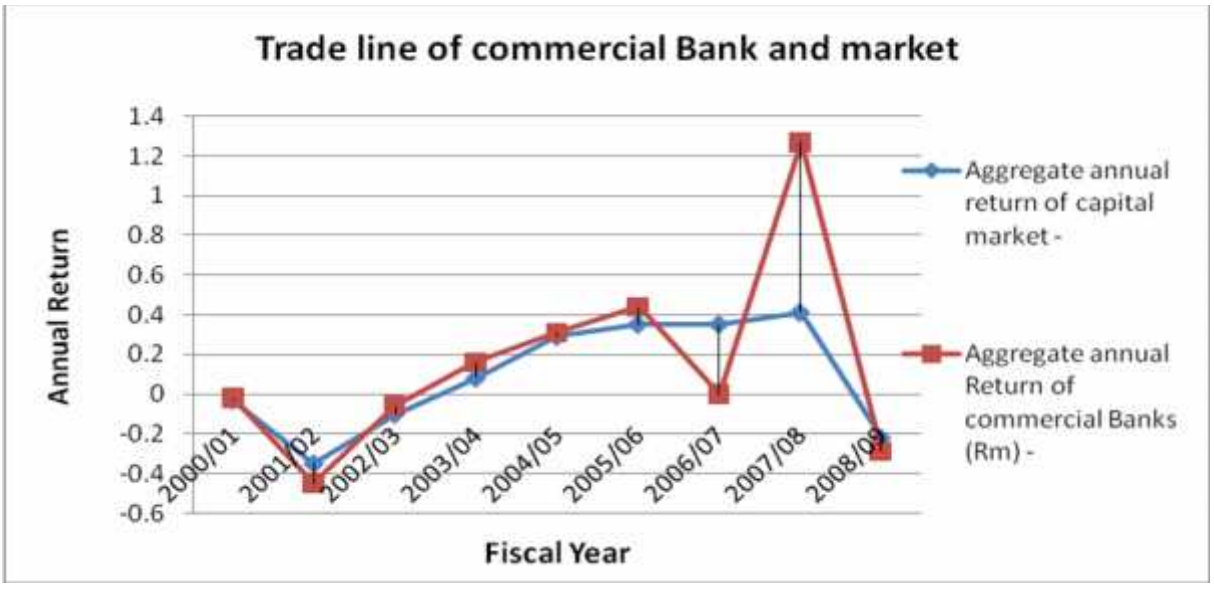
Years	Closing NEPSE Index	Aggregate annual return of capital market	Commercial banks closing index	Aggregate annual Return of commercial Banks (Rm)
1999/00	360.7	-	392.71	-
2000/01	348.43	-0.03	384.04	-0.02
2001/02	227.54	-0.35	212.68	-0.45
2002/03	204.86	-0.1	200.67	-0.06
2003/04	222.04	0.08	231.97	0.16
2004/05	286.67	0.29	304.64	0.31
2005/06	386.63	0.35	437.49	0.44
2006/07	386.63	0.35	437.49	0

2007/08	963.36	0.41	994.7	1.27
2008/09	749.10	-0.22	704.35	-0.29
Total		**1.2**		**1.36**
Average		**0.1333**		**0.15**

Source:-Appendix 2

From the table 4.6 show Yearly Closing NEPSE Index, Aggregate annual return of capital market, Commercial banks closing index & Aggregate annual return of commercial Banks (R_m). In F/Y 2007/08, NEPSE index and commercial bank index have maximum value. Both commercial banks sector and capital market return is negative in F/Y 2002/03. Commercial banks sector index has maximum in F/Y 2000/01, 2001/02, 2002/03and 2008/09. Commercial bank sector index has maximum in F/Y 2007/08 as well as overall market index return is also maximum in same year. It is seemed that overall market index is highly affected by the commercial banks index because both sector has negative return in F/Y 2000/01, 2001/02, 2002/03 and 2008/09, there is significant increase in their return of both index in F/Y 2007/08 and it reveals that there is high positive correlation between the overall market return and the bank index return Commercial banks index and overall market return index has been presented in figure 4.6.

Figure No. 4.6: Expected market return and commercial banks return on common stock



Source:- Table 4.6

4.1.4 Comparison between average rate of return on common stock and required rate of return of commercial bank index in Nepal.

Capital asset pricing model (CAPM) has been used to evaluate required rate of return of sampled banks which is given in research methodology 3.5.2.1. To calculate required rate of return, average rate of return has been taken from table 4.1.4 and excess return has calculated by using average required rate of return. Risk free rate of return has been taken from NRB and given in Appendix 2. It is average rate of Treasury bill of 364 days of past nine year's rate of Treasury bills. Average rate of return and required rate return over the study period has been presented in table 4.7.

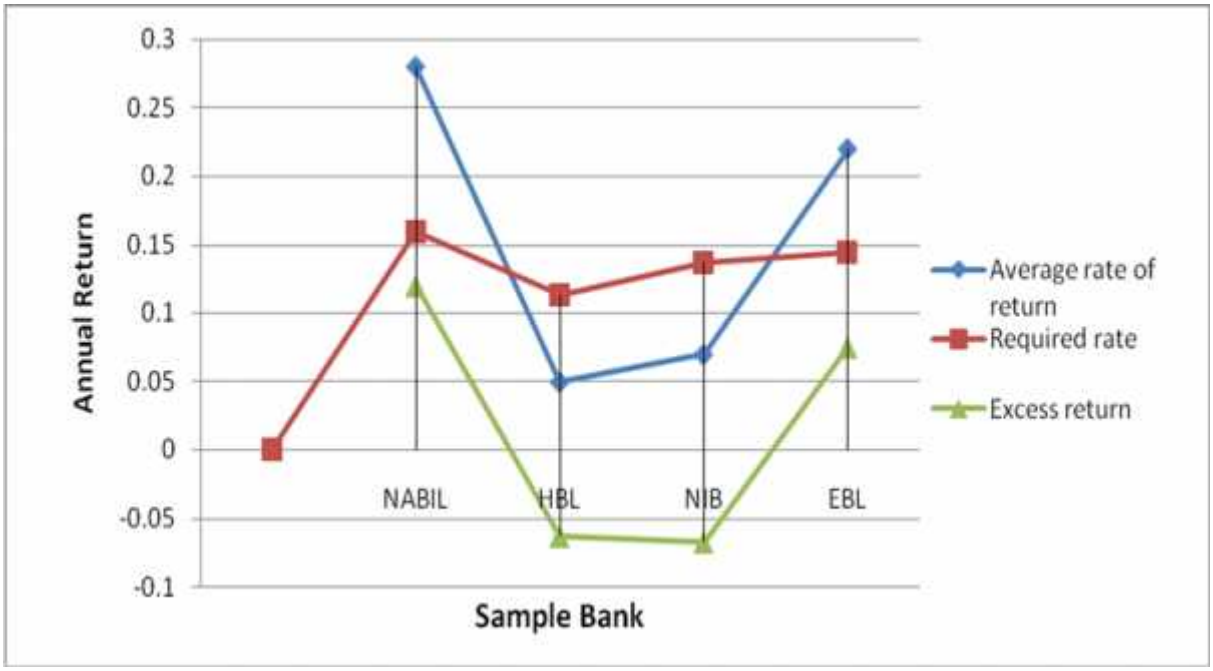
Table 4.7 Comparison between average rates of return and expected rate of return on common stock of commercial banks

Banks **(1)**	Average rate of return (2)	Required rate of return (3)	Excess return **(4) = (2-3)**	Over and under **(5)**
NABIL	**0.28**	**0.1597**	**0.1203**	Under priced
HBL	**0.05**	**0.1129**	**-0.0629**	Over priced
NIB	**0.07**	**0.1371**	**-0.0671**	Over priced
EBL	**0.22**	**0.1446**	**0.0754**	Under priced

Source:- Table 4.5 & Appendix 3

Table 4.7 exhibit annualized expected rate of return on stock of commercial banks. It also exhibits required rate of return of commercial banks on stocks. The required rate of return of NABIL, EBL, NIB and EBL is 0.1597, 0.1129, 0.1371 and 0.1446 respectively. Average rate of return of NABIL & EBL has accessed by 12.03 &7.54 percent than its required rate of return respectively. It implies that the common stock of these banks is under priced. It means the bank has expected to earn a higher rate of return is necessary to compensate and investor for the level of systematic risk he bears. Similarly, excess average rate of return of HBL is -6.29 percent and NIB is -6.71, so stock of this bank is also overpriced. It means the bank has expected to earn a lower rate of return is necessary to compensate and investor for the level of systematic risk he bears. NIB has higher rate of average return over required rate of return. So, its stock is under priced.

Figure No. 4.7 Comparison between average rates of return and expected rate of return



Source: - Table 4.7

From the Figure 4.7 shows annualized expected rate of return on stock of commercial banks. It also exhibits required rate of return of commercial banks on stocks. The required rate of return of NABIL, EBL, NIB and EBL is 0.1597, 0.1129, 0.1371 and 0.1446 respectively. Average rate of return of NABIL bank has accessed by 12.03 percent than its required rate of return.

4.1.5 Risk analysis

Previous analysis has only assessed return position of individual banks but in this section, the study has analyzed risk position of individual commercial bank and its comparative analysis. The study has mainly focused on standard deviation, beta coefficient, Correlation coefficient, correlation determination, risk indicator (systematic and unsystematic risk) and relative measurement of risk coefficient (coefficient variation). From the risk perspective, standard deviation, variation, variation coefficient is calculated. Beta is used as indicator to measure the relative risk of individual stock to market. In term of beta when beta is negative, the movement of market (NEPSE) is negative.

