CHAPTER - I
INTRODUCTION

1.1 Background of the Study

Investment in its simplest form means employing money to generate more money in future. In finance, the purchase of a financial product of other item of value with an expectation of favorable future returns. In general, terms investment means the use of money in the hope of making more money. It is the sacrifice of current rupees for future rupees. The sacrifice takes place in the present and is certain. But the reward comes later and is an uncertain. Return is the primary motive of investment, but it always entails some degree of risk. Buying common stocks, bonds, deposited money into bank account, buying a piece of land, gold or silver are some example of investment. All these examples involve sacrifice of current rupees in expectation of future return. Hence, they are investment. The main objective of investment is to maximize the wealth of an investor.

Investment is defined simply to be the sacrifice of current consumption for future consumption whose objective is to increase future wealth. The sacrifice of current consumption takes place at present with certainty and the investors expects desired level of wealth at the end of his investment horizon. The general principle is that the investment can be retired when cash is needed. The decision to investment now is a most crucial decisions the future level of wealth is not certain. Time and risk are the two conflicting attributes involved in the investment decision. Broadly, investment alternatives fall into two categories: real assets and financial assets. Real assets are tangible while financial assets involve contracts written on pieces of papers such as common stock, bond and debentures. Financial asset are bought and sold in organization security markets.

"An investment is a commitment of fund made in the exception of some positive rate of return, if the investment so properly undertaken the return will be commensurate with the risk, the investor assumes" (Fisher and Jordan, 2000).

The term risk and return is closely associated with investment. Investment simply means sacrificing current funds for future returns, bearing certain risk. The investment may be on fixed assets like land, building or precious metals and collectibles or something else. But here as a student of finance, I have focused the term investment as sacrificing current fund on financial assets like shares, debenture, warrants, convertibles etc for the long term return.

Investors invest their fund on the securities of certain companies for the long run future returns. The return is defined as the reward for bearing the risk. Return is the most important outcome from an investment. It measures the investor's rate of wealth accumulation i.e. increase or decrease per period. Risk is defined as the occurrence of unfavorable outcomes, which is ever harmful for the business. Risk is inseparable from return. It ever creates uncertainty. Some of the factors that create investment uncertainty such as interest rate risk, purchasing power risk, bull-bear market risk, management risk and so on. Thus, risk is virtually every decision. Assessing risk and incorporating the same in the final decision is an integral part of financial analysis.

Primary goal of any nation, including Nepal, is rapid economic development to promote the welfare of the people and the nation by economic growth rate. Financial market plays vital role in economic development of the country. Nepal, the capital deficient economy, requires the huge amount of investment money in activities for the rapid economic development. The capital market reinvigorates and boosts up the economic activities by encouraging and mobilizing the saving especially domestic financial resources to provide the entrepreneurs for investment in profitable projects. It provides best investment

opportunities by transferring the funds from surplus saving to need based sectors through the transaction of financial instruments. Integrated and speedily development of the country is possible only when competitive capital market, i.e. capital formation and its proper utilization, reach corner of the country. Hence, investment portfolio is one such tool that helps for proper utilization of resources. Successful formulation and effective implementation of investment policy is the prime essential for the successful performance of capital market. Good investment policy has a positive impact on economic development of the country. An investment involves the sacrifice of current rupees for future rupees. The sacrifice takes place in the present and certain. The reward comes later and is uncertain. Finance mostly deals on the monetary risk and return, which is the most effective subject matter for a small individual firm to large corporations. Return is the reward for bearing risk and risk is always associated with return. In other word, risk is the fact of life, which is the product of uncertainty and its magnitude depends upon the degree of variability in uncertain cash flows. In fact, risk is an indication of opportunity of losing investment value and return is the income received in investment. There is the expectation of reasonable return in every investment which is also taken as reward of the activity. Favorable return allures the investors in business undertakings.

Nepal has adopted mixed and liberal economic policy with the implicit objective to help the state and the private sector. Especially after restoration of the democracy, the concept of the liberalization policies has been incorporated as directive principal and state policies. This liberalization has helped in establishing many companies, banks, finance companies and manufacturing industries. Thus, these establishments help the country for its development.

Commercial banks are not legally formed financial institution, which accept deposits and makes loan for commercial and non-commercial purpose. 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 of Ltd. in 1937 A.D. In 1966 (2014B.S) the central bank named Nepal Rastriya bank Ltd. was established with the objective of supervising, guiding and protecting the functions of banking sector. 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 1974 (2031 B.S). Nepal Arab bank Ltd. is the first joint venture bank in Nepal which was established in 1984 (2041 B.S.) presently, there are twenty nine commercial banks with more than branches over the national frontier operating in Nepal.

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, collect 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 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.

1.2 Introductions of Commercial Banks in Nepal

Although Bank can be categorized into different types on the basis of its functions, objectives etc. the word Bank will always be synonymous with the Commercial Banks with its function. Basically, the functions of Commercial Banks all over the world are same. As per our context the operation of Commercial Bank has a very short history. It was in 1937 A.D. when a first Commercial Bank i.e. Nepal Bank Limited started its operation. Since then till 1991 (2048 B.S.) there is only five Banks operating in Nepal with their main

concentration Kathmandu valley. Commercial Bank is profit oriented financial service institution. Certain rate of interest is given to the depositors of saving. Therefore, certain rate of interest is charged by Bank as a loan facility. The commercial Bank Act 1974(2031 B. S.) defines "A commercial bank is that bank which exchanges money, accepts deposits, grants loans and performs banking functions". But the Commercial Banks Act,1974 (2031B.S) has repealed by section 93 of Banks and Financial Institutions ordinance, 2004.

After the introduction of liberal economic policy of Nepal, provide an opportunity for the banking institutions to grow rapidly. As a result different joint venture Banks and Financial Institutions established rapidly and "till now there are licensed 32 Commercial Banks operating in Nepal. Out of this, only four banks taken from sample of this study.

1.2.1 Nepal Arab Bank Limited (NABIL)

Nepal Arab Bank Limited (NABIL) was established in 1984 A.D.and listed in NEPSE in year 1984 A.D. It was established a decade and half ago in Kathmandu with the joint venture of Dubai Bank Limited and National Bank Limited, Dhaka later on. A joint venture is the joining of forces between two or more enterprises with the purpose of carrying out a specific operation. NABIL is the first highly expansion joint venture bank that has been benefiting the managerial support from National Bank Limited, Dhaka, established under the rules of Central Bank Act 1955(2012 B.S.), commercial bank Act 1974(2031 B.S.) and certain directives of Nepal Rastra Bank liable to every JVB's; the NABIL has been meeting the financial and commercial needs of the public and the modern business assisting in the financial development of a country as a whole. Nepal Rastra Bank issues certain directives to these banks. NABIL has authorized capital Rs, 2,10,00,00,000, issued capital Rs. 2,02,97,69,400 and paid up capital Rs. 2,02,97,69,400. Currently the banks have around 50 branches (www.nabil.com.np).

1.2.2 Nepal Investment Bank Limited (NIBL)

Nepal Investment Bank Ltd. (Previous Nepal Indosuez Bank Ltd.) was established on 21 January 1986 as a third joint venture bank under the Company Act 1964. The bank is managed by Banque Indosuez, Paris in according with joint –venture and technical services agreement signed between it and Nepalese promoters. Now this bank is operating under the full ownership of Nepalese promoters and shareholders. NIBL has authorized capital Rs. 4,000,000,000, issued capital Rs. 2,409,097,700 and paid up capital Rs. 2,409,097,700. Bank was listed in NEPSE in 21 November 1987 (05/08/2044 B.S). And now it has 41 branches around the country (www.nibl.com.np).

1.2.3 Everest Bank Limited (EBL)

Everest bank limited was established in 1992 under the company act as one of the Joint –venture banks. Earlier, its foreign joint –venture partner was United Bank of India Limited but from December 1996 onwards, its management was taken over by Punjab National Bank Limited of India. EBL has authorized capital Rs. 1250,000,000 issued capital Rs. 1050,000,000 and paid-up capital Rs. 1030,467,300 respectively. The bank was listed in NEPSE in 1905 A.D. Currently the banks has 48 branches around the country (www.ebl.com.np).

1.2.4 Bank of Kathmandu Limited (BOKL)

Bank of Kathmandu Ltd. was established in 1994 in collaboration with the SIAM commercial Bank, Thailand and Nepali promoters. Out of 50%, shares holding the SIAM commercial bank diluted its 25% of holding to the Nepalese citizen in 1998. To become a significant contributor to the economic development of Nepal, by distinguishing the Bank as an efficient, competitive, safe and top-quality financial institution. BOK also aims to facilitate the nations economic and to become more competitive globally.

The authorized Capital, Issued Capital and Paid up Capital at the end of fiscal year 2011/12 were, 200,00,00,000, 1,18,21,57,100 and 1,18,21,57,100

respectively. Currently, the banks have 46 branches around the country (www.bok.com.np).

1.3 Statement of the Problems

People assume more risk in stock investment than it's real. So it is necessary to analyze in the field is a must. Unavailability of clear and simple technique to analyze risk associated with return is also a constraint. So, main problem is the lack of information to analyze the risk and return on common stock investment. People fell more risk in stock investment then as its real risk. Not only general public, but also the university graduates and post graduates cannot analyze risk and return while making stock investment decision.

Theory suggests that the stock price in the market is guided by the intrinsic value which is calculated by and of company's result of financial performance dividend, required rate of return and growth. In an efficient market condition stock price is equal to the intrinsic value since the buyer and the seller are fully aware of the facts and figures of the company. Therefore one can say that market price and financial performance are positively correlated but conditions here are totally different from that. Whatever the theory has depicted is not applicable in our context, where most of the investors do not know to interpret the information and so they can't make a rational decision regarding transactions of the stock.

Therefore stock prices in Nepal are determinate more by other factors, than the financial performance of the concerned company. Therefore courage is needed and at the same time faith to invest in common stock because there are several question which may be rising in the mind of the individual investor at a time of the investment.

This study focuses that how far people invest in particular security from their available fund and which will be the other security in which the possible risk

will be reduced and the expected return increases. Even, investors have difficulties in choosing the best securities and create a well-diversified portfolio. They only see the market price when investment. They do not analyze the risk factors associated with the return. Most investors use linear logic to formulate their investment strategies and make investment decision. Linear logic is based in the assumption that the future will resemble the past in a highly predictable fashion. There are no sources to get exact or perfect information about the future regarding risk and return on investments in Nepal. Even intellectual scholars, university graduates and post graduates in business administration could not perfectly analyze the risk and return of stock and stock market. There are no organized firm which can give such information so that it can accelerate stock investment and market efficiency. Government policy is also less encouraging to create proper investment environment. So we can say none of the effective programmed has been introduced to develop investor's Knowledge in Nepal yet. Therefore, in Nepal, major weakness on the increment of stock market efficiency is due to lack of education, knowledge, resources and technology that hinders to analyze risk and return of individual stock and portfolio stock.

Some of the common questions that frequently occur in investors mind can be listed as follows. The criteria for evaluation that are holding will give them a favorable return or not what should be the compensation they have to receive for bearing risk.

- How can one make higher return through risk?
- How do they know about the magnitude of the risk?
- How can investor diversify the risk?
- What sorts of information needed to analyze risk and return?
- How can we manage our portfolio through risk and return analysis?

Therefore, these are some burning issues that have influenced to carry on these studies.

1.4 Focus of the Study

The main focus of this study is the risk and return analysis of the common stock investment of the listed commercial banks of Nepal. Risk and return are two most crucial for investment decision. Every rational investor invests their money with the hope of getting healthy return in their investable funds. But due to lack of well diversified portfolio, investors make bad return from their investment. So, effective analysis of portfolio risk and return is necessary to achieve good results.

The purpose of the study is to analyze how one can get sustainable profit by minimizing the risk. For this purpose, market return, expected return, total risk, systematic risk and unsystematic risk are analyze to give an idea to get sustainable profit by diversifying the risk to avoid future loss of the common stock investment. Still now, there are 32 commercial banks in Nepal. NABIL, NIBL, EBL and BOK are selected as sample.

1.5 Objective of the Study

The main objective of this study is to analyze the risk and return on common stock investment of the listed commercial banks in Nepal. However, the specifics objectives of this study can be enumerated as:

- To assess the risk and return of selected commercial banks and analyze their coefficient of variation.
- To analyze the systematic and unsystematic risk of the selected commercial banks.
- To determine the relationship between earning per share and market price per share of the commercial banks.
- To make relevant suggestion and practical ideas and recommendation based on analysis.