4.1.5.1 Risk analysis of NABIL bank

Table 4.8 Risk analysis of NABIL

Indicators	Results of NABIL Bank
Variance	**0.2682**
Standard deviation	**0.5179**
Beta coefficient	**1.096**
Coefficient variation	**1.849**
Systematic Risk	**0.122**
Unsystematic Risk	**0.146**
Average Rate of return	**0.28**
Covariance	**0.134**
Correlation coefficient	**0.67**
Correlation of determination	**0.45**

Source:-Appendix 8

From the figure 4.8 Variance of NABIL is 0.2682, Standard deviation is 0.5179 and Beta is 1.096. It reveals that the stock has high degree positive correlation with market i.e. NEPSE is 0.67. Its means this changes positive in NEPSE. There is 51.79 percent chance of deviation around the average rate of return. It means there is chance of variability in return by 51.79 percent. NABIL has minimized the unsystematic risk by 12.2 percent only. It has 0.28 average rate of return.

4.1.5.2 Risk analysis of HBL bank

Risk analysis of HBL bank over the study period has been presented in Table 4.9

Table 4.9 Risk analysis of HBL

Indicators	Results of HBL Bank
Variance	**0.072**
Standard deviation S	**0.268**
Beta coefficient	**0.633**
Coefficient variation	**5.36**

Systematic Risk	**0.048**
Unsystematic Risk	**0.024**
Average Rate of return	**0.05**
Covariance	**0.0772**
Correlation coefficient	**0.82**
Correlation of determination	**0.67**

Source:-Appendix 9

From the table 4.9 Beta of HBL is 0.633. It reveals that the stock has high degree positive correlation with market i.e.82%. If it will be one percent, the stock will have positive response by 0.633. From the view point of volatility, the stock is less volatile than the market. The stocks, therefore, can be categorized as defensive stock. There is 26.8 percent deviation around the average rate of return. It means there is chance of variability in return by 26.8 percent. HBL has the lowest diversifiable risk i.e. 0.024. The risk per unit return is 5.36. It means an investor could hold 5.36 unit risks to earn one unit of return.

4.1.5.3 Risk analysis of NIB

Risk analysis of NIB bank over the study period has been presented in Table 4.10

Table 4.10 Risk analysis of NIB

Indicators	Results of NIB Bank
Variance	**0.126**
Standard deviation	**0.354**
Beta coefficient	**0.872**
Coefficient variation	**5.057**
Systematic Risk	**0.093**
Unsystematic Risk	**0.033**
Average Rate of return	**0.07**
Covariance	**0.106**
Correlation coefficient	**0.86**
Correlation of determination	**0.74**

Source:-Appendix 10

From the table 4.10 Beta of NIB is 0.872. It reveals that the stock has positive correlation with market i.e. NEPSE. As Beta of the stock is measured 0.872, the positive changes in NEPSE. If it will be one percent, the stock will have positive response by 0.872. From the view point of volatility, the stock is less volatile than the market. The stocks therefore, can be categorized as defensive stock. There is 35.4 percent deviation around the average rate of return. It means there is chance of variability in return by 35.4 percent. NIB has the lowest diversifiable risk i.e. 0.033. The risk for per unit return is 5.057.

4.1.5.4 Risk analysis of EBL

Risk analysis of EBL bank over the study period has been presented in Table 4.11

Table 4.11 Risk analysis of EBL

Indicators	Results of EBL Bank
Variance	**0.1568**
Standard deviation	**0.3960**
Beta coefficient	**0.947**
Coefficient variation	**1.8**
Systematic Risk	**0.109**
Unsystematic Risk	**0.047**
Average Rate of return	**0.22**
Covariance	**0.1155**
Correlation coefficient	**0.84**
Correlation of determination	**0.70**

Source:-Appendix 11

From the table 4.11 Variance of EBL is 0.1568, standard deviation is 0.3960 and Beta is 0.947. It reveals that the stock has highly positive correlation with market i.e. NEPSE. As Beta of the stock is measured 0.947, the positive changes in NEPSE. If it will be one percent, the stock will have positive response by 0.947. From the view point of volatility, the stock is less volatile than the market. The stocks therefore, can be categorized as defensive stock.

There is 39.60 percent deviation around the average rate of return. It means there is chance of variability in return by 39.60 percent. EBL has the lowest diversifiable risk i.e. 0.047. The risk for per unit return is 1.8.

4.1.6 Comparative analysis of sample banks

The section has mainly focused on comparative analysis of four commercial banks. For the analysis, the data has been taken from the table 4.8 to 4.11. Comparative analysis of four sampled banks over the study period has been presented in table 4.12.

Table 4.12 Comparative Risk analysis of four sampled banks

Indicators	NABIL	HBL	NIB	EBL
Variance	**0.2682**	**0.072**	**0.126**	**0.1568**
Standard deviation	**0.5179**	**0.268**	**0.354**	**0.3960**
Beta coefficient	**1.096**	**0.633**	**0.872**	**0.947**
Coefficient variation	**1.849**	**5.36**	**5.057**	**1.8**
Systematic Risk	**0.146**	**0.048**	**0.093**	**0.109**
Unsystematic Risk	**0.122**	**0.024**	**0.033**	**0.047**
Average Rate of return	**0.28**	**0.05**	**0.07**	**0.22**
Covariance	**0.134**	**0.0772**	**0.106**	**0.1155**

Source:-Table 4.8, 4.9,4.10 & 4.11

Table 4.12 has been presented overall risk indicators of all sampled banks. NABIL has the highest rate of return of 28 percent with standard deviation of 51.79 percent. HBL has maintained the lowest expected rate of return i.e. 5 percent with standard deviation of 26.8 percent. The expected rate of return of NIB and EBL is found 7 percent and 22 percent with standard deviation of 35.4 and 39.60 respectively. From this, it can be found that HBL has higher risk relative to the return. As coefficient of variation reflects the risk for per unit return, EBL has the lowest variance so that this bank has less risky. Contrast, HBL has the highest coefficient variation. So, it has risk on its common stocks. Overall, NABIL has almost fifty-fifty portion diversifiable and un-diversifiable risk.

4.1.7 Correlation between market and sample Bank

Correlation coefficient indicates the relationship between two or more variables. It shows the relation between two variables either in positive and negative dimension. The correlation coefficient has been analyzed in table 4.13. Theoretically, when risk increases return also increases and vice-versa. For the analysis, standard deviation and expected rate of return has been taken from previous calculation. And it has been calculated by using Microsoft Excel Programmers. Correlation between risk and expected return has been presented in Table 4.13.

Table 4.13 Correlation between market and sample Bank

Banks	Correlation with market
NABIL	**0.67**
HBL	**0.82**
NIB	**0.86**
EBL	**0.70**

Source:-Table 4.8, 4.9, 4.10 & 4.11

From the table 4.13, it has been presented the correlation between market and sample bank. Correlation between market and sample Bank are 67%, 82%, 86% & 70% of NABIL, HBL, NIB & EBL respectively. In this table it is cleared that there are high degree positive correlation between markets. It indicates when risk increases then the return is also increases.

4.1.8 Correlation of determination between market and sample Bank

The coefficient of determination is the proportion of systematic risk in total risk. The higher the systematic risk the higher will be the coefficient of determination and vice versa. Coefficient determination is the squire of coefficient. The coefficient of determination and the proportion of systematic risk are the same. It interprets internal risk factor and external risk factor. The following table shows the coefficient of determination between market and sample bank.

Table 4.14 Correlation determination between market and sample Bank

Banks	Correlation determination with market
NABIL	**0.45**
HBL	**0.67**
NIB	**0.74**
EBL	**0.70**

Source:-Table 4.8 ,4.9, 4.10 & 4.11

The table 4.14 presents the Correlation determination between market and sample Bank. Correlation determination with market is 45%, 67%, 74% & 70% of NABIL, HBL, NIB & EBL respectively. It means 55%, 33%, 26% & 30% of NABIL, HBL, NIB & EBL interprets from market factor and remaining are interpret by internal factor(company itself) respectively.

4.2 Data presentation and analysis based on primary data

This section deals with the analysis of risk and return on common stocks of selected banks from the investors' perspective. For this the required data has been obtained from the primary source. The research has made ample efforts to explore information about how investors' are making decision for stock investment on commercial bank from the perspective of risk and return factor. A structured questionnaire was distributed to 100 investors asking to provide their views and information on the point expressed in the question. The numbers of respondents are 60 who respond the questionnaire properly. Following section presents analysis of investors' views and information in the same order as they were asked in the questionnaire.

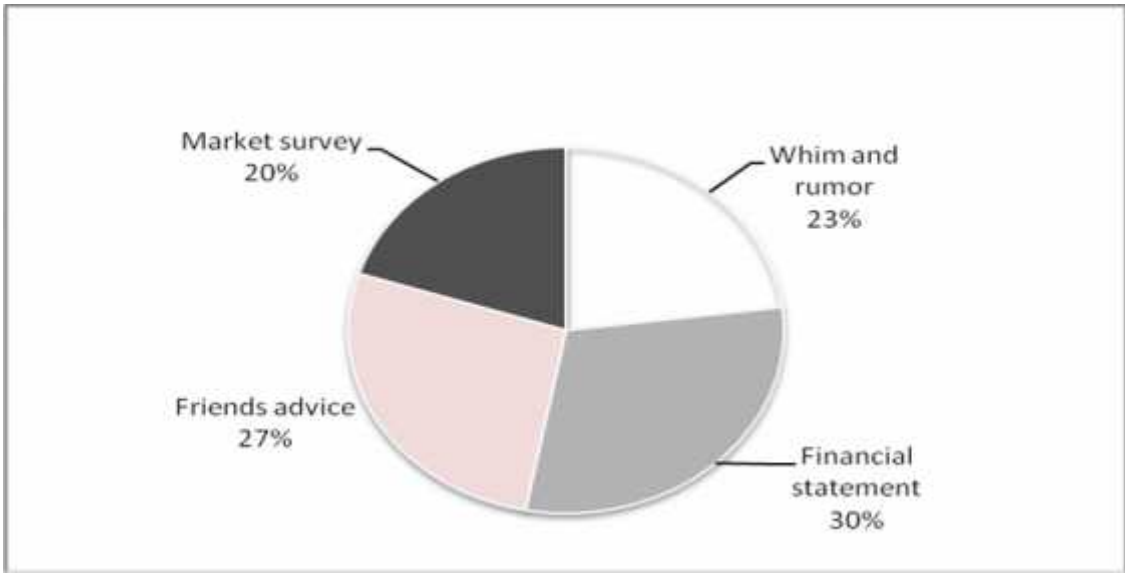
1. Investment made on the common stocks of commercial bank

As the all questionnaire has been distributed to those respondents who have already made investment in common stock of commercial bank, 100% respondent has opined that they have invested in the common stock.

2. Basis of investment

Investment on common stocks of commercial banks has been made based on a number of means. This research has utilized this information on those variables which motivates investors to invest common stocks of commercial banks. In this research question following information from respondent has been obtained.

Figure 4.8



*Source:-Appendix 13(*questionnaire-*2)*

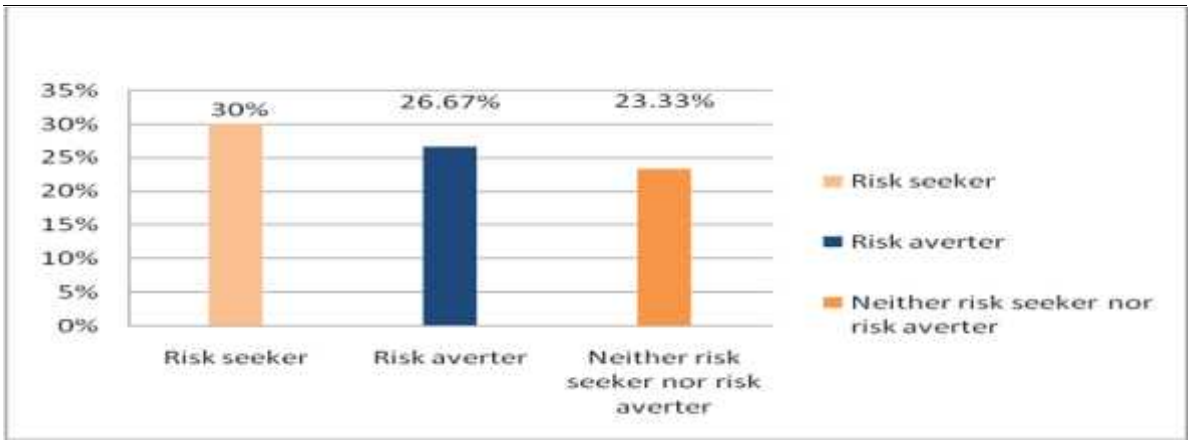
Figure 4.7 shows that, majority of the respondent (30%) stated that they consider financial statement review while making investment decision. At the same time, 27 % respondent opined that friends' advice is the base of their investment. Some of the respondent (23%) told that whim and rumor was the key of their investment. And remaining (20%) has mentioned that they have invested their money based on the information obtained from market survey. It has made clear financial investment review has been a reliable base of the investment on common stocks of commercial banks in Nepal.

3. Nature of investor

Investor may have different kinds of nature towards their investment. In order to explore their nature they were asked what kind of investor they are by providing five options. 30% respondent have presented as a risk seeker and 26.67% as a risk averter. At the same time

23.33% are neutral between risk seeker and risk averter. And remaining (20%) respondent has mentioned that they have no any idea about it.

Figure 4.9

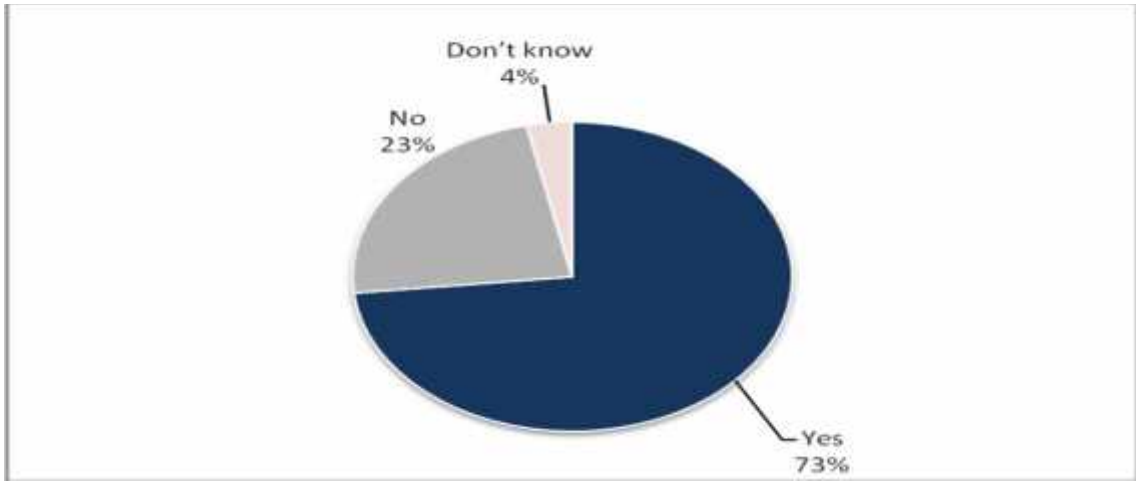


*Source:-Appendix 13(*questionnaire-*3)*

4. Consideration on return on the common stocks of commercial banks

The expected rate or return or holding period return is based upon the expected cash receipts over the holding period and expected ending or selling price. So every investor should consider the expected rate of return that can be earned from their investment on common stocks. For this, research question is designed to know whether the investor take return as decisional variable for their investment or not. The result obtained from the respondents has been presented and illustrated with the help of following figure.

Figure no. 4.10



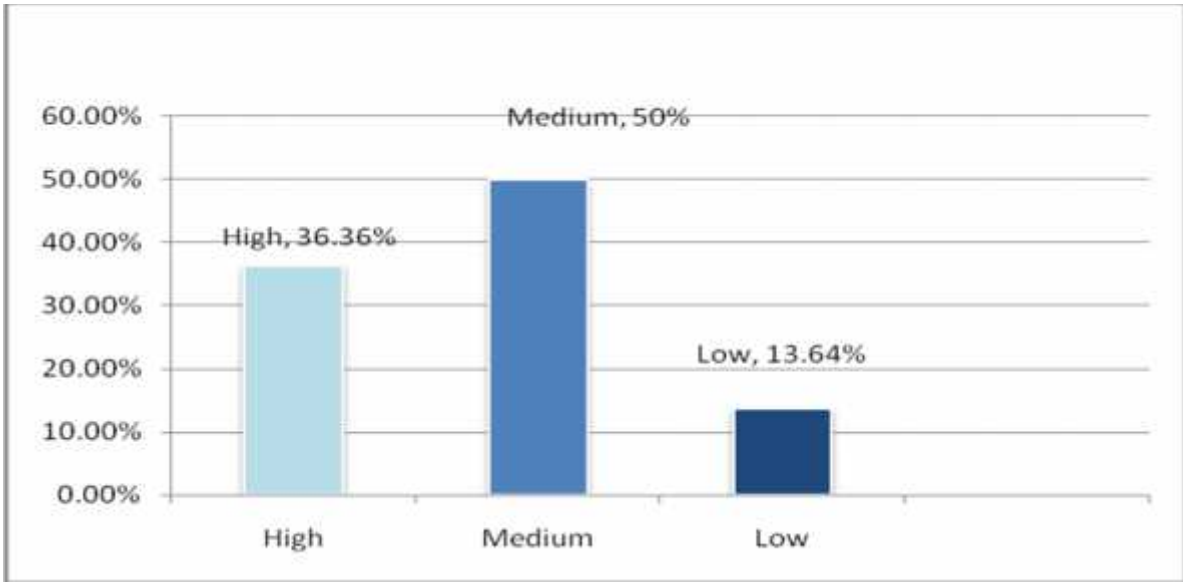
*Source:-Appendix 13(*questionnaire-*4)*

The figure 4.10 presents the proportion of investors' consideration on return on common stocks of commercial banks while making investment. Majority of respondents (73.33%) has considered return on common stock while approximately one fourth (23.33%) respondents have reported that they has ignored return involved in their investment. Remaining respondents (3.34%) has Investors' consideration on return of common stock expressed that they were not aware about return. To sum up, it is concluded that most of investor also evaluate return factor while putting their money on shares.

5. Degree of consideration on return on common stock of commercial bank while making investment

In this research question, respondents were asked to scale their consideration level of return of stock. They were given scales i.e. high, medium and low. The result obtained can be presented in the following bar diagram with detailed expansion.