1.6 Significance of the Study

The study is focused on risk and return analysis along with the analysis of the relationship of market price per share (MPS) with different commercial banks in Nepal. It will be helpful for investors as well as provides proper guidelines for making choices of stocks and bonds on the basic risk and return. Because most of public investors are not well aware about the real financial strengths and weaknesses of the public companies, they cannot well analyze and interpreted the real financial position of the company on the basic of available data and information to reach the right conclusion. So due to this kind of circumstances this study may help investors to think about restructuring their investment portfolio. Similarly, the potential investors may take better timely investment decision on the basis of the finding of the study. It provides the consolidated basic data and information about the NEPSE and commercial banks under study. The study will be beneficial for all the persons who are directly or indirectly related to the Nepalese capital market. This study is not only to fulfill MBS level course of T.U. but also to provide some knowledge about the Nepalese stock market along with providing ideas to minimize the risk on stock investment, respective institution under study, the officials of stock market, brokers, market makers, university graduates, professors can use the findings of this study.

1.7 Limitations of the Study

Every works have been its own restriction and limitation due to the lack of time, resources and knowledge the work is completed within the periphery of its limitation. Despite ample efforts on the part of the study is not free from limitation. This study also will have some limitations which will be as follows:

- This study is based on secondary data. Thus, the result of the analysis depends on accuracy of available information.
- The study covers only the latest six fiscal years from 2007/08 to 2011/12.

- The study is mainly conducted on the basis of secondary sources of data e.g. annual reports of various banks, NRB and governments publications and other related journals, will be included where matters.
- The study is concerned only with the risk and return of the listed four commercial banks.
- Analysis is based on the limited financial and statistical tools, which are mentioned as methodology.

1.8 Organization of the Study

The study has been organized into five chapters as per Tribhuvan University's prescribed specimen of master thesis. Each devoted to some aspects of the study of risk and return of these four commercial banks in Nepal. The titles of each of these chapters are as follows:

Chapter- I: Introduction

The first chapter of the study is introduction, which highlighted the basis information of the research area, various problems, objectives, importance, limitations and organization of the study.

Chapter- II: Review of Literature

The second chapter of the study assures 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-III: 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 - IV: Data Presentation and Analysis

The developed information has finished in required form in fourth chapter. Information is presented and analyzes (i.e. secondary sources) by using various financial and statistical tools in specified from to meet the stated objective of study.

Chapter- V: 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 suggestion to the concerned organization for better improvement.

Bibliography and appendices will be enclosed at the end of study. Besides this in front part of the study, declaration, viva voice sheet, recommendation, acknowledgement, list of tables, list of figures and abbreviations are also enclosed at the study.

CHAPTER- II
REVIEW OF LITERATURE

Review of literature is an essential part of all studies. It is very important to study the materials on the topic of research and that is called review of literature. A review of the literature helps the researcher to develop a thorough understanding and insight into previous research works that relate to the present study. Review of literature deals with the theoretical aspect of the topic on risk and return on common stock investment in more details and descriptive manner. The primary focus of the study is to analyze risk and return. The researcher reviews books, journal, magazines, previous thesis paper, or any type of studies, which are related to his field of the study. Research is a continuous process it never ends. The procedures and the findings may change but research continuous. Main purpose of reviewing the literature is to develop some expertise in ones area, to see what new contributions can be made and to receive some ideas for developing a research design. Thus, the precious studies cannot be ignored because they provide the foundation and ideas to the present study.

In this chapter relevant and recent literature, which are related to topic risk and return, is reviewed. Topic from basic academic courses books and different studies published in magazine, thesis of seniors and journals related to the study are reviewed below.

2.1 Conceptual Frameworks

Conceptual review or theoretical review deals with the theoretical aspects of investment, risk, return etc. Different books dealing with theoretical aspects of risk and return are taken into consideration. Major focus of finance is tradeoff between risk and return.

2.1.1 Investment

Analyzing risk and return shows the relation or tradeoff between risk and return on my kind of investment. Investment, risk and return are the financial terms. Which are heavily associated with each other? Investment simply means sacrificing current funds for future cash inflows. Here the future cash inflows are the "Returns". The future is uncertain and uncertainty obviously points out risk.

"Investment in its broadest sense means the sacrifice of dollars for future dollars. Two different attributes are generally involved times and risk. The sacrifice takes place in present and is certain. The reward comes later, if at all, and the magnitude is generally uncertain" (Francis, 1986:68).

Investing or speculating in the stock market has all the characteristics of a game. The purpose of stock market game, like that of any other game, is to win (Grewal, 1995: 56).

Investment can be made on real assets or financial assets. An investment on real asset is known as real investment and on financial assets is known as financial investment. Real investment is also known as fixed assets investment, which indicates investment on land and buildings, machinery, factory etc. financial investment means the investment on financial assets like shares, debentures, warrants, convertibles etc. "Real investment generally involves some kind of tangible assets such as land, machinery or factories. Financial investment involves contracts written on pieces of paper such as common stock and bonds. In the primitive economies most investment is of the real variety, where as in a modern economy reach investment is of the financial variety" (Sharpe, 1995:2).

The term risk and return is closely associated with investment. An investment simply means sacrificing current for future returns, bearings certain risk. The

investment may be on fixed assets like land, buildings, vehicles, etc or on precious metals and collectibles or something else's. But concerned with finance the study has focused the term investment as sacrificing currents fund on financial assets like shares, debentures, warrants, convertibles etc, for the long-term return.

Investors invest their fund on the securities or certain companies for the long run future returns. The return is defined as the reward for beating the risk. Return is the most important outcome from an investment. It measures the investors rate of wealth accumulation i.e. increase or decrease per period. Return can be different way, like holding period return, return from speculation or from short sell, capital gain, dividend gain yield on investment, yield to maturity etc. these all types of return are the rewards to the investors for bearing the risk. Risk is defined as the occurrence of unfavorable outcomes, which is ever harmful for the business.

Return to investors is ever followed by risk. Risk ever creates uncertainty some of the factors that create investments uncertainties are interest rate risk, purchasing power risk, bull-bear market risk, management risk and so on, and risk can be diversifiable or undiversifiable. The level of risk depends on the condition of the market. If the market is efficient, there is low risk, but if it is inefficient, definitely there will be higher risk. An efficient market is that market where the securities prices reflect all available information about the economy, about the financial market and about specific company involved. In efficient market, the price of stock reflects its value. The investors can invest either in primary or in secondary market, by purchasing the securities of different companies. There are many more financial securities like a common share, preference shares, debentures, warrants, convertibles etc for the investors to invest. But in our country, common share, preference share, debenture and convertibles are in practice.

2.1.2 Investments on Securities

The investment environment encompasses the kinds or marketable securities that exist and where and how they are bought and sold. Securities are normally the shares, debentures, preferred stocks, warrant, convertibles or any other financial certificated issued by the companies to general public. These certificates are issued at certain price called par value and are transferable from one person to another. In simple way securities can be understand as the promissory paper that company gives to the investors after receives certain rupees as loan or share.

"When someone borrows money from a broker he or she must leave some item of value as security. Failure to repay the loan (plus interest) means that the pawn broker can sell the pawned item to recover the amount of loan and perhaps makes profit. The term of agreement to buy a vehicle, the leader usually holds formal title to the car until the loan is repaid. In the event of default, the lender can repossess the car and sell it to recover his / her cash. In this case the official certificate of title is issued by the state server as security for the loan" (Sharpe, 1995:2).

An investor can invest on any kind of the securities for the longer-term return. He or she can make investment on shares, debenture or any other financial assets. But a rational investor must think about the risk and return on his/ her investment. Before making any type of investment rational investors must analyze risk and return. Normally almost the investors are risk averters so risk return analysis is very important for investment. Investment and fixed return, but the investments on common shares are the most risky because of their certain investment but uncertain returns. There are many more varieties of securities available for investment. Some of them are common stock, preferred stock, bond, warrants, convertibles, treasury- bills etc.

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2.1.3 Capital Market

Capital market is also called security market as well as financial market. Capital marker is the mechanism designed to facilitate the exchange the financial assets or securities by bringing buyer and seller of securities together. In any market, there are both the demanders and the suppliers capital market is the place, which bring both the financial demanders and supplies directly or indirectly in touch. Commercial banks, financial institutions, investment companies and industrial sectors are the demanders. This demand and supply is carried out in capital market. 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 mot, constituted for the purpose of regulating controlling the business of selling or dealing securities.

According to Brigham and 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 market. Non-security market refers to the mobilization of the non-financial resources. According to the nature of capital market, it can be classified into primary and secondary market.

2.1.3.1 Primary Market

The primary market is used to denote the market where original sales of securities by an issuer to the public take place. The financial market in which security are initially issued, the only market in which the issuer is directly involve to the transaction is called primary market (Gitman, 1985: 33).

Primary capital 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 example, investment bankers other similar nature of institutions. In contract, most of the investors are unfamiliar with issue markets and its institutions such as underwriting and selling syndicates, which serve intermediaries between the corporate demanders of funds and the individual investor.

2.1.3.2 Secondary Market

After securities have been purchased from the primary market, they can be traded in the secondary market. The secondary market comprises the organized securities exchanges and a specialist facilities the transaction. The major of all capital market transactions occur in the secondary market. In Nepalese financial marker, Nepal Stock Exchange (NEPSE) Ltd. is an authorized secondary market, which is non-profit organization, operating under the securities exchange act, 1983. The basic objective of NEPSE is to import free marketability and liquidity to the government bonds, corporate bonds and corporate securities.

2.1.4 Efficient Financial Market

Efficient market is that market where the market prices of securities represent the markets consensus estimate of the value of securities. It means in an efficient market price valuable than the current market prices. Other who does not purchase the security think the value is less than current prices.

"An efficient market exists when security prices reflect all available public information about the economy, about financial market and about the specific company involved. The implication is that market prices of individual securities adjust very rapidly to new information. As a result, security prices are said to be fluctuating randomly about their intrinsic values. New information can result in a change in the intrinsic value of security, but subsequent security prices movement will follow what is known as random walk. An efficient market the future trend is not predicated by observing past trends. The future is represented by present because all the information is available there. No one has to fear of any unnecessary outcomes.

2.1.5 Risk

2.1.5.1 Concept of Risk

Different investors define risk in different ways. Simply risk is defined as variability in returns. "Risk is defined in Webster's Dictionary as a 'hazard: a peril: exposure to loss or injury': thus for most, risk refers to the change that some unfavorable event will occur. If you invest in speculative stocks (or, really, any stock), you are taking a risk in the hope of making an appreciable return. The Greater the change of loss or negative returns the riskier the investment" (Weston and Brigham, 1992: 113).

Risk defined most generally is the probability of the occurrence of unfavorable outcomes. But risk has different meanings in different context. In our context two measures development from the probability distribution have been used an initial measures of return and risk. There are the mean and the standard deviation of the probability distribution.

"Instead of measuring risk the probability of a number of different possible outcomes, the measures of risk should somehow estimates the extent to which two actual outcomes is likely to diverge from the expected outcome. Standard deviation is a measure that does this since it is an estimate of the likely

divergence of actual return from an expected return" (Sharpe, Gordon and Bailey, 1995: 95).

In real sense, risk is the chance of losing future return and investment amount in future. Assets having grate 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.

2.1.5.2 Types or Sources of Investment Risk

The risk is the total risk that arises in the business. Any type of business, whether that may be of large or small scale suffers risk because investment is a part of economic and the economical cycle changes frequently. When the market is bullish there is low risk and when it starts declining i.e. bearish there may be high risk. Every investment involves uncertainties that make future investment return risky. The sources of uncertainty that contribute to investment risk are:

Interest Rate Risk

It is defined as the potential variability of returns caused by changes in the market interest rates. If market interest rates rises or falls, then the investments' present value will fall or rise. Present value moves inversely with changes in the market rate of interest. The interest rate risk affects the prices of bonds, stocks, real estates, gold, puts, call, future contracts, and other investments as well.

Bull-Bear Market Risk

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

next trough is called a bear market. Bull markets that usually rise more than enough to compensate for the bear market losses follows bear markets. But the alternating bull market forces create potential sources of investment risk.