Figure 4.11



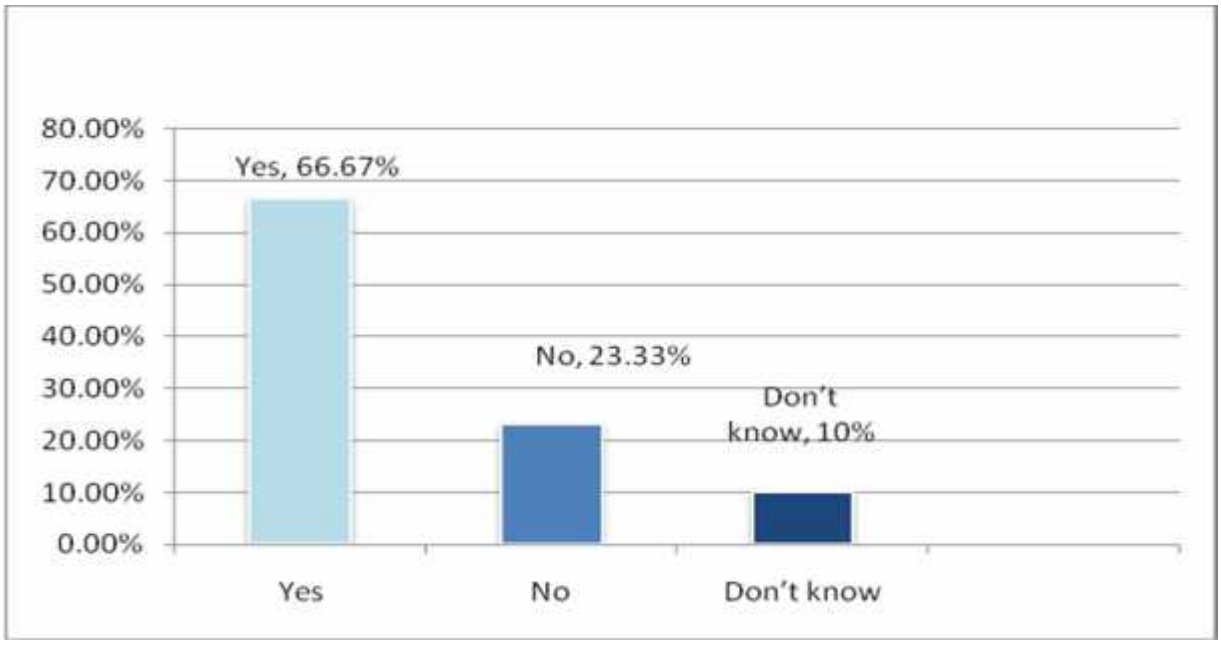
*Source:-Appendix 13(*questionnaire-*5)*

From the figure 4.10, it is cleared that 50% investors have average level consideration on return while 36.36% respondents put high value to return. A few investors have minor consideration on it.

6. Consideration on risk on the common stocks of commercial banks

Risk is the variability of possible returns around the expected returns of an investment. It is an essential factor to be considered while making investment on common stock. There is no return without bearing risk in every investment. For this, respondents were asked to put their responses whether they are aware about risk or not. The result obtained can be portrayed with the following pie chart with brief description.

Figure 4.12



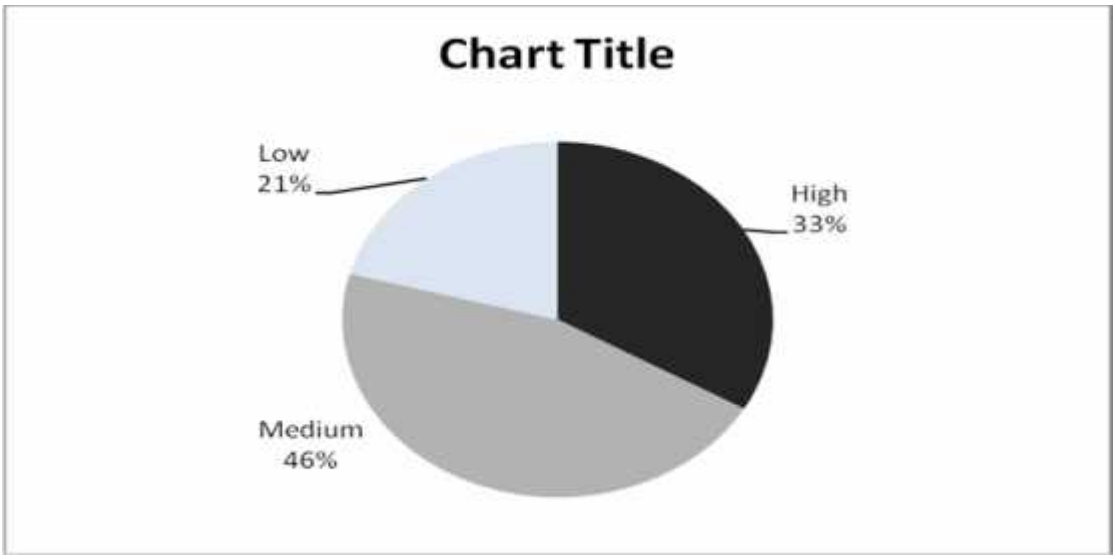
*Source:-Appendix 13(*questionnaire-*6)*

Figure 4.10 illustrates that 66.67% respondents were considered risk as major variable for their investment decision. Likewise, roughly one fourth (23.33%) respondents have no any consideration on risk. Remaining respondents (3.34%) has no any idea about the risk. To conclude, risk has been taken as considerable factor in making investment decision.

7. Degree of consideration on risk on common stock of commercial bank while making investment

In this research question, respondents were asked to scale their consideration level of risk on stock. They were given three scales i.e. high, medium and low. The result obtained can be presented in the following bar diagram with detailed expansion.

Figure 4.13



*Source:-Appendix 13(*questionnaire-*7)*

The figure 4.13 cleared that 45.83% investors have average level consideration on return. 33.34% of the respondents put high value to return. A few investors (20.83%) have minor consideration on it. Comparatively, it is found that more investors consider return than risk involved in their investment decision at moderate level.

8. Nature of analysis for investment decision

Investment decision is a process where various analyses should be conducted t construct a sound portfolio of investment in order to maximize return and minimize risk. For this purpose, this research question has been developed to obtain the information about the nature of analysis mentioning three options i.e. financial analysis, market analysis and both. 26.67% of the total respondents have been reported that they had conducted only financial analysis to measure the viability and profitability of their investment on stock through the banks' financial variables like risk and return calculation, dividend policy and market price per share etc. This result shows Nepalese investors are not in the position to conduct financial analysis to design better investment decision. Likewise, 30 % of the respondents only conduct market analysis to measure the viability and profitability of their investment on stock through analyzing the banks' goodwill and image, share market performance, market rumor and future expectation. Besides these, maximum numbers (43.33%) of respondents have told that they

had conducted both analyses to derive more accurate decisional variable to make their investment decision sound.

9. Priority assigned to the factors to be considered while conducting financial Analysis

For the further clarification of research question number 8, this research question has been developed to prioritize the factors to be considered while conducting financial analysis. They were given four different variables namely returned factor, risk factor, dividend policy and market price per share. Referring to Appendix 13 and table for question number 9, it has been found that investors have given highest ranking to return factor i.e.50%, they have given second ranking to risk factor i.e.25%. Likewise, they have given third and fourth to market price per share and dividend policy respectively i.e.8% & 17%. From this, it is observed that most of the Nepalese investors have high consideration on return factor while investing their money on the common stock of commercial banks based on the financial analysis approach.

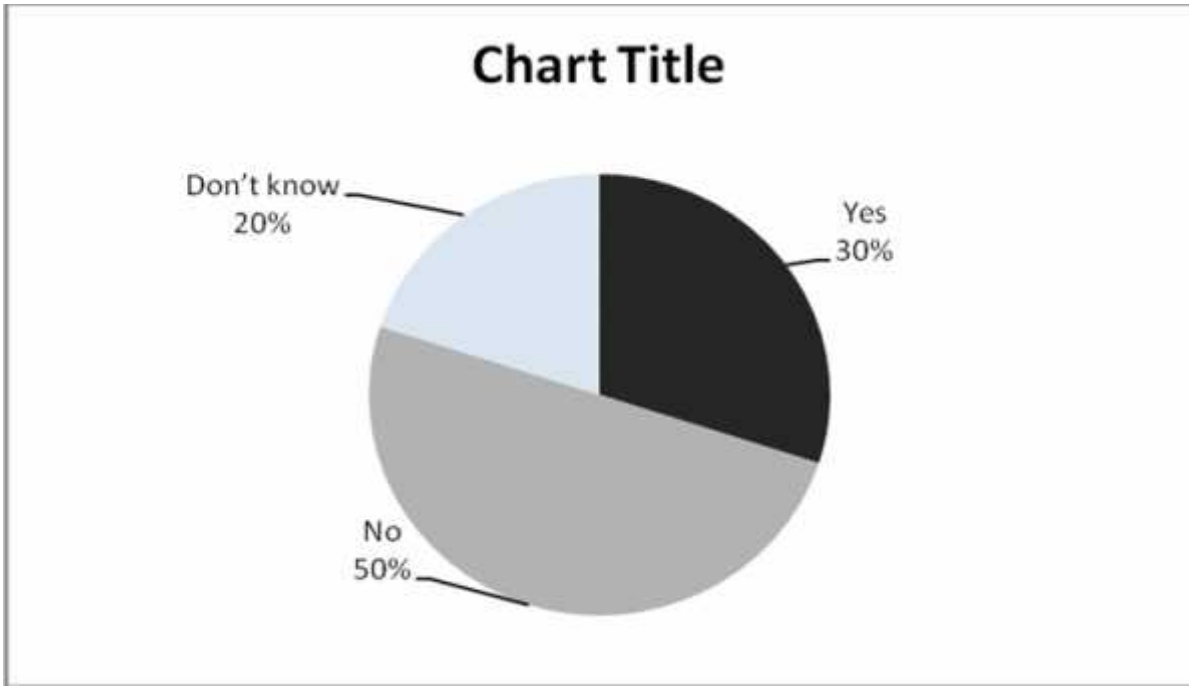
10. Priority assigned to the factors to be considered while conducting market Analysis

For the further clarification of research question number 8, this research question has been developed to prioritize the factors to be considered while conducting market analysis. They were given four different variables namely market rumor, future expectation, goodwill and image of the commercial bank and share market performance Referring to Appendix 13 and table for question number 10, it has been found that investors have given highest ranking to goodwill and image of the commercial bank i.e. 50%; they have given second ranking to share market performance i.e 30%. Likewise, they have given third and fourth to future expectation and market rumor respectively i.e. 15% & 5%. Form this; it is observed that most of the Nepalese investors have high consideration on goodwill and image of the commercial bank while investing their money on the common stock of commercial banks based on the market analysis approach.

11. Degree of awareness in Nepalese investors about risk and return

Finally, this research question has been asked to know whether the Nepalese investors are aware adequately about the risk and return factor or not. As it is fact that most of the Nepalese investors are investing their money in share knowingly and unknowingly and this question try to find out the position of Nepalese investors about the knowledge of risk and return. The result obtained from the respondent has been presented in following pie chart.

Figure 4.14



*Source:-Appendix 13(*questionnaire-*11)*

This figure shows that majority (50%) of prospective investors are treated as low awareness about risk and return factors. 30% of the respondents reported that Nepalese investors have adequate awareness about risk and return factors. And the remaining (20%) have expressed that they have no any prediction about the research question.

4.3 Major Findings of the study based on secondary data

- Average rate of return of NABIL, HBL, NIB and EBL are 28%, 5%, 7% and 22% respectively. Among four sampled banks, NABIL has the highest rate of return and HBL has lowest return.
- In year 2001/02, all the sampled banks have negative annual return or no return. Annual return of NABIL, HBL, NIB and EBL is - 49%, - 31%, - 33%, -31.2 % respectively and in the same year NEPSE index movement is also negative i.e. -0.03.
- Standard deviation of NABIL, HBL, NIB and EBL are 51.79%, 26.8%, 35.4% and 39.60 % respectively and Beta coefficient of NABIL, HBL, NIB and EBL are 1.096, 0.633, 0.872 and 0.947 respectively. The standard deviation of NABIL is highest and HBL is lowest.
- The required rate of return of NABIL, EBL, NIB and EBL is 0.1597, 0.1129, 0.1371 and 0.1446 respectively. Average rate of return of NABIL & EBL has accessed by 12.03 &7.54 percent than its required rate of return respectively. Similarly, excess average rate of return of HBL is -6.29 percent and NIB is -6.71, so stock of this bank is also overpriced. It means the bank has expected to earn a lower rate of return is necessary to compensate and investor for the level of systematic risk he bears. NIB has higher rate of average return over required rate of return. So, its stock is under priced.
- Coefficient of variation of NABIL, HBL, NIB and EBL are 1.849, 5.36, 5.057, and 1.8 respectively. Coefficient of HBL is highest and EBL has lowest.
- Systematic risk of NABIL, HBL, NIB and EBL are 0.146, 0.048, 0.093 and 0.109 respectively. Similarly, Unsystematic risk of NABIL, HBL, NIB and EBL are 0.122, 0.024, 0.033 and 0.047 respectively.
- Correlation between market and sample Bank are 67%, 82%, 86% & 70% of NABIL, HBL, NIB & EBL respectively. In this table it is cleared that there are high degree positive correlation between markets. It indicates when risk increases then the return is also increases.
- Correlation determination with market is 45%, 67%, 74% & 70% of NABIL, HBL, NIB & EBL respectively. It means 55%, 33%, 26% & 30% of NABIL, HBL, NIB & EBL interprets from market factor (i.e. macroeconomic factor) and remaining are interpret by internal factor (company itself) respectively.

4.4 Major Findings of the study based on primary data

- Financial statement survey is the base of investment on common stocks of commercial banks in Nepal. At the same time, same investors also make market survey to build on base for their investment.

- Majority of investors are risk seekers who consider risk in their investment on common stock but the consideration level is at the middle level rather than high. Likewise, there are also some investors who consider return factors and tend to avoid high risk and consider return at middle level.

- Most of the investors expressed that they have conducted both analysis. At the same time some of investors have conducted only either financial analysis or market analysis.

- Those who have conducted either financial analysis or both type of analysis has ranked return factor in first priority and only than market price per share, risk and dividend in second, third and fourth priority.

- Those who have conducted either market analysis or both types of analysis has ranked goodwill and image of the banks I first priority and only than share market performance, future expectation and market rumor in second, third and fourth.

- Majority of investors agreed that most of the Nepalese investors have not adequate awareness about risk and return factors.

- It is observed that most of the Nepalese investors have high consideration on goodwill and image of the commercial bank while investing their money on the common stock of commercial banks based on the market analysis approach.

- 50% of investors are treated as low awareness, 30% of the investors have adequate awareness and 20% have no any prediction about risk and return factors.

CHAPTER V

SUMMERY, CONCLUSION & RECOMMENDATION

Commercial banks plays an important role for economic development of a country as they provide capital for the development of industry, trade and business by investing the saving collected as deposits from public. They provide various services to their customer facilitating their economic and their social life. They are the most important ingredients for integrated and speedy development of a country. Therefore, a comparative and reliable banking system is essential to every country for the development and economic upliftment.

An investor holds shares with an intention to earn money. Finance theory states that in every, there is some risk associated with it. While an investment in share has the prospects of earning good return, it also has a risk of losing large amount of equity. A stock market can be a risky place for investors if they fail to know how to protect themselves from potential losses. This chapter consists of the summary, conclusions and recommendations from this study.

5.1 Summary

Commercial banks are major financial institutions, which occupy quite an important place in the framework of every economy because they provide capital for the development of industry trade and business and other resources deflect sector investing the saving collected as deposit commercial banks, by playing active role have changed the economic structure of the world. Commercial banks have its own role and contribution in the economic development; it maintains economic confidence of various segments and extends credit to people.

Investment operation of commercial banks is quite risky one. It is the most important factor from the view point of shareholders and bank management. For this, commercial banks have to pay due consideration while formulating investment pattern. A healthy development of any commercial bank depends upon its investment pattern. A good investment pattern attracts both borrowers and lenders, which help to increase the quality and quantity of deposits, loan an investment.

The major source of income of banks is interest income from loans and investments and fee based income. Similarly earning from such loan and advances occupy a major space in income statement of the bank. However, it is very important to be reminded that most of the bank failures in the world are due to the shrinkage in the value of loans and advances. Hence, loan is known as risky asset and investment operation of the commercial banks is risky one. Risk of nonpayment of loan is known as credit risk or default risk. Performing loans have multiple benefits to the society by helping for the growth of economy while nonperforming loans erode even existing capital.

Though several commercial banks have been established in our country within short period of time, stable, strong and appropriate investment has not been followed by the commercial banks to earn sufficient return. They have not been able to utilize their funds more efficiently and productively. Thus proper utilization of the resources has becomes relevant and current issue for the banks. The directions and guidance provided by Nepal Rastra Bank are the major policy statements from Nepalese commercial Banks.

Risk and return analysis is the part of the business world. If there is no risk, there is no return. Risk and return measures the performance on any corporate house. It is the key factor in the financial sector and could be a good indicator to the prospect who one to make investment on the securities of enterprises. For any investment decision, investors want to the expected rate of return from the investment and risk associated with in it. The economy is growing rapidly, which Force the change in the variable of world economy in galloping manner. No investors would like to make their investment in the risky asset which holds higher risk and yield lower rate of return. Banking sector is the most dynamic part of the economy which collects unused funds and mobilizes it in needy sector. It is heart of trade, commerce and industry. In Nepal joint venture and private sector bank has performed sound results than the government sector bank because high skill management, efficiency and proper risk management. Capital market plays vital role to develop the economic world. NEPSE in Nepal is the heart of capital market. Capital market has two wings i.e. primary capital market and secondary capital market. Various companies' securities are traded in such type of market. Most of the investor is least aware about the risk and return factor associated in each investment. They make their

investment in hunches and their own intuition rather than calculating the expected rate of return and comparing it market rate of return. The present study has been analyzed the risk and return parameter of common stock investment. Common stock is regarded most risky security and one of the major paper asset, traded in security market. The major objective of this research study is to analyze the risk and return of commercial banks in the context of Nepal especially focused in the commercial banks listed in the NEPSE. Four listed commercial banks in NEPSE have been taken as sample and their individual risk and return were calculated and analyzed as whole to find out the performance of each bank.