Purchasing Power Risk

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

Management Risk

Errors made by business managers can harm those who invest in their firms. Forecasting management errors is difficult work that may not be worth the effort and, as a result, imports a needlessly skeptical outlook. Agency theory provides investor with an opportunity to replace skepticism with informed insight as they endeavor to analyze subjective management risks.

Default Risk

Default risk is that portion of an investments' total risk that result from changes in the financial integrity of the investment. The variability of returns that investors experience as a result of changes in the credit worthiness of a firm in which they invested is default risk.

Liquidity Risk

Liquidity risk is that portion of an assets' total variability of return which results from price discounts given or sales commissions paid in order to sell the asset without delay.

Callable Risk

Some bonds and preferred stocks are issued with a call provision. Issuers like the call provision because it allows them to buy back outstanding preferred stocks and/ or bonds with the funds from a new issue if market interest rates

drop below the level being paid on the outstanding securities. But, whatever the issuing company gains by calling in on issuing is gained at the expense of the investors who have their securities called.

That portion of a security's total variability of returns that 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 slightly higher average rate of return. This additional return should increase as the risk that the issue would be called increases.

Convertibility Risk

Conversion is a contractual stipulation that is included in the terms of original security issue. This provision alters the variability of return from the affected security.

Convertibility risk is that portion of the total variability of return from a convertible bond or preferred stock that reflects the possibility that the investment may be converted into the issuer's common stock at a time or under terms harmful to the investor's best interests.

Political Risk

Political risk arises from the exploitation of a politically weak group for the benefit of a politically strong group, with the effect of various to improve their relative position increasing the variability of return from the affected asset regardless of whether the charges that causes political risk are sought by political or economic interests, the resulting variability of return is called political risk if it is accomplished through legislative, judicial or administrative branches of the government. Political risk can be international as well as domestic.

Industrial Risk

Industrial risk is that portion of an investment's total variability of return caused by events that affect the products and firms that make up an industry. The stage of industry's life cycle, international tariff and/or quotas on the products produced by an industry, product or industry related tax, industry wise labor union problems, environmental restrictions, raw material availability, and similar factors interact and affect all the firms in an industry simultaneously. As a result of these commonalities, the prices of the securities issued by competing firms tend to rise and fall together.

These uncertainties are the major sources of investment risk, which are of additive nature and up to total risk. There might be numerous other sources of risk as well (Francis, 1986: 3-10).
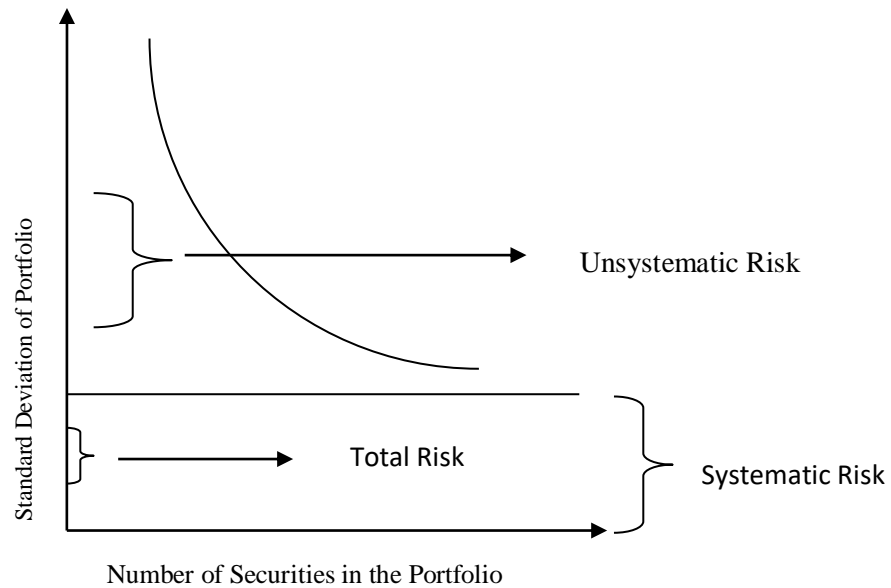
2.1.5.3 Systematic Risk and Unsystematic Risk

The risk that is talked may be systematic risk or unsystematic risk associated with investment. Hence the risk can be classified as diversifiable and undiversifiable risk.

Diversifiable risk is also known as unsystematic risk and undiversifiable risk is the systematic risk which is neither avoidable nor can be quit. The combination of these two risks is the total risk. "Diversified risk is firm-specific risk which is not related to the general market, it can be eliminated by a well-diversified portfolio" (Pradhan, 2006:107).

Figure 2.1

Total Risk, Systematic Risk and Unsystematic Risk

(Source: Van Horne; 1997: 60)

Systematic risk is also known as non-diversifiable risk. This risk arises due to the changes in the economic stat, or due to the change made by government in fiscal or monetary policies. Some examples of systematic risk are change in interest rate policy by government. Increase in corporate tax rate, interest in inflation rate etc.

Unsystematic risk arises due to the many more reasons, like labor strike, entry of formidable competitor in the marker loss or big contract bid, company not being able or mange or obtains adequate raw materials on time etc. These types or risk are normally minor one and can be handled by the management. That's why this type of risk is called diversifiable risk. Risk can be measured by using different statistical tool. The major tools in practice are the standard deviation (S.D.).

The standard deviation denoted by **σ** is known as specific firms risk and is unsystimized risk, which can be minimized totality by well diversification. But

the S.D. sometimes can mislead for the proper measurement. So, coefficient of variation (C.V.) is also used to measure risk. Coefficient of variation is the unitary risk measure that predicts how much risk is to bear for earning one extra unit of return. As standard deviation is used to find out systematic of emetic risk beta is used to find out systematic risk. Logically the systematic risk is the covariance between the return of individual assets or portfolio and the returns of market portfolio, which is represented by beta (β or b).

2.1.6 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 defied as the changes in the value plus any cash distribution expressed as a percentage of the beginning of the period of investment value.

It is no denying the fact the return is the motivating force and the principal rewards to the investment process. The return may be defined in terms of realize return i.e. the return which was earned or could have been earned, and expected return i.e. there return which the firm anticipate to earn over some future period. The expected return is a predicted return and may or may not occur. Measuring the realizing return allows a firm to assess how the future expected returns may be. For a firm, the return from an investment is the expected cash inflows. The return may be measured as the total gain or loss to the firm over a given period of item and may be defined as percentage return on the initial amount invested.

Before investing in any securities, the investors, at first, want to know about the return. The return from an investment is the realizable cash flow earn by its owner during a given period. Typically, it is expressed as a percentage of the beginning-of-period value of the investment (Chandra, 1995: 62).

Return is the reward to the investors for bearing certain risk. It is main target of investment. It can be defined as the tax increases in the value of the investments.

2.1.6.1 Holding Period Return

If an investor purchases a stock of any companies and holds it certain period, the return will be received on two ways, one is increases in the value of that stock as compared to initial one. Another is direct cash payment. The increase in value is called capital gain and direct cash payment is called dividend gain.

"The return from holding an investment over some period is simply a cash payment received due to ownership, plus the change in market price, derived by the beginning price. For common stock, we can define one period return as:

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

Where R is the actual return when it refers to a particular times period in the past (future). D_t is the cash dividend at the end of time period t. P_t is the stocks prices at the time period t, and P_{t-1} is the stock price at the time period of t-1. Notice that that this formula can be used to determine both actual one period returns (when based on expected dividend and prices)" (Van Horne and Wachowicz, 1995: 90).

2.1.6.2 Required Rate of Return

When setting the required rate of return on the investment, an investor must consider the real rate of return, expected inflation, and risk. Because

consumptions foregone today, the investor is entitled to a rate of return that compensations for this deferred consumption. Since the investor expects to receive an increase in the real goods purchase later, and assuming for the movement, zero inflation and risk, the required rate could equal the real rate of return, in which case it would represent the pure time value of money. The capital markets determine this rate based upon the supply of money to be invested related to the demand for borrowed money (Cheney and Mosses, 1995: 33).

The required rate of return is the function of real rate of return and risk. It is the minimum rate of return an investor will accept. The required rate of return for an assets or portfolio of assets can be estimated using the equation for the SML suggested by the CAPM model.

2.1.6.3 Expected Rate of Return

The return that an investor expects from his investment in the forthcoming future is called expected rate of return. The expected rate of return is based up on the expected cash receipts (e.g. dividends or interests) over the holding period and the expected ending and selling price. The expected rate of return is an ex-ante or unknown future return.

The investor has forecast possible outcomes, each based upon a possible state of the economy. Each economic state will result a different expected rate of return. Subjective probabilities are assigned to each outcome. The overall expected rate of return, E (HPR) can be calculated as a weighted average of the forecasts.

2.1.7 Portfolio Theory

Portfolio theory is the best way of investment for rational investors. Normally all the investors are risk averse. The need high or satisfactory level of return bearing risk as low as possible. Portfolio theory gives the concept of

investment in a very good way that "never keeps all the eggs in a single basket". Therefore, never invest your entire amount in a single asset. It is needed to extend analysis of risk and return include portfolio combination of two or more securities or assets is portfolio. It has following two types of objectives:

- **Primary Objectives**
    - To minimize risk
    - To maximize return

- **Secondary objectives**
    - Regular return
    - Safety of investment
    - Tax benefit
    - Stable income

2.1.7.1 Markowitz Portfolio Selection Model

Harry Markowitz drew attention to the common practice of portfolio diversification and showed exactly how an investor can reduce the standard deviation of portfolio return by choosing stocks that do not move exactly together. But Markowitz did not stop there- he went on to work out the basic principles of portfolio construction (Brealey, 1997: 173).

A portfolio is a collection of securities. There exists a problem of portfolio selection. Investors face a problem of selection optimal portfolio from a set of possible portfolios. Hence, it is often referred to as portfolio selection problems. Markowitz put one solution to this problem forth in 1952, when he published a landmark paper that is generally viewed as the origin of Modern Portfolio Theory approach to investing.

Markowitz's approach begins by assuming that an investor has a given sum of money to invest at the present time. Markowitz's approach considers the

holding period rate of return. Holding period rate of return is simply the total return an investor would receive during the investment period or holding period or holding period. This money will be invested for a particular length of time known as the investor's holding period. At the end of holding period, the investor will sell the securities purchased at the beginning of that period. Markowitz infused a high degree of sophistication into portfolio construction by developing a 'mean variance model' for the selection of portfolio (Markowitz, 1952: 77). Markowitz used mathematical programming and statistical analysis in order to arrange for the optimum allocation of assets within portfolio. To reach this objective, Markowitz generated portfolios within a reward risk context. In other words, he considered the variance in the expected returns from investments and their relationship to each other in constructing portfolios. Markowitz's model is a theoretical framework for the analysis of risk- return choices. Decisions are based on the concepts of efficient portfolios. A portfolio is said to be efficient when it provides maximum expected return for the same level of risk or provide minimum risk for the same level of return (Sharpe, Alexander and Bailey, 2000: 194).

To build an efficient portfolio, an expected return level is chosen, and assets are substituted until the portfolio combination with the smallest variance at the return level is found. As this process is repeated for, other expected for other expected returns, set of efficient portfolio is generated.

The portfolio selection model developed by Markowitz is based on several assumptions.

- The expected return form an asset is the mean value of a probability distribution of future return over some holding period.
- The risk of an individual assets or portfolio is based on the variability of return   (i.e. standard deviation or variance).

2.1.7.2 Markowitz Efficient Frontier

The efficient frontier is the combination of all portfolios called the attainable set of investment opportunities. The efficient frontier is the locus of investment graphed in risk return space, which has the maximum expected rate of return in their risk class or the minimum risk at whatever rate of return is selected. An investor can gain higher level of return at any given risk. According to Markowitz in investor should seek a portfolio of securities that lies on the efficient frontier set.

"A portfolio is not efficient if there is another portfolio with a higher expected return and the same standard deviation. If your portfolio is not efficient you can increase the expected return without increasing the risk, decrease the risk without decreasing the expected return or some combination of increased expected return and decreasing the risk by shifting to a portfolio on the efficient frontier set" (Van Horne, 1997: 60) .