While analyzing risk and return in brief review of literature for the present study has been made and theoretical review and related studies where fundamental concept has been prepared to facilitate the study more accurate and effective. The study has also included research methodology to fulfill the objective of the present study. To analyze the standard deviation, beta coefficient, required rate of return, expected rate of return, coefficient variation have been calculated on the basis of major finding. This research study has also made a survey where a structured questionnaire has been filled up by 60 respondents and the result obtained from these primary data has been analyzed and conclusion has been derived regarding the risk and return on common stock of commercial banks from the investors' perspective. Based on the derived conclusion a very useful recommendation has been made.

5.2 Conclusions

Following conclusions from study has been drawn. Based on the analysis and interpretations on chapter 4, the following conclusions have been drawn which are summarized below:

- While considering the systematic (un-diversified) risk of commercial banks, HBL has the least systematic risk and EBL has the highest one among the selected banks.

- When unsystematic (diversifiable) risk is considered it is be found that NABIL has lowest risk and EBL has the highest one.

- At the same time when total risk is considered, NABIL is considered lowest risky and EBL has the highest risk.

- Beta coefficient of EBL has the highest and HBL has the lowest. It shows HBL is least risky and EBL is top most one among the selected banks.

- If relative risk measurement through coefficient variation is considered then, NIB has the highest per unit of risk as measured by coefficient of variation.

- Looking at only return factors, average return of NABIL is the highest and that of HBL is the lowest rate of return.

- According to CAPM approach, NABIL has the highest required rate of return. And HBL has the lowest one. All the sampled banks are under priced. So it is concluded that it is advisable to purchase common stock of such companies by the investors.

- Coefficient of variation of NABIL, HBL, NIB and EBL are 1.849, 5.36, 5.057, and 1.8 respectively. Coefficient of HBL is highest and EBL has lowest.

- Systematic risk of NABIL, HBL, NIB and EBL are 0.146, 0.048, 0.093 and 0.109 respectively. Similarly, Unsystematic risk of NABIL, HBL, NIB and EBL are 0.122, 0.024, 0.033 and 0.047 respectively.

- Correlation between market and sample Bank are 67%, 82%, 86% & 70% of NABIL, HBL, NIB & EBL respectively. In this table it is cleared that there are high degree positive correlation between markets. It indicates when risk increases then the return is also increases.

- Correlation determination with market is 45%, 67%, 74% & 70% of NABIL, HBL, NIB & EBL respectively. It means 55%, 33%, 26% & 30% of NABIL, HBL, NIB &

EBL interprets from market factor (i.e. macroeconomic factor) and remaining are interpret by internal factor (company itself) respectively.

- From the study it is found that none of the banks share price is rightly determined as all the banks' average rate of return is more than the required of return for the investor. This brings the difference of market prices from the intrinsic value.

- Financial statement review and friend advice are the main source of inspiration for the Nepalese investors to make their investment decision on common stocks of commercial bank in Nepal.

- Though some of the investors tend to bear risk as being the risk seeker but the degree of risk consideration remain on average. Likewise most of the investors also tend to avoid risk and value high to return as s decisional factor. The degree of consideration on return is also on average.

- Most of the investors conduct market analysis and financial analysis together. At the same time, a few investors conduct either of one analysis.

- When investors conduct financial analysis, return factor and market price per share are the major inputs for further analysis.

- When investors conduct market analysis, goodwill and image of the commercial bank as well as market performance are the major inputs for further analysis.

- Most of the Nepalese investor is reported lack of adequate awareness on risk and return involved in share investment in commercial bank.

5.3 Recommendations

Based on the research work, the following recommendations are made on the above findings and conclusion. Certain recommendations can be made here so that the concerned authorities can benefit from them.

- There is unrealistic relationship between required rate of return and expected rate of return of sampled banks' securities. Excess return of banks is more than 20 percent which may not be realistic. So, all the investors are recommended to conduct technical analysis as well as fundamental analysis to know the correct price of common stock. Technical analysis reveals stock's future performance based on the market price trend and investors' future expectation.

- The common stock returns of commercial banks are highly sensitive to market. They are highly positively correlated to the market. So, market should be further analyzed by the investors to balance the risk and return properly.

- Generally, it is believed that higher the return, higher will be the risk. Investment risks are better covered through a large and diversified portfolio. Diversifying an investment is a way of reducing the risk. Here, all the risky sampled banks are recommended to diversify their investment policy in less risky securities.

- The result of correlation between risk and return is insignificant. The result is unsatisfactory because the sample size of the study is too small and the data for the study is used from annual report and website which may not be sufficient so it is suggested that for the further researcher will recommend including sufficient sample size.
- If investor is risk averter, it is recommended him or her to invest in NABIL and if investor is risk seeker, then suggested to invest in HBL.

- Nepalese investors are requested to develop an appropriate basis for their investment on common stock as per the requirement. They are recommended to invest their fund by performing multiple analyses.

- As risk and return are positively correlated they are requested to assess these factors as a important and recommended to analyze these factors with different financial tools and techniques.

- All investors are recommended to put adequate consideration on risk and return factors while making investment on common stocks of commercial banks. They are requested to follow not only a few factors like market price per share, goodwill and image of commercial banks, dividend policy and market rumor etc.

- The investment policy of EBL is good in every aspect as studied above but the consistency in the above investment sectors is in equilibrium states. It is found that at time bank focuses much of its attention to one sector leaving other sector untouched, so, it is recommended to touch the entire sector and balance it effectively as to have the optimal performance of the bank.

To get success itself and to encourage financial and economic development of the country through industrialization and commercialization of commercial bank must mobilize its fund and debentures of other financial and non financial companies. And if other sectors go up positively than bank can utilize its fund more and more by providing them loan or getting sufficient dividend on their share or interest on their debentures. Commercial bank needed to strengthen its economic structure to achieve piped overall development. They have to resort to innovative approach of banking there by bringing professionalism in their business. If they follow those suggestions they can have better reach to the modern innovative and competitive banking markets.

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Appendix 1

List of Licensed Commercial Banks

S/N	Commercial banks	Established date (B.S)	Head office	listed
1	Nepal Bank ltd.	1994/07/30	Kathmandu	No
2	Rastriya Banijya Bank	2022/10/10	Kathmandu	No
3	Agriculture Bank ltd.	2024/10/7	Kathmandu	Process
4	Nabil Bank Ltd.*	2041/03/29	Kathmandu	yes
5	Nepal Investment Bank ltd.*	2042/11/16	Kathmandu	yes
6	Standard Chartered Bank Nepal Ltd.	2043/10/16	Kathmadu	yes
7	Himalayan Bank Ltd.*	2049/10/05	Kathmandu	yes
8	Nepal Bangladesh Bank Ltd.	2050/02/23	Kathmandu	yes
9	Nepal SBI Bank Ltd.	2050/03/23	Kathmandu	yes
10	Everest Bank Ltd*	2051/07/01	Kathmandu	yes
11	Bank of Kathmandu	2051/11/28	Kathmandu	yes
12	Nepal Credit and Commerce Bank	2053/06/28	Siddhartha Nagar	yes
13	Lumbini Bank ltd	2055/04/01	Narayanghat	yes
14	N I C bank ltd.	2055/04/05	Biratnagar	yes
15	Kumari Bank ltd	2056/08/24	Kathmandu	yes
16	Machhapucchre Bank ltd.	2057/06/01	Pokhara	yes
17	Laxmi Bank ltd	2958/06/11	Birgunj	yes
18	Siddhartha Bank ltd.	2058/06/12	Kathmandu	yes
19	Global Bank Ltd	2063/09/18	Birgunj	yes
20	Citizen Bank ltd	2064/01/7	Kathmandu	yes
21	Prime Bank Ltd	2064/06/7	Kathmandu	yes
22	Sunrise Bank ltd.	2064/06/25	Kathmandu	yes
23	Bank of Asia	2064/06/25	Kathmandu	yes
24	NMB Bank ltd	2053/09/11	Kathmandu	yes
25	DCBL Bank	2057/10/10	Kathmandu	yes
26	KIST Bank	2059/11/09	Kathmandu	Yes
27	Janata Bank	2067/01/11	Kathmandu	No
	Population = 27			**23**

Sources: NEPSE and NRB *** Sample commercial bank.**

Appendix 2

Commercial bank & NEPSE index **Opening/ closing**

Year	NEPSE index (closing)	Annual return of capital market	Commercial bank Index (closing)	Annual Return of commercial Banks (Rm)	Treasury Bills Rates
1999/00	**360.7**	-	**392.71**	-	**4.5812**
2000/01	**348.43**	-0.03	**384.04**	-0.02	**4.9535**
2001/02	**227.54**	-0.35	**212.68**	-0.45	**4.717**
2002/03	**204.86**	-0.1	**200.67**	-0.06	**4.4975**
2003/04	**222.04**	0.08	**231.97**	0.16	**3.7273**
2004/05	**286.67**	0.29	**304.64**	0.31	**4.2882**
2005/06	**386.63**	0.35	**437.49**	0.44	**4.3962**
2006/07	**683.95**	0.35	**639.93**	0	**4.7348**
2007/08	**963.4**	0.41	**919.38**	1.27	**4.853**
2008/09	**749.10**	-0.22	**704.35**	-0.29	**8.1150**
Total		**1.2**		**1.36**	**48.864**
Average		**0.1333**		**0.15**	**4.8864**

Source: *Calculated on the basis of the data extracted from NEPSE and annual report of Sample banks.*

Where

$$\text{Annual return of capital market} = \frac{\text{Beginning price} - \text{Ending price}}{\text{Ending price}}$$

$$\text{Annual return of commercial Banks (Rm)} = \frac{\text{Beginning price} - \text{Ending price}}{\text{Ending price}}$$