Figure 2.2

Markowitz Efficient Frontier
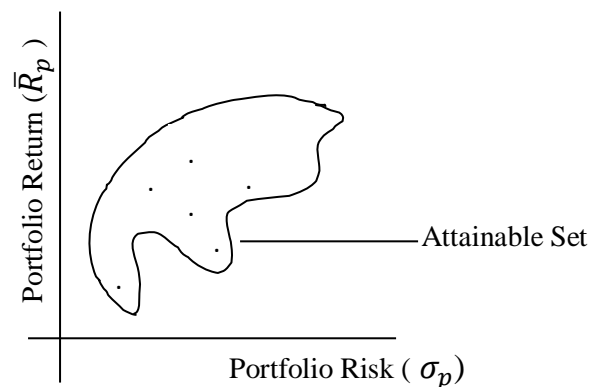
(Source: Van Horne; 1997: 60)

2.1.8 Capital Asset Pricing Model (CAPM)

This model describes the relationship/tradeoff between risk and expected return / required return. This explains the behavior of security prices and provides a mechanism to assess the impact of a proposed security investment on investors' overall portfolio risk and return. The CAPM provides a framework for basis

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risk-return tradeoff in portfolio management. It enables drawing certain implications about risk and the size of risk premium necessary to compensate for bearing risk (Khan and Jain 1999: 223).

Capital Asset Pricing Model (CAPM) is a descriptive model of how assets are priced. The major implication of the model is that the expected return of an asset will be related to a measure of risk for that asset known as beta. The exact manner in which expected return and beta are related is specified by the CAPM. The capital asset pricing model states that the expected risk premium on each investment is proportional to its beta. This means that each investment should lie on the sloping security market line connecting treasury bills and market portfolio (Stewart and Richard, 2003: 200).

In market equilibrium, a security will be expected to provide a return commensurate with its unavoidable risk. This is simply the risk that cannot be avoided by diversification. The greater the unavoidable risk of a security, the greater the return that investor will expect from the security. The relationship between expected return and unavoidable risk, and the valuation of securities that follows, is the essence of the Capital Asset Pricing Model (CAPM). This was developed by William F. Sharpe (1990 Nobel Prize winner in Economics) and John Lintner in the 1960s, and it has had important implications for finance ever since (Van Horne and Wachowicz, 1997: 620).

CAPM is a model that describes the relationship between risk and required return. In this model a securities expected return is the risk free rate plus a premium based on the systematic risk of the securities. The model is:

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

Where,

R_j = The required rate of return on stock j.

R_f = The nominal risk free rate of return.

$E(R_m)$ = The expected or ex- ante return on the market portfolio.

β_j = Beta coefficient of stock j.

The greater the beta of a security, the greater the risk and the greater the expected return required. Likewise, the lower the beta, the lower the risk, the move valuable it becomes and the lower the expected return required. In market equilibrium, the relationship between an individual securities' expected rate of return and its systematic risk, as measured by beta, will be linear. The relationship is known as the Security Market Line (Van Horn and Wachowicz, 1997: 70). When the CAPM is graphed in a figure, it is called the security Market Line (SML). In equilibrium, all securities must be priced so that they fall on the SML. The fact is that they have different variances, which are irrelevant for determining their expected return, because total risk contains a diversifiable component, which is nit priced in market equilibrium. SML may be used to explain the required rate of return on all securities whether or not they are efficient. The SML provides a unique relationship between undiversifiable risk (measured by beta) and expected rate of return. Hence, if we can accurately measure the beta of a security, we can estimate its equilibrium risk-adjusted rate of return.

Figure 2.3

The Security Market Line /CAPM
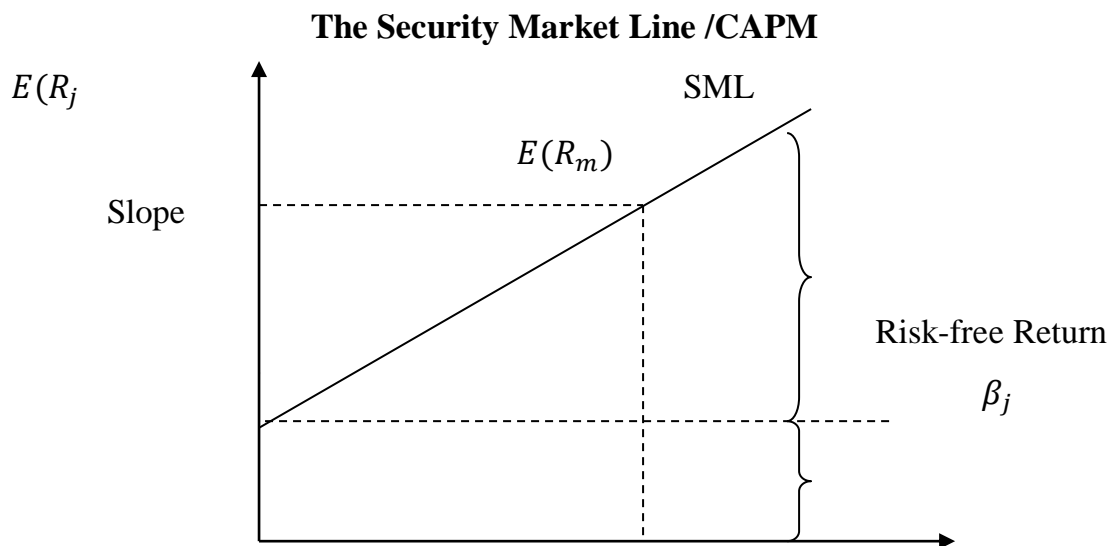
(Source: Van Horne, 2000: 71)

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2.2 Review of Different Studies

This topic is again sub-divided into the review from journal and from the thesis. The studies related to the topic are reviewed here.

2.2.1 Review of Journals and Articles

Pradhan (1993), carried out a study in the topic of *"Stock Market Behavior on a Small Capital Market: a Case in Nepal"* in 1993. The study was based on the data collected for seventeen enterprises from 1986 to 1990.

One of the measure objectives which are related to this study was:

- To assets the stock market behavior in Nepal."
- To find the relationship between dividend per share & market price per share.

Pradhan has summarized the findings as follows:

- Dividend per share and market price per share was positively correlated.
- Higher the earning on stocks, large the ratio of dividends per share to market price per share.
- There are positive relationship between dividend payment and liquidity.

"In many cases the existing authoritarian mentality of management seems to have mot considered the shareholder in deciding the managerial plans and policies. Top level decision often by pass the interest of shareholders. As the management lacks the serious concern about the protection of shareholders rights and expectations. The annual general meeting has become the platform for shareholder to express their opinion and grievance in front of the management and board of directors. Many general meeting feedback revel no serious response to the feeling of shareholders. Thus, it reflects unwillingness of the management and board of directors to change their traditionally held activities towards shareholders".

Paudel (2002), in journal has published articles "*Investing in Shares of Commercial Banks of Nepal"* where he explored that:

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The study was based on the data of shares of seven sample commercial banks from mid July 1996 to mid July 2001.

- For the purpose of analyzing risk characteristics of the shares of those commercial banks, Paudel has used standard deviation.
- The coefficient of variation, the correlation coefficient between the return of individual bank's share and the return on market portfolio and the beta coefficient.

Average return on the 91-days Treasury bill was taken as a risk-free rate of return. Based on the standard deviation of the returns on shares, the shares of EBL could be considered as high-risk security. The standard deviation of the returns on shares of HBL was the lowest one. On the basis of CV, the share of BOK had the lowest risk per unit of return, the highest being with the shares of NABIL. It was also observed that the systematic risk was negative with the shares of NABIL. Therefore, the total risk on the returns on the shares of NABIL was due to company specific characteristics rather than market pervasive. Return on all the shares except NABIL had positive correlation with the return on the market.

Most of the shares appeared to be defensive as beta coefficients were less than one. Only the return on shares of BOK had beta coefficient of greater than one, indicating that the share was risky than the market.

Paudel concluded that major findings as follows:

- The shares of commercial banks in Nepal are heavily traded in the stock market and, therefore, these shares play a key role in the determination of stock exchange indicators.
- All the shares produced higher rates of return than the return on market portfolio. However, the risk-return characteristics did not seem to be the same for all the shares reviewed.
- He further concluded that most of the shares fall under the category of

defensive stocks, except the shares of Bank of Kathmandu Limited. From the analysis, it appears that none of the shares is correctly priced.

Mark Kritzman and Donrich (2002), With the Title *"The Mis-Measurement of Risk"* has introduced two new ways of measuring risk, within horizon probability of loss and continuous value at risk. This is a very new concept for those investors who measure risk at the end of their investment horizon. Some major objectives of this study:

- Investors typically measure risk as the probability at the end of their investment horizon. This views of risk considers only the result at the one of the investment horizon, whether the horizon lasts for one day, one week, one year or many years. They are affected by exposure to loss throughout the investment period, not just at its conclusion.
- They introduce two new ways of measuring risk that is within horizon probability of loss and continuous value at risk.

They have concluded that & findings as follows:

- The investor's measure risk incorrectly if they focus exclusively on the distribution of out comes at the end of their investment horizons.
- This approach to risk measurement ignores intolerable losses that might occur throughout an investment period, either as the result of the accumulation of many small losses of from a significant loss that later recovers.

Application of these measures in reasonable scenarios illustrates vividly that investors are exposed to investment period than end-of-horizon risk measure indicate. If investors do not care about within-horizon risk, they should. At the very least, investors need to be aware of the likelihood that they will be able to sustain their investment strategies. Awareness does not necessarily mean that investors should simply reduce risk, although such a course of action may be warranted. Indeed, if investors are informed of their within-horizon exposures to loss, then if an unpleasant loss occurs, they will not be unduly surprised and

will not act to reduce risk out of a misguided perception that the nature of their investment strategy has changed.

Ghimire (2007), published an article *"Commercial Bank Dominated other Financial Institution"*.

Major objectives are which as follows:

- The share transaction in NEPSE is mostly dominated by commercial banks followed by the finance companies in terms of number of share traded and transaction amount.

- The faith of the investors in the shares of commercial banks is growing. As the commercial banks are more and more diverse in their services, and with the new explore of investment areas, the banks are earning more profit each year. This has positively affected the investment of the investors. However the investors seemed to have less willingness to find the long term consequences of the bank's current investment. They also do not understand the reason behind the bank's growing profit amount. Without any proper analysis of risk and return of these commercial banks, it's possible that the investor's faith may collapse as the house of card in the days ahead.

Kadariya (2012), has published an article regarding, *"Investor Awareness and Investment on Equity in Nepalese Capital Market"* in banking journal, value 2(issue 1).The major objectives of this study as follows:

- The Nepalese financial Sector has been growing rapidly so does the growth of capital market, which is dominated by the financial sector.

- The rapid growth of capital market has raised the question of sustainable development of this sector. For the long term growth, it has some preconditions: the stakeholder's literacy and awareness level the access to information ,and ability to analyze them for the financial decision making

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In this study Kadariya has summarized the major findings as follows:

- The study find that the equity investor are aware and there level of awareness is high compare to needed level ,aware equity investor have more chance of holding high value of equity investment and there is problem on access to information for equity investors in secondary market.

- Invest are keen to get market is characterized with limited sources of information .The rational fact is that information but the but the study shows that there is problem on access to information for equity investor in secondary market . The investor awareness level is found to be affected by the related work experience understanding of investment environment, learning expectation& access to market information .Equity investor in secondary market are not satisfied with the available source of information &efforts of information disseminating mechanism.

Mainali (2012) has published an article regarding, *"Problems and Prospects of Stock Market in Nepal"* .This study aims are as follows:

- To examine the problems & prospects of stock market in Nepal.

- The Correlation & regression analysis are used to analyses the secondary data & chi-square test is performed to analysis survey responses various measures of stock market development indicate that the stock & is creeping & unable to show signification positive impact in the economy.

- To minimum participation of real sector & high concentration of real sector & high concentration ratio, especially banking sector dominate indicate that the stock market is risky & illiquid .

The finding based on primary data suggest that coordination among authorities &political stability are necessary for the sustainable development of stock market in Nepal.

The major findings of this study are:

- Stock market development is unable to show significant positive impact on the national economy.

- Nepalese stock market is characterized by small number of listed companies, low value trade ration .low turnover ratio high volatility high concentration illiquid & risky market. The result of primary data analysis indicate that the poor coordination among SEBON, NEPSE, NRB & insurance Board : insufficient information of stock market ,unavailability of CSD services poor institutional strengthening of SEBION low instrument diversification mal-practices on stock transaction, frequent changes on policies poor attention of government for its development are the major problems of Nepalese stock market.

- Furthermore the survey results underscore the importance of political stability in the development of stock market in Nepal

2.2.2 Review of Thesis

During the review, the researcher has found numerous studies conducted for the partial fulfillment of Master Degree. Some of them, which are relevant to this study, are reviewed in the following paragraphs.