Appendix 3

Calculation of Required Rate of return

Sample Bank	Required Rate of return E(Rj) = Rf + bi [Rm + Rf]
NABIL	0.049+1.096(0.15+0.049) = 0.1597
HBL	0.049+0.633(0.15+0.049) = 0.1129
NIB	0.049+0.872(0.15+0.049) = 0.1371
EBL	0.049+0.947(0.15+0.049) = 0.1446

Source: Appendix 2

Appendix 4

NABIL Bank Ltd

Year	Closing Price (Rs)	Opening Price (Rs)	Cash dividend (%)	Stock dividend (%)	Year end return (Rj)
1999/00	**1400**	**700**	**405**	**-**	**0**
2000/01	**1500**	**1400**	**40**	**25**	**0.1**
2001/02	**735**	**1500**	**20**	**-**	**-0.49**
2002/03	**737**	**735**	**50**	**-**	**0.07**
2003/04	**1000**	**735**	**65**	**-**	**0.45**
2004/05	**1505**	**1000**	**70**	**-**	**0.58**
2005/06	**2240**	**1505**	**85**	**-**	**0.54**
2006/07	**5050**	**2240**	**140**	**40**	**1.32**
2007/08	**5275**	**5050**	**100**	**40**	**0.06**
2008/09	**4899**	**5275**	**85**	**50**	**-0.12**

Source: *Calculated on the basis of the data extracted from NEPSE and annual reports of sampled banks.*

Where

$$\text{Year end return } (R_j) = \frac{\text{Beginning price} - \text{Ending price} + \text{Cash Dividend}}{\text{Ending price}}$$

Appendix 5

Himalayan Bank Ltd

Year	Closing Price (Rs)	Opening Price (Rs)	Cash dividend (%)	Stock dividend (%)	Year end return (Rj)
1999/00	**1700**	**1000**	**50**	**25**	**0**
2000/01	**1500**	**1700**	**27.5**	**30**	**-0.10**
2001/02	**1000**	**1500**	**25**	**10**	**-0.31**
2002/03	**836**	**1000**	**1.32**	**24.32**	**-0.16**
2003/04	**840**	**836**	**-**	**20**	**0**
2004/05	**920**	**840**	**11.58**	**20**	**0.10**
2005/06	**1100**	**920**	**30**	**5**	**0.23**
2006/07	**1760**	**1100**	**15**	**25**	**0.61**
2007/08	**1980**	**1760**	**25**	**20**	**0.14**
2008/09	**1760**	**1980**	**12**	**21.56**	**-0.10**

Source: *Calculated on the basis of the data extracted from NEPSE and annual reports of sampled banks.*

Where

$$\textbf{Year end return } (R_j) = \frac{\textbf{Beginning price} - \textbf{Ending price} + \textbf{Cash Dividend}}{\textbf{Ending price}}$$

Appendix 6

Nepal Investment Bank Ltd

Year	Closing Price (Rs)	Opening Price (Rs)	Cash dividend (%)	Stock dividend (%)	Year end return(Rj)
1999/00	1401	822	25	25	**0**
2000/01	1150	1401	-	-	**-0.17**

2001/02	760	1150	-	40	**-0.33**
2002/03	795	760	20	-	**0.07**
2003/04	940	795	15	-	**0.20**
2004/05	800	940	12.50	-	**-0.13**
2005/06	1260	800	20	35.26	**0.6**
2006/07	1729	1260	5	25	**0.37**
2007/08	2450	1729	7.50	33.33	**0.42**
2008/09	1388	2450	20	-	**-0.42**

Source: *Calculated on the basis of the data extracted from NEPSE and annual reports of sampled banks.*

Where

$$\textbf{Year end return } (R_j) = \frac{\textbf{Beginning price} - \textbf{Ending price} + \textbf{Cash Dividend}}{\textbf{Ending price}}$$

Appendix 7

Everest Bank Ltd

Year	Closing Price (Rs)	Opening Price (Rs)	Cash dividend (%)	Stock dividend (%)	Year end return (Rj)
1999/00	980	407	195	**20**	**0**
2000/01	750	980	-	-	**-0.23**
2001/02	430	750	86	20	**-0.312**
2002/03	445	430	20	-	**0.08**
2003/04	680	445	20	-	**0.57**
2004/05	870	680	-	-	**0.27**
2005/06	1379	870	25	-	**0.61**

2006/07	2430	1379	10	-	**0.76**
2007/08	3132	2430	20	-	**0.29**
2008/09	2455	3132	30	30	**-0.20**

Source: *Calculated on the basis of the data extracted from NEPSE and annual reports of sample banks.*

Where

$$\text{Year end return } (\bar{R}_j) = \frac{\text{Beginning price} - \text{Ending price} + \text{Cash Dividend}}{\text{Ending price}}$$

Appendix 8

Calculation of standard deviation, variance, coefficient of variation and Beta coefficient of NABIL Bank Ltd.

Year	Rj	Rm	$(Rj - \bar{Rj})$	$(Rj - \bar{Rj})^2$	$(Rj-\bar{Rj})x(Rm-\bar{Rm})$	$(Rm - \bar{Rm})$	$(Rm - \bar{Rm})^2$
2000/01	0.1	-0.02	-0.18	0.0324	0.0252	-0.14	0.0196
2001/02	-0.49	-0.45	-0.77	0.5929	0.4389	-0.57	0.3249
2002/03	0.07	-0.05	-0.21	0.0441	0.0357	-0.17	0.0289
2003/04	0.45	0.16	0.17	0.0289	0.0068	0.04	0.0016
2004/05	0.58	0.31	0.3	0.09	0.057	0.19	0.0361
2005/06	0.54	0.44	0.26	0.0676	0.0832	0.32	0.1024
2006/07	1.32	0.46	1.04	1.0816	0.3536	0.34	0.1156
2007/08	0.06	0.55	-0.22	0.0484	-0.0946	0.43	0.1849
2008/09	-0.12	-0.29	-0.4	0.16	0.164	-0.41	0.1681

total	**2.51**	**1.11**		**2.1459**	**0.0698**		**0.9821**
average	**0.28**	**0.12**					

Source: *Calculated on the basis of the data extracted from NEPSE and annual reports of sample banks.*

Where,

Average rate of return ($\overline{Rj}$) = $\frac{\sum Rj}{N}$

Variance = $(\sigma j)^2$

Standard deviation(σj) = $\left[\frac{\sum(Rj - \overline{Rj})^2}{N-1}\right]^{1/2}$

Beta Coeficient(βj) = $\frac{COV(j,m)}{\sigma m2}$

C.V = $\frac{S.D}{Mean} | 100$

Systematic risk = total risk – Unsystematic risk

Or Systematic risk = $\beta^2 \times \sigma_m^2$

Unsystematic risk = total risk (variance) – systematic risk

Or Unsystematic risk = $\sigma_i^2 - \sigma_e$

Corelation Coefficient($r jm$) = $\frac{COV(j,m)}{\sigma j \, \sigma m}$ **Or** $\frac{bi \, \sigma m}{\sigma i}$

Coefficient of Determination (βim^2) = $\frac{\text{Systematic Risk}}{\text{Total Risk } (\acute{o}i^2)}$

Appendix 9

Calculation of standard deviation, variance, coefficient of variation and Beta coefficient of Himalayan Bank Ltd.

Year	Rj	Rm	$(Rj - \overline{Rj})$	$(Rj - \overline{Rj})2$	$(Rj-\overline{Rj})x(Rm-\overline{Rm})$	$(Rm - \overline{Rm})$	$(Rm - \overline{Rm})^2$
2000/01	-0.1	-0.02	-0.15	0.0225	0.021	-0.14	0.0196

2001/02	-0.31	-0.45	-0.36	0.1296	0.2052	-0.57	0.3249
2002/03	-0.16	-0.05	-0.21	0.0441	0.0357	-0.17	0.0289
2003/04	0	0.16	0.05	0.0025	-0.002	0.04	0.0016
2004/05	0.1	0.31	0.05	0.0025	0.0095	0.19	0.0361
2005/06	0.23	0.44	0.18	0.0324	0.0576	0.32	0.1024
2006/07	0.61	0.46	0.56	0.3136	0.1904	0.34	0.1156
2007/08	0.14	0.55	0.09	1.0081	0.0387	0.43	0.1849
2008/09	-0.1	-0.29	-0.15	0.0225	0.0615	-0.41	0.1681
total	**0.14**	**1.11**		**0.5778**	**0.6176**		**0.9821**
average	**0.05**	**0.12**					

Source: Calculated on the basis of the data extracted from NEPSE and annual reports of sampled banks.

Where,

Average rate of return ($\overline{Rj}$) = $\frac{\sum Rj}{N}$

Variance = $(\sigma j)^2$

Standard deviation(σj) = $\left[\frac{\sum(Rj - \overline{Rj})^2}{N-1}\right]^{1/2}$

Beta Coeficient(βj) = $\frac{COV(j,m)}{\sigma m2}$

C.V = $\frac{S.D}{Mean} | 100$

Systematic risk = total risk – Unsystematic risk

Or Systematic risk = $\beta^2 \times \sigma_m^2$

Unsystematic risk = total risk (variance) – systematic risk

Or Unsystematic risk = $\sigma_i^2 - \sigma_e$

Corelation Coefficient($r jm$) = $\frac{COV(j,m)}{\sigma j \, \sigma m}$ **Or** $\frac{bi \, \sigma m}{\sigma i}$

Coefficient of Determination (βim^2) = $\frac{\text{Systematic Risk}}{\text{Total Risk } (\acute{o}i^2)}$

Appendix 10

Calculation of standard deviation, variance, coefficient of variation and Beta coefficient of Nepal Investment Bank Ltd.