Upadhaya (2001).had undertaken a study entitled *"Risk and Return on Common Stock Investments of Commercial Banks in Nepal"*. The main Objectives of this study were:

- To assess the risk associated with returns on common stock investment of the listed commercial banks on the basis of selective financial tools.

- To evaluate common stocks in terms of risk and return.

- To assess the risk compensating the returns; and to analyze the volatility of common stocks and other relevant variables as an affecting factor in portfolio construction of common stocks.

In order to achieve the objectives, Upadhaya had used five years secondary data from 1994/95 to 1998/99 of eight commercial banks as sample. After analyzing the data, Upadhaya major findings as follows:

- "Many people have unrealistically optimistic or pessimistic expectations about stock market investment. Due to the lack of information and poor knowledge, Nepalese individual investors cannot analyze the securities as well as market properly.

- Most of the Nepalese private investors invest in single security. Some of the investors use their fund on two or more securities. They invest their fund in different securities on the basis of expectation and assumption of individual security rather than analysis of the effect of portfolio.

Tamang (2003), has conducted his Master's thesis entitled, *"Risk and Return of Commercial Banks in Nepal"* which is related in our research. Among different objectives of his study:

- One is to analyze whether the common stock of commercial banks are currently priced or not by analyzing the required rate of return by using the CAPM .

- It also aims to measure systematic and unsystematic risk of the commercial banks.

Tamang has summarized major findings as follows:

- The tools of analysis are MPS, dividends, Expected Return, Standard Deviation and Beta etc. it is based on Hypothetical data and more analytical and empirical types of research rather than descriptive.

- Nepal Bangladesh Bank has the highest return and Arab Bank has the lowest return whereas unsystematic risk of Arab Bank is highest and that of Bank of Kathmandu is lowest.

- Correlation coefficient of Arab Bank shoes that the return on bank goes down when market return goes up. Though the shares of banking sector are one of the heavily traded shares in Nepal, none of the company's

shares are correctly priced. From his study, the shares of commercial banks in Nepal are heavily traded in NEPSE none of the share prices us correctly priced.

Sharma (2004), had undertaken a study entitled *"Portfolio Management of Listed Commercial Banks and Insurances Companies in Nepal."* The relevant objectives of his study were:

- To analyzing the risk and return of the common stocks of listed commercial banks and insurance companies
- To analyze the diversifiable and undiversifiable risk; and to determine whether the shares of commercial banks and insurances companies were correctly priced or not.

Sharma had analyzed the secondary data using financial as well as statistical tools. Major findings of the study were:

- The shares of all the commercial banks were attractive for investment. However, the common stocks of HBL seemed attractive among all considering risk per unit of return.
- The overall market return could not be regarded as attractive with respect with its risk. The risk per unit of return was very high which proved that the market was more risky than the common stocks of insurance companies and commercial banks.
- Almost common stocks of commercial banks and insurance companies had positive correlation. The unsystematic risk of all the companies was high in comparison to total risk. The returns from the portfolio managed by the commercial banks and insurance companies could not be taken satisfactory. Most of the commercial banks adopted simple diversification and very few adopted diversification across quality rating categories.

Shrestha (2004) in his thesis *"Risk and Return Analysis on Common Stock Investment of Banking Sector in Nepal"* is conducted by taking eight listed

commercial bank as sample and data using six years from 1996 to 2001 is based in descriptive and analytical research design. The main objective of the study was:

- To analyze the volatility of common stock and other relative variables.
- To identify whether stocks of the samples companies equilibrium priced or not and to study returns associated with common stock investment of bank.

Shrestha has used various scientific analytical tools such as calculation of expected and realized rate of return, coefficient of variation of sampled banks, risk measuring tools such as standard deviation and beta coefficient and systematic and unsystematic risk of the sampled banks as well. Detailed analysis of the risk and return associated with the sampled banks has made the finding more reliable and applicable.

The major findings of his study are:

- NBBL's common stock is yielding the highest realized rate of return whereas it is the lowest in case of NIBL. Similarly, BOK's common stock has the highest total risk, whereas HB Ltd's common stock had the least risky.
- The C.V. is considered the best tool for relative measurement of risk per unit of return. BOKL seems to be the riskiest one for investment, whereas the lowest risky is of SCBL. According to beta coefficient NBBL, EBL, BOKL and NBL fall in aggressive investment category because of beta coefficient is higher than 1 that is and the rest defensive except NSBL, bank whose beta coefficient is negative.
- All of the sampled companies realized rate of return are positively correlated except SBI bank whose realized rate of return is negatively correlated. NBLS stock consists the highest of the systematic risk. Whereas it is lowest in the case of NSBL. Similarly, all the commercial

banks common stocks are under priced. Among them SCBL seems to be in the best position and BOKL is in the worst position.

Tiwari (2007), conducted a study on the title of *"Risk and Return Analysis of Selected Financial Companies Listed in Nepal"* on the specific object:

- To analysis the risk and return associated with the common stock of six finance companies. They are Kathmandu Finance Co. Ltd., Sanjhana Finance Co. Ltd., National Finance Co. Ltd., Citizen Investment Trust, Ace Finance Co. Ltd. and Peoples Finance Co. Ltd. His research has been based on the collected data from the secondary source. Nepal Stock Exchange (NEPSE) Ltd is the main organization, which provides most of the data required for the study from year 1998 to 2002.

- For analyzing the data, he has used various statistical techniques of simple liner regression as well as other financial tools.

The major findings of his study were as follows:

- All the finance company have positive expected return as well as most of the finance company has the return near to the average.

- All the investment involved certain amount of risk (i.e. standard deviation) as well as most of the finance company have the risk less than the average.

- The value of best suggests majority of finance company stock volatility is less than the market volatility and they are defensive stock.

- Some finance companies securities have highest value of CV (3.49). Although many of the finance companies CV is less than the average CV (1.77) but not in acceptable level.

- The return of majority of finance companies has higher degree of positive correlation with the return of other companies.

- The overall effect of portfolio on risk and return shows mixed result. It means the portfolio helps to increase the return in some case but in some case, it has also decreased the result up to negative level. But in other

hand, neatly in all case it has helped to decrease the level of risk up to some extent.

Maharjan (2008), did research on *"Share Price Behavior of Listed Commercial Banks"*. The study was focused on the share price behavior of commercial banks. The study has taken six years data from 2001 to 2006. The major objectives she has set are:

- To provide the glimpse of the present Nepalese stock market.
- To analyze the share price behavior of Nepalese commercial banks listed in Nepal stock Exchange, and to find out the risk involved in common stock. To show the glimpse of the stock market she has shown behavior of NEPSE index in the form of monthly index along with rate of company listing.
- To examine the risk she has used statistical tools like standard deviation and coefficient of variation, beta coefficient. To make the assessment seven commercial banks are taken as samples.

She has found major findings as follows:

- Commercial banks are in good position in terms of assets management and profit.
- She hasn't given the findings about the types of glimpse she analyzed.
- She has also concluded the security market's history is not long for commercial bank and because of dividend and profit status the market index has shown positive movement.

Shakya (2009), conducted a thesis *"Risk and Return Analysis the Commercial Banks"* with the following objective:

- To performed the comparative of risk and return analysis on the common stocks of the selected banks.
- To find out how sensitive the stock price of the selected commercial banks and the banking sector as a whole with that of the NEPSE.

- To measure risk, return in six commercial banks, and evaluate the stocks companies whether they are overprices and or correctly priced.

Shakya study was based on the common stock data six listed commercial banks for the period of six year starting fiscal year 2057 to 2063 and used different tools to finding return and risk. After available data and information using various financial and statistical tools, he summarized his finding as:
- Most of the Nepalese investors still invest on different securities on the basis of expectation and assumption of individual security rather than analysis of effect of portfolio.
- The commercial banking sectors have positive return together with market sector. The covariance and beta-coefficient of the commercial banking sector with that of the market are also good enough for the general investors to invest in this sector.

Sapkota (2010), on *"Risk and Return Analysis and Optimal Portfolio Creation of Common Stock Investment (With References to SBI, NABIL, BOK, NIC, EBL, and SCBL)"*. The main objectives of the study are as follows.
- To analyze risk and return of investment in common stock of commercial bank.
- To determine relation of each bank with the industry index.
- To explain portion of systematic risk and unsystematic risk from the total risk.
- To evaluate common stock price under CAPM method.
- To analyze how to create optimal portfolio combination using selected commercial banks.

Major findings of this study:
- To find out the condition of risk and return analysis of common stock investment and suggestion how to create a portfolio among the selected commercial banks.

- It shows the current market movement, banking index movement and selected commercial banks price movement in trend line.

Major findings of the study are as follows:

- NABIL has highest risk on the basis of Standard Deviation & EBL has low risky but on the bases of coefficient of variation lower C.V.is preferable so that among four commercial banks BOK has best one because it has low C.V.

- NABIL's common Stock is yielding the highest Expected rate of return whereas it is the Lowest in case of NIBL. .

- All Banks have Unsystematic risk which Risk can be diversifiable. The highest USR of BOK Bank, whereas the Lowest USR for EBL.

- BOK's stock is aggressive i.e. market sensitive, to the market changes as evaluated by the highest beta coefficient of 2.0886, whereas it is lowest 1.0896 in case of EBL.

2.3 Research Gap

Risk and return is a broad topic in finance and investment. In Nepalese stock market, many studies have been undertaken in the field of risk and return analysis of common stock of finance companies. It is a continuous process of analyzing and interpreting the result that are obtained from the research. Investment is a dynamic process and investors required various information regarding the stock market and individual companies as soon as possible. In this aspect, this study will provide up to date insights regarding the risk and return characteristics of the common stock of finance companies. Overall, in terms of time period sample to some extent tools of analysis, this study is different and new from previous studies which will provide updated information regarding the risk and return on common stock investment of listed finance companies that will help the investors make more rational investment decisions.

CHAPTER- III
RESEARCH METHODOLOGY

The research methodology is the systematic way of solving research problems. Research methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view. It describes the method and process applied in the entire subject of the study. Research can be conducted on the basis of secondary data. In this study, all the data are secondary and those data are analyzed using appropriate financial as well as statistical tools. Under this, research design, population and sample, sample selection method, data collection and analysis techniques have been explained.

3.1 Research Design

Research design is a plan or forecasting of the method of technique used in current study. Research design is a plan, structure and strategy of investigation conceived to obtain answer to research question and to control variance (Kothari, 1991). This study is based on recent five years historical data F/Y 2007/08 to F/Y 2011/12. This research design has used the secondary data the major sources. It deals with the common stock of commercial banks on the basis of available information. For the portfolio analysis, other company's common stocks under study are analyzed. The title of the study suggests that it is more analytical and empirical and less descriptive. The analytical research design makes analysis of the gathered facts and information and makes a critical evaluation of it.

3.2 Population and Sample

This study is based on the comparative study of risk and return on four commercial banks listed in Nepal stock Exchange. There are 32 commercial banks till date 2012 and out of which are four commercial banks are taken as sample for this study. The study is based on some of the listed commercial banks as follows:

- Nepal Arab Bank Ltd.
- Nepal Investment Bank Ltd.
- Everest Bank Ltd.
- Bank of Kathmandu Ltd.

Only four commercial banks are taken as sample due to easily availability of needed information and these four commercial banks have strong markets position.

3.3 Nature and Sources of Data

The data necessary for the research is collected the secondary sources. Secondary data has been collected through various sources. However, during the study, information option survey has also been taken with the Nepal stock exchange, security board of Nepal and other related sources. Data related to the market price of the stock, movement of NEPSE index, market capitalization etc, is taken from the trading report published by NEPSE. Different websites have been clicked to take the operational data of commercial banks. Financial statement of commercial banks and their annual reports are also collected. The major sources of data and information are as follows:

- Annual trading reports of NEPSE.
- Annual trading report of SEBON.
- Financial document providing by the companies.
- Different websites.
- Previous research studies, dissertation and articles on the subject.
- Other related books, newspaper, booklets etc.

3.4 Data Collection Technique

The researcher has visited the concerned companies and collected required documents containing required information. The researcher has also visited various concerned libraries, books, magazines etc. and collected related publications and periodicals. Furthermore, secondary data related to common

stocks have been downloaded from the official website of NEPSE and related companies.

3.5 Data Analysis Tools

Under this study, financial as well as statistical tools have been used to analyze the gathered data and information. The related tools and terms are described below.

3.5.1 Market Price of Share (MPS)

One of the principal measures of the value of the stock is market price of stock. It is denoted by 'P'. Three price records are available in Nepal Stock Exchange Limited namely high, low and closing price. For our study purpose, closing prices of the stocks are taken since our study focuses on annual data.

3.5.2 Earning Per Share (EPS)

Earning refers to the net income after tax of the company. EPS is the result of net income after tax dividend by the outstanding number of common shares. It can be expressed as:

$$\text{Earning Per Share} = \frac{\text{Net Income After Taxes}}{\text{No.Of Common Stock Outstanding}}$$

3.5.3 Dividend per Share (DPS)

Dividend is relevant during the computation of rate of return, which is a return to the shareholders for the investment. If a company declares stock dividend (Bonus Share), it is difficult to obtain the amount that really shareholders has gained. In this case, they get extra number of share as dividend and simultaneously price of the stock declines as a result of increased number of stock. To get a real amount of dividend following model has been used throughout.

Dividend per share (DPS) is calculated using the following model:

DPS= Cash Dividend + Stock Dividend

Cash equivalent of stock dividend is calculated as:

Cash equivalent of Stock Dividend= SDR × Next year MPS

Where,

SDR = Stock Dividend Ratio

MPS = Market Price per Share

3.5.4 Price Earnings Ratio (P/E Ratio)

This ratio is closely relates to the earning of the yield/ earning price ratio. This is computed by dividing the market price of share by the EPS.

$$\text{Price Earnings Ratio} = \frac{\text{MPS}}{\text{EPS}}$$

Where,

MPS = Market price per share

EPS = Earnings per share

3.5.5 Return on Common Stock Investment (R)

Holding Period Rate of Return

Generally, single period rate of return or holding period rate of return is represented by R and expressed in terms of percentage basis. It is calculated as:

Symbolically,

$$\text{Holding Period Rate of Return} = \frac{P_t - P_{t-1} + D_t}{P_{t-1}} = \text{CapitalGain} + \text{DividendYield}$$

Where,

R = Actual rate of return on common stock at time t.

P_t = Price of stock at time t.

P_{t-1} = Price of stock at time t-1

D_t = Dividend per share at time t.

3.5.6 Expected Rate of Return on Common Stock (R_j)

One of the main aims of the study is to determine the expected return on the investment in common stock. Generally, this rate is obtain by the arithmetic mean of the past years return.

Symbolically,

Expected Rate of Return on Common Stock $(R_j) = E(R_j) = \dfrac{\Sigma R_j}{n}$

Where,

$\bar{R}_j = E(R_j) =$ Expected rate of return on stock j.

$\Sigma R_j =$ Summation of annual returns on stock j.

n   = Number of year that the return is taken.

3.5.7 Standard Deviation (S.D.)

It is a statistical measure of the variability of a distribution of return around its mean. It is the square root of the returns. Standard Deviation is the measure of the total risk of the asset i.e. it means the dispersion of returns around the mean return. S.D. can be calculated using following formula:

When time series data is given:

$$(\sigma_j) = \sqrt{\dfrac{\Sigma(R_j - \bar{R}_j)^2}{n-1}}$$

Where,

$\sigma_j =$ S. D. of returns of stock j during the time period n.

When the probability distribution is given,

$$S.D\ (\sigma_j) = \sqrt{\sum P_j\ (R_j - \bar{R}_j)^2}$$

Where,

P_j = Probability distribution of the observation (returns).

R_j = Holding period returns on stock j.

$\bar{R}_j$ = Expected return on stock j.

3.5.8 Coefficient of Variation (C.V.)

Coefficient of variance is the standardized measure of risk per unit of return. It is calculated as the standard deviation divided by the expected return. It provides a more meaningful basis for a comparison when two or more than two investments of different expected return and standard deviation are to be compared .The C.V. is computed as:

Symbolically,

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

Where,

σ_j = Standard Deviation of security j.

$\bar{R}_J$ = Average returns on security j.

C. V_j= Coefficient of variation of stock j.

3.5.9 Beta Coefficient (β)

Beta coefficient may be used for ranking the systematic risk of different assets. It is an index of degree of movement of an asset's return in response to a change in the market return. The beta coefficient for an asset can be found by examining the asset's historical returns relative to the returns for the market (Gitman, 1988: 30). Beta coefficient shows the market sensitivity of stock.

Higher the beta, greater the sensitivity and reaction to the market movement. Beta coefficient of a particular stock will be less than equal or more than 1, but the beta for market will be always 1. The formula for the calculation of beta is given by:

$$\beta_j = \frac{COV(R_j, R_m)}{\sigma_m^2}$$

Where,

β_j = Beta coefficient of stock j.

$COV(R_j, R_m)$ = Covariance between return on stock j and return on market.

σ_m^2 = Variance of market return.

Individual stocks can be classified as aggressive or defensive or average on the basis of beta coefficients.

- If the beta coefficient is less than one, the stock is defensive and it is less risky than the market.
- If the beta coefficient is exactly one, the stock is average and it is equally risky as the market.
- If the beta coefficient is greater than one, the stock is aggressive and it is more risky than the market.

3.5.10 Correlation Coefficient

Correlation coefficient is a measure of the relative association two variables. The two variables are correlated when they are related that the change in the value of one variable is accompanied by change in the value of other. Correlation may be positive or negative. If returns on two securities are negatively correlated, which combined in portfolio reduces the risk. If securities are positively correlated risk cannot be reduced. Correlation coefficient is negative or positive which ranges from -1 to +1.

Correlation coefficient and covariance are related by the following equation.

$$COV_{ij} = \sigma_i \sigma_j p_{ij}$$

$$P_{ij} = \frac{COV_{ij}}{\sigma_i \sigma_j}$$

Where,

P_{ij} = Correlation coefficient for securities i and j.

COV_{ij} = Covariance between securities i and j.

$\sigma_i \sigma_j$ = Standard deviation of return for securities i and j.

3.5.11 Return on Market (R_m)

Annual return on market is the average return of market based on the index of market. It is denoted by R_m. Under this study, NEPSE index has been used. It is a value weighted index and companies of all the stocks listed in NEPSE. The NEPSE index is used for the study.

$$\text{Return on Market}(R_m) = \frac{\text{Ending NEPSE index} - \text{Beginning NEPSE Index}}{\text{Begnning NEPSE Index}}$$

Symbolically,

$$R_m = \frac{NI_t - NI_{t-1}}{NI_{t-1}}$$

Where,

NI_{t-1} = NEPSE index at time t-1.

NI_t = NEPSE index at time t.

R_m = Return on market.

$$\text{Return on Market}(R_m) = \frac{\sum R_m}{n}$$

Where,

$\sum R_m =$ Summation of annual market return.

N   =   Number of observations.

3.5.12 Portfolio Risk and Return

Portfolio Return

The return of a portfolio is the weighted average of the return of individual assets in the portfolio. The weights are the proportions of the investor's wealth invested in each asset (Cheney and Moses, 1995:652). The portfolio return is calculated as:

Symbolically,

$$E(R_p) = W_i E(R_i) + W_j E(R_j)$$

Where,

$E(R_p)$ = Expected return on portfolio.

W_i = Proportion of wealth investment in i assets.

W_j = Proportion of wealth investment in j assets.

$E(R_i)$ = Expected return on i assets.

$E(R_j)$ = Expected return on j assets.

Portfolio Risk

Portfolio risk is the measure of combined standard deviation of stocks held in the portfolio, with reference to the individual stocks corresponding correlation contribution. The formula of the calculation of portfolio risk for two assets case is given by:

$$\sigma_p = \sqrt{\sigma_i^2 W_i^2 + \sigma_j^2 W_j^2 + 2W_i W_j COV(R_i R_j)}$$

Where,

σ_p = Standard deviation of portfolio i and j.

σ_i^2 = Variance of asset i.

σ_j^2 = Variance of asset j.

W_i = Weight of asset i.

W_j = Weight of asset j.

$COV(R_iR_j)$ = Covariance between the return of assets i and j.

Minimum Risk Portfolio

It is the portfolio with the lowest level of risk in the efficient frontier. It is also called risk minimizing weight or optimal weight. In two stocks portfolio, the optimal weight to invest in stock i and j are calculated as follows:

$$W_i = \frac{\sigma_j^2 - \text{Cov}(R_i, R_j)}{\sigma_i^2 + \sigma_j^2 - 2\text{Cov}(R_i, R_j)}$$

Where,

$$W_j = 1 - W_i$$

3.5.13 Systematic and Unsystematic Risk

Systematic Risk

Systematic risk proportion $(p^2) = \frac{\beta_j^2 \sigma_m^2}{\sigma_j^2}$

Unsystematic Risk

Unsystematic risk proportion $(1 - p^2) = \frac{\text{Var}(e)}{\sigma_j^2}$

Where,

β_j^2 = Square beta of stock j.

σ_j^2 = Variance of stock j.

σ_m^2 = Variance of market return.

$Var(e)$ = Residual variance.

3.6 Method of Analysis and Presentation

All the method of analysis and presentation are applied as simple as possible. Proper financial and statistical tools are used and result are presented in table and also shown in diagram. Detail calculations are presented in appendices at the end of report. To make the report simple and easily understandable charts, diagrams and graphs have been used. Summary, conclusion and recommendation are presented finally.

CHAPTER - IV
DATA PRESENTATION AND ANALYSIS

This chapter included analysis of data collected and their presentation. In this chapter, the effort has been made to analyze risk and return in commercial banks. With the help of various financial and statistical tools, movement of Nepalese stock market of listed commercial banks are tried to evaluate. Detail data of MPS, EPS, DPS and P/E ratios of selected commercial banks as well as NEPSE index of each industry is presented and their analysis is done. With reference to various readings and literature review in the proceeding, chapter effort is made to analyze and established the relationship between risk and return of stock investment with listed commercial banks. And also analyzes the systematic and unsystematic risk of each commercial bank. With the help of figures and tables result have been tried to make simple and easy to understand.

4.1 Analysis of Individual Commercial Banks

As the study has been taken, special reference to listed commercial banks is analyzed individually. Presently 32 commercial banks operating in Nepal, only 27 are listed in NEPSE. Among them only four commercial bank are as sample of study. Even if data coverage for some on banks is less than six years, each bank is introduced and their risk and return are analyze here. The names of selected commercial banks are as follows:

- Nepal Arab Bank Limited (NABIL)
- Nepal Investment Bank Limited (NIBL)
- Everest Bank Limited (EBL)
- Bank of Kathmandu Limited (BOKL)

4.1.1 Nepal Arab Bank Ltd. (NABIL)

Market price and dividend records of common stock of NABIL are shown in table 4.1. Table 4.2 shows the calculation of Yearly-realized return, expected return and standard deviation of return.

4.1.1.1 Analysis of Total Dividend

Table 4.1

**MPS, Dividend, EPS and P/E Ratio of NABIL**

Fiscal Year	Closing MPS	Cash Dividend(Rs)	Stock Dividend (%)	Total Dividend	EPS	P/E Ratio
2007/08	5275	60	100	4959	115.86	45.33
2008/09	4899	35	85	2061.4	113.4	43.19
2009/10	2384	30	70	906.4	83.81	28.45
2010/11	1252	30	30	436.5	70.67	17.72
2011/12	1355	40	60	853	83.57	16.21

(Source: Annual Report (The calculation of Total Dividend is Annex 1.)

According to table 4.1, NABIL is paying cash dividend every year & stock dividend paid o in year, 2007/08 to 2011/12. Highest total dividend is paid in the year 2007/08 i.e. 4959. P/E ratio of NABIL is maximum in the year 2007/08 i.e. 45.33 and minimum in the year 2010/11i.e. 17.72.