Year	Rj	Rm	(Rj- $\overline{Rj}$)	(Rj – $\overline{Rj}$)2	(Rj-$\overline{Rj}$)x(Rm-$\overline{Rm}$)	(Rm- $\overline{Rm}$)	(Rm- $\overline{Rm}$)^2
2000/01	-0.17	-0.02	-0.24	0.0576	0.0336	-0.14	0.0196
2001/02	-0.33	-0.45	-0.4	0.16	0.228	-0.57	0.3249
2002/03	0.07	-0.05	0	0	0	-0.17	0.0289
2003/04	0.2	0.16	0.13	0.0169	0.0025	0.04	0.0016
2004/05	-0.13	0.31	-0.2	0.04	-0.038	0.19	0.0361
2005/06	0.6	0.44	0.53	0.2809	0.1696	0.32	0.1024
2006/07	0.37	0.46	0.3	0.09	0.102	0.34	0.1156
2007/08	0.42	0.55	0.35	0.1225	0.1505	0.43	0.1849
2008/09	-0.42	-0.29	-0.49	0.2401	0.2009	-0.41	0.1681
total	**0.61**	**1.11**		**1.008**	**0.8518**		**0.9821**
average	**0.07**	**0.12**					

Source: Calculated on the basis of the data extracted from NEPSE and annual reports of sampled banks.

Where,

Average rate of return ($\overline{Rj}$) = $\dfrac{\sum Rj}{N}$

Variance = $(\sigma j)^2$

Standard deviation(σj) = $\left[\dfrac{\sum(Rj - \overline{Rj})^2}{N-1}\right]^{1/2}$

Beta Coeficient(βj) = $\dfrac{COV\ (j,m)}{\sigma\ m2}$

C.V = $\dfrac{S.D}{Mean} \mid 100$

Systematic risk = total risk – Unsystematic risk

Or Systematic risk = $\beta^2 \times \sigma_m^2$

Unsystematic risk = total risk (variance) – systematic risk

Or Unsystematic risk = $\sigma_i^2 - \sigma_e$

$$\text{Corelation Coefficient}(r_{jm}) = \frac{COV(j,m)}{\sigma j\, \sigma m} \quad \text{Or} \quad \frac{bi\,\sigma m}{\sigma i}$$

$$\text{Coefficient of Determination } (\beta im^2) = \frac{\text{Systematic Risk}}{\text{Total Risk } (\sigma i^2)}$$

Appendix 11

Calculation of standard deviation, variance, coefficient of variation and Beta coefficient of Everest Bank Ltd.

Year	Rj	Rm	$(Rj - \overline{Rj})$	$(Rj - \overline{Rj})2$	$(Rj-\overline{Rj})x(Rm-\overline{Rm})$	$(Rm - \overline{Rm})$	$(Rm - \overline{Rm})^2$
2000/01	-0.23	-0.02	-0.45	0.2025	0.063	-0.14	0.0196
2001/02	-0.312	-0.45	-0.532	0.283024	0.30324	-0.57	0.3249
2002/03	0.08	-0.05	-0.14	0.0196	0.0238	-0.17	0.0289
2003/04	0.57	0.16	0.35	0.1225	0.014	0.04	0.0016
2004/05	0.27	0.31	0.05	0.0025	0.0095	0.19	0.0361
2005/06	0.61	0.44	0.39	0.1521	0.1248	0.32	0.1024
2006/07	0.76	0.46	0.54	0.2916	0.1836	0.34	0.1156
2007/08	0.29	0.55	0.07	0.0046	0.0301	0.43	0.1849
2008/09	-0.2	-0.29	-0.42	0.1764	0.1722	-0.41	0.1681
total	**1.838**	**1.11**		**1.255124**	**0.92424**		**0.9821**
average	**0.22**	**0.12**					

Source: Calculated on the basis of the data extracted from NEPSE and annual reports of sampled banks.

Where,

Average rate of return ($\overline{Rj}$) = $\frac{\sum Rj}{N}$

Variance = $(\sigma j)^2$

Standard deviation(σj) = $\left[\frac{\sum(Rj - \overline{Rj})^2}{N-1}\right]^{1/2}$

Beta Coeficient(βj) = $\frac{COV\ (j,m)}{\sigma\ m2}$

C.V = $\frac{S.D}{Mean} \mid 100$

Systematic risk = total risk – Unsystematic risk

Or Systematic risk = $\beta^2 \times \sigma_m^2$

Unsystematic risk = total risk (variance) – systematic risk

Or Unsystematic risk = $\sigma_i^2 - \sigma_e$

Corelation Coefficient($r\,jm$) = $\frac{COV\ (j,m)}{\sigma j\ \sigma m}$ **Or** $\frac{bi\ \sigma m}{\sigma i}$

Coefficient of Determination (βim^2) = $\frac{\text{Systematic Risk}}{\text{Total Risk } (\acute{o}i^2)}$

Appendix 12

A Survey on the risk and return on common stock from the investors' perspective

Dear Members,

I am collecting the data concerned with risk and return on common stock from the investor's perspective for the project work in partial fulfillment of the requirements for the degree of MBS and it would be grant value of your help in this project work, if you help by filling up the following questionnaires.

Thank you for your kind cooperation. **Bauda Hang Rai**

(Researcher

Name (optional); ……

Position: ……..

Experience: …… years.

Institution: …….

Address: …….

1. Have you invested in the common stock of commercial banks in Nepal? (Tick one)

   a. Yes b. No

2. On what basis, you have made investment on common stocks of commercial banks? (Tick one)

   a. Friends advice ( )

   b. Market survey ( )

   c. Financial statement review ( )

   d. Whim and rumor ( )

3. What kind of investor are you?

   a. Risk seeker ( )

   b. Risk averter ( )

   c. Neither risk seeker nor risk averter ( )

   d. Don't know ( )

4. Do you consider return on common stocks of commercial banks while making investment? (Tick one)

a. Yes b. No c. Don't know

5. To what extent do you consider the return involved in investing on common stocks of commercial banks? Please indicate on the following scale:

6. Do you consider risk on common stock of commercial banks while making investment? (Tick one)

a. Yes b. No c. Don't know

7. To what extent do you consider the risk involved in investing on common stocks of commercial banks? Please indicate on the following scale:

a. High b. Medium c. Low

8. What kind of analysis do you conduct for your investment decision? (Tick one)

a. Financial analysis b. Market analysis c. Both

9. If you conduct financial analysis which of following factors do you prioritize? (Rank the following factor according to priority given)

a. Return factor ( )

b. Risk factor ( )

c. Dividend policy ( )

d. Market price per share ( )

10. If you conduct market analysis which of following factors do you prioritize? (Rank the following factor according to priority given)

a. Market rumor ( )

b. Future expectation ( )

c. Goodwill and image of the commercial bank ( )

d. Share market performance ( )

11. Do you think that Nepalese investors are aware adequately about the risk and return factors? (Tick one)

a. Yes b. No c. Don't know

Thank you.

Appendix 13

RESPONSE OBTAINED ON QUESTION NO.2

Options offered	Response obtained	Share on total response
Friends advice	16	27%
Market survey	12	20%
Financial statement review	18	30%
Whim and rumor	14	23%
Total	60	100%

RESPONSE OBTAINED ON QUESTION NO.3

Options offered	Response obtained	Share on total response
Risk seeker	18	30%
Risk averter	16	26.67%
Neither risk seeker nor risk averter	14	23.33%
Don’t know	12	20%
Total	60	100%

RESPONSE OBTAINED ON QUESTION NO.4

Options offered	Response obtained	Share on total response
Yes	44	73.33%
No	14	23.33%
Don’t know	2	3.34%
Total	60	100%

RESPONSE OBTAINED ON QUESTION NO.5

Options offered	Response obtained	Share on total response
High	16	36.36%

Medium	22	50%
Low	6	13.64%
Total	44	100%

RESPONSE OBTAINED ON QUESTION NO.6

Options offered	Response obtained	Share on total response
Yes	40	66.67%
No	14	23.33%
Don’t know	6	10%
Total	60	100%

RESPONSE OBTAINED ON QUESTION NO.7

Options offered	Response obtained	Share on total response
High	16	33.34%
Medium	22	45.83%
Low	10	20.83%
Total	48	100%

RESPONSE OBTAINED ON QUESTION NO.8

Options offered	Response obtained	Share on total response
Financial analysis	16	26.67%
Market analysis	18	30%
Both	26	43.33%
Total	60	100%

RESPONSE OBTAINED ON QUESTION NO.9

Research variable	Ranking	Response percent
Return factor	30	50%
Risk factor	15	25%
Dividend policy	5	8%
Market price per share	10	17%
Total	60	100%

RESPONSE OBTAINED ON QUESTION NO.10

Research variable	Ranking	Response percent
Market rumor	3	5%
Future expectation	9	15%
Goodwill and image of the Commercial bank	30	50%
Share market performance	18	30%
Total	60	100%

RESPONSE OBTAINED ON QUESTION NO.11

Options offered	Response obtained	Share on total response
Yes	18	30%
No	30	50%
Don’t know	12	20%
Total	60	100%