Figure 4.1

Year End Price Movement of NABIL

(Source: Table 4.1)

58
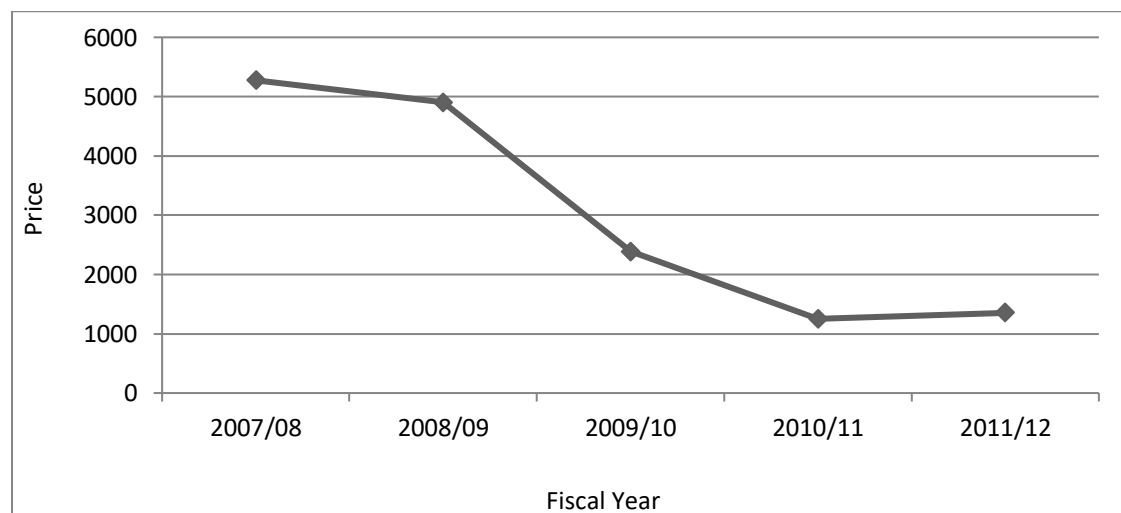
Figure 4.1 shows the trend line of market price in several year of NABIL. It can be seen that there is fluctuation of market price from 2007/08 to 2011/12. Therefore the market price trend line show rapid grow in 2007/08 & in 2008/09 to 2011/12 is going low respectively. There is maximum price in year 2007/08 i.e. Rs 5275 and minimum market price in year 2010/11, which is Rs 1252. Therefore, closing market price denotes the trend values.

4.1.1.2 Expected Return, Standard Deviation and Coefficient of Variation of NABIL

<div align="center">

Table 4.2

Risk and Return of NABIL

</div>

Fiscal Year	Closing MPS	Total Dividend	$R_j = \dfrac{P_t - P_{t-1} + D_t}{P_{t-1}}$	$R_j - \overline{R_J}$	$(R_j - \overline{R_J})^2$
2007/08	5275	4959	1.0265	0.7286	0.5309
2008/09	4899	2061.4	0.3195	0.0216	0.0005
2009/10	2384	906.4	-0.3284	-0.6263	0.3923
2010/11	1252	436.5	-0.2917	-0.5896	0.3476
2011/12	1355	853	0.7635	0.4656	0.2168
			$\sum(R_j) = 1.4894$		$\sum(R_j - \bar{R}j)^2 = 2.9078$

(Source: Annex 9)

According to table 4.2 shows that return of NABIL in 2007/08, 2008/09. 2011/12 are positive & other remaining years negative.

Figure 4.2

Annual Rate of Return of NABIL
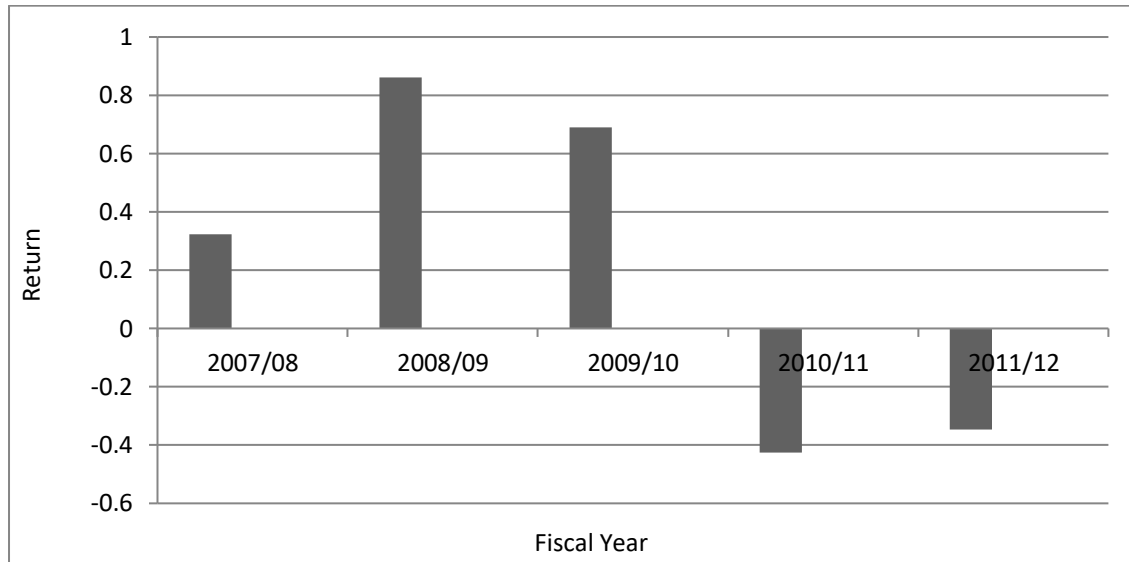
(Source: Table 4.2)

The figure represents the annual return of common stock of NABIL. The figure 4.2 shows that there is a positive return of NABIL till year 2007/08,2008/09,2011/12 and negative return of other year. The highest return in the year 2007/08 i.e. 1.0265 and lowest return in the year 2010/11 i.e. -0.2917.

Table 4.3

E.R, S.D. & C.V. of NABIL

Expected Return	Standard Deviation	Coefficient of variation
0.2979	0.8526	2.8620

(Source: Annex 9)

According to the table 4.3 shows that the expected return of NABIL is 0.2979, total risk (standard deviation) of 0.8526 and the coefficient of variation is 2.8620, which is indicate the to get per unit return 2.8620 risk must be sacrificed. Therefore, we know that higher coefficient of variation denote higher risk.

4.1.2 Nepal Investment Bank Ltd. (NIBL)

Market price and dividend records of common stock of NIBL are shown in table 4.3. Table 4.4 shows the calculation of Yearly-realized return, expected return and standard deviation of return.

4.1.2.1 Analysis of Total Dividend

Table 4.4

MPS, Dividend, EPS and P/E Ratio of NIBL

Fiscal Year	Closing MPS	Cash Dividend(Rs)	Stock Dividend (%)	Total Dividend	EPS	P/E Ratio
2007/08	2450	7.5	40.8	573.804	57.9	42.3
2008/09	1388	20	20	161	37.4	37.1
2009/10	705	25	25	153.75	52.5	13.4
2010/11	515	25	50	280.5	39.1	10.5
2011/12	511	5	30	158.3	27.6	18.5

(Sources: Annual Report of NIBL and Annex 2)

The table depicts, that NIBL is regular payment of cash divided and also stock dividend paid in year, 2007/08 to 2011/12 of. The highest total dividend is paid in year 2007/08 and lowest is in 2009/10. Moreover, the P/E ratio of NIBL is maximum in year 2007/08 and less in year 2010/11. The closing MPS of NIBL is maximum of Rs 2450 in year 2007/08 and minimum of Rs 511 in year 2011/12.

Figure 4.3

MPS, Dividend, EPS and P/E Ratio of NIBL
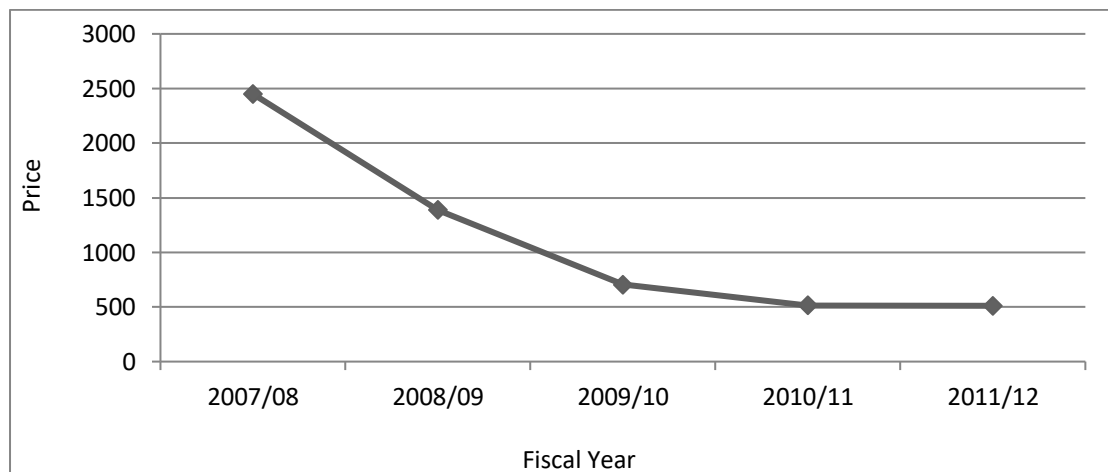
(Source: Table 4.3)

Year End Price Movement of NIBL

Figure 4.3 shows the trend line of market price in several year of NIBL. It can be seen that there is fluctuation of market price from 2007/08 to 2011/12. Therefore the market price trend line show rapid grow in 2007/08 & in 2008/09 to 2011/12 there is going low respectively. There is maximum price in year 2007/08, which is Rs 2450, and minimum market price in year 2011/12, which is Rs 511. Therefore, closing market price denotes the trend values.

4.1.2.2 Expected Return, Standard Deviation and Coefficient of Variation of NIBL

Table 4.5

Risk and Return of NIBL

Fiscal Year	Closing MPS	Total Dividend	$R_j = \dfrac{P_t - P_{t-1} + D_t}{P_{t-1}}$	$R_j - \overline{R_J}$	$(R_j - \overline{R}j)^2$
2007/08	2450	573.804	0.7489	0.6633	0.4399
2008/09	1388	161	-0.3678	-0.4534	0.2056
2009/10	705	153.75	-0.3813	-0.4669	0.2179
2010/11	515	280.5	0.1284	0.0428	0.0018
2011/12	511	158.3	0.2996	0.2140	0.0458
			$\sum(R_j) = 0.4278$		$\sum(R_j - \overline{R}j)^2 = 0.9110$

(Source: Annex 10)

According to table 4.5 shows that return of NIBL in 2007/08, 2010/11, 2011/12 are positive & other remaining years negative.

Figure 4.4

Annual Rate of Return of NIBL
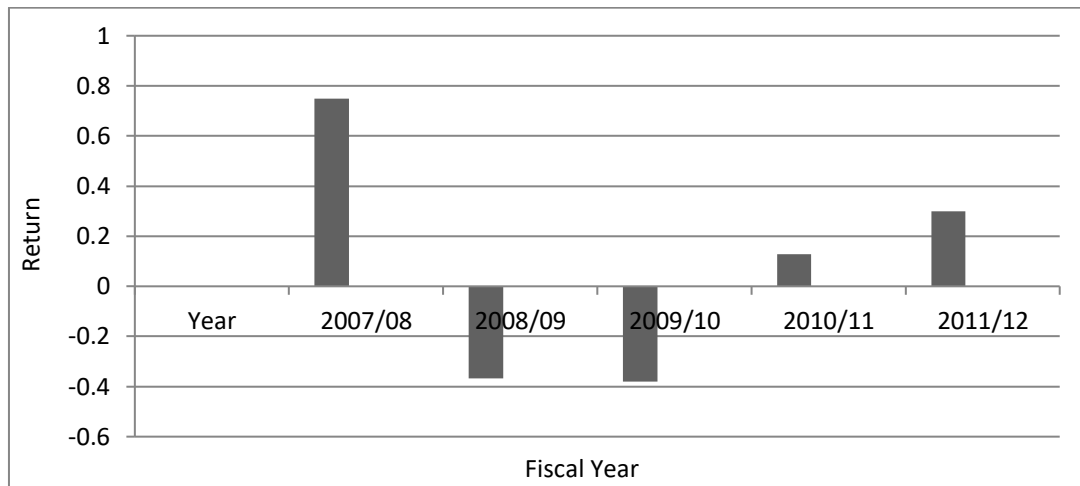
(Source: Table 4.4)

The figure 4.4 represents the annual rate of return of common stock of NIBL. The figure 4.4 shows that there is a positive return of NIBL in year 2007/08, 2010/11, 2011/12 and negative return of 2008/09 and 2009/10. The highest return in the year 2007/08 i.e. 0.7489 and lowest return in the year 2008/09 i.e. -0.3678.

Table 4.6

E.R. S.D. & C.V of NIBL

Expected Return	Standard Deviation	Coefficient of Variation
0.0856	0.4772	5.5748

(Source: Annex 10)

According to the table 4.6, the expected return of NIBL is 0.0856, with total risk (standard deviation) of 0.4772. The coefficient of variation of NIBL is 5.5748 which indicate that to get per unit return 5.5748 risks must be sacrificed. Hence, we know that higher C.V. denotes higher risk.

4.1.3 Everest Bank Ltd. (EBL)

Market price and dividend records of common stock of NABIL are shown in table 4.7. Table 4.8 shows the calculation of Yearly-realized return, expected return and standard deviation of return.

4.1.3.1 Analysis of Total Dividend

Table 4.7

MPS, Dividend, EPS and P/E Ratio of EBL

Fiscal Year	Closing MPS	Cash Dividend(Rs)	Stock Dividend (%)	Total Dividend	EPS	P/E Ratio
2007/08	3132	20	30	756.5	91.82	34.11
2008/09	2455	30	30	519	99.99	24.55
2009/10	1630	30	30	358.2	100.16	16.27
2010/11	1094	50	10	153.3	83.18	13.15
2011/12	1033	1.58	30	311.48	88.55	11.67

(Sources: Annual Report of EBL)

The closing MPS 2006/07 is Rs. 2430. According to table 4.1 shows that, EBL is paying cash dividend every year & also stock dividend .Highest total dividend is paid in year 2007/08 and lowest is in year 2010/11. P/E ratio of EBL is maximum year 2007/08 and minimum of the year 2011/12. The closing MPS of EBL is maximum of Rs. 3132 in year 2007/08 and minimum of Rs. 1033 in the year 2011/12.

Figure 4.5

Year End Price Movement of EBL

(Source: Table 4.6)

64
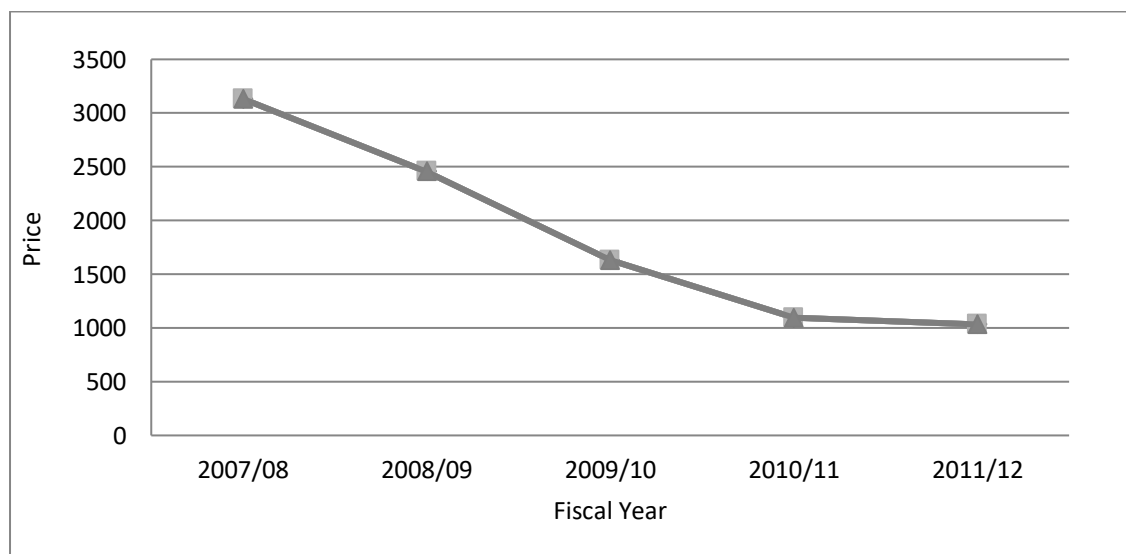
From the figure 4.5 shows that the line of market price in several year of EBL. It can be seen that closing market price of EBL is decreasing during that fiscal year 2008/09 till 2011/12. It is highest fiscal Year 2007/08 and lowest in Fiscal year 2010/11. There is maximum price in year 2007/08 i.e. Rs 3132. And end of the year market price to decline and reached Rs 1033.

4.1.3.2 Expected Return, Standard Deviation and Coefficient of Variation of EBL

Table 4.8
Risk and Return of EBL

Fiscal Year	Closing MPS	Total Dividend	$R_j = \dfrac{P_t - P_{t-1} + D_t}{P_{t-1}}$	$R_j - \overline{R_J}$	$(R_j - \overline{R}j)^2$
2007/08	3132	756.5	0.6002	05295	0.2804
2008/09	2455	519	-0.0504	-0.1211	0.0147
2009/10	1630	358.2	-0.1902	-0.2609	0.0681
2010/11	1094	153.3	-0.2348	-0.3055	0.0933
2011/12	1033	311.48	0.2285	0.1578	0.0249
			$\Sigma R_j = 0.3533$		$\Sigma (R_j - \overline{R}j)^2 = 0.4814$

(Source: Annex 11)

According to table 4.8 shows that return of EBL in 2007/08, 2011/12 are positive & other remaining years negative.

Figure 4.6

Annual Rate of Return of EBL

(Source: Table 4.7)

65
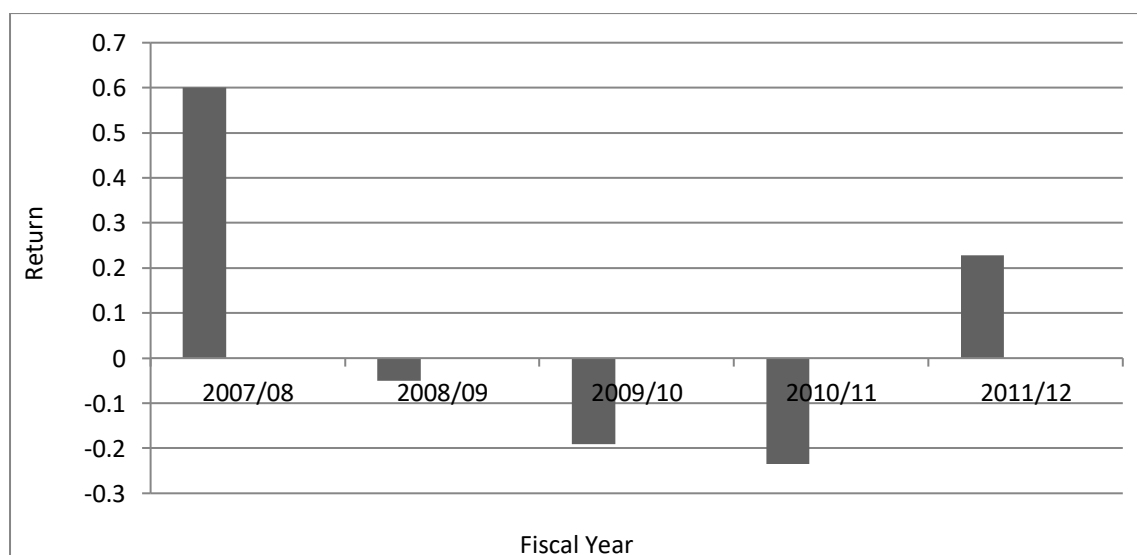
Figure 4.6 shows that the annual rate of return of EBL is positive the fiscal year 2007/08 & 2011/12 and negative the fiscal year 2008/09 ,2009/10& 2010/11 There is highest return of 0.6002 in year 2007/08, lowest return of -0.1902 in year 2009/10 and negative return of -0.0504, -0.2384 in year 2008/09, 2010/11, respectively. There is fluctuation of return.

Table 4.9

E.R, S.D & C.V of EBL

Expected Return	Standard Deviation	Coefficient of variation
0.0707	0.3469	4.9066

(Source: Annex 11)

The expected return of EBL is 0.0707 with total risk (standard deviation) of 0.3469 The C.V of EBL is 4.9066 which indicates that to get per unit return 4.9066 risk must be sacrificed. Hence, we knew that higher CV denotes lower risk.

4.1.4 Bank of Kathmandu Ltd. (BOKL)

Market price and dividend records of common stock of NABIL are shown in table 4.9. Table 4.10 shows the calculation of Yearly-realized return, expected return and standard deviation of return.

4.1.4.1 Analysis of Total Dividend

Table 4.10

MPS, Dividend, EPS and P/E Ratio of BOKL

Fiscal Year	Closing MPS	Cash Dividend(Rs)	Stock Dividend (%)	Total Dividend	EPS	P/E Ratio
2007/08	2350	2.11	42.11	770.62	59.94	39
2008/09	1825	7.37	47.37	405.28	54.68	33
2009/10	840	15	30	186	43.08	19
2010/11	570	16.75	34.75	234.98	44.51	12.81
2011/12	628	21.32	26.32	186.613	37.88	16.58

(Source: Annual report of BOK)

The closing MPS 2006/07 is Rs 1375. The table depicts, that there is regular payment of cash and stock dividend by BOK. The highest total dividend is paid in year 2007/08 and lowest is in 2009/10. Moreover, the P/E ratio of BOK is maximum in year 2007/08 and less in year 2005/06. The closing MPS of BOK is maximum of Rs 2350 in year 2007/08 and minimum in year 2010/11 respectively.

Figure 4.7

Year End Price Movement of BOK
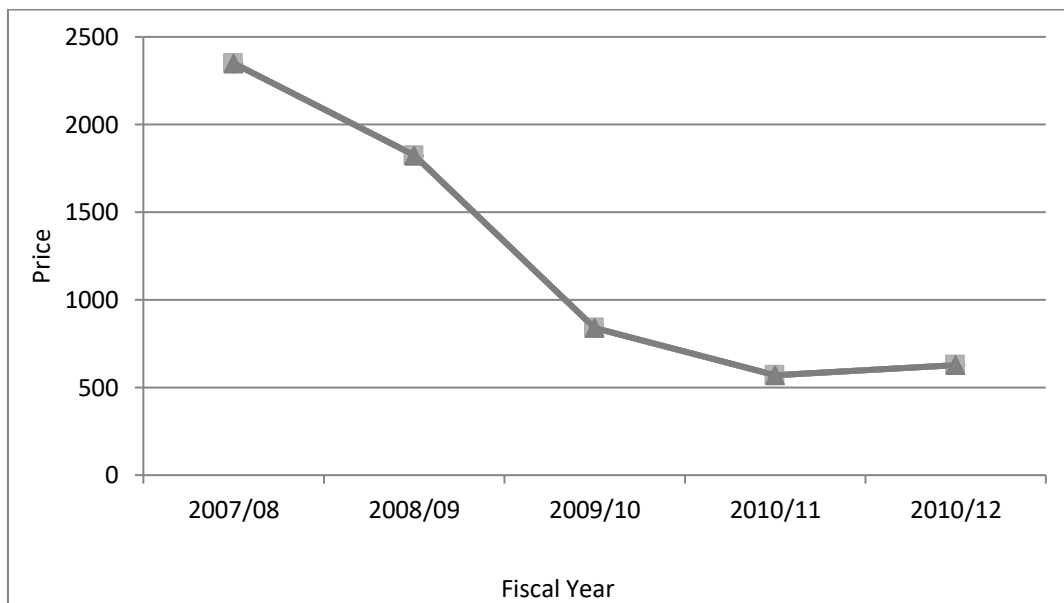
(*Source: Table 4.10)*

From the figure 4.7 shows that the line of market price in several year of BOK. It can be seen that closing market price of BOK is decreasing during that fiscal year 2008/09 till 2011/12. It is highest fiscal Year 2007/08 and lowest in Fiscal year 2010/11. There is maximum price in year 2007/08 i.e. Rs 2350.

4.1.4.2 Expected Return, Standard Deviation and Coefficient of Variation of BOK

Table 4.11

Risk and Ret Risk and Return of BOKL

Fiscal Year	Closing MPS	Total Dividend	$R_j = \dfrac{P_t - P_{t-1} + D_t}{P_{t-1}}$	$R_j - \bar{R}_j$	$(R_j - \bar{R}j)^2$
2007/08	2350	770.62	1.2695	1.0359	1.0731
2008/09	1825	405.28	-0.0509	-0.2845	0.0809
2009/10	840	186	-0.4378	-0.6714	0.4508
2010/11	570	234.98	-0.0417	-0.2753	0.0758
2010/12	628	186.613	0.4291	0.1955	0.0382
			$\Sigma R_j = 1.1682$		$\Sigma(R_j - \bar{R}_j)^2 = 1.7188$

(Source: Annex 12)

According to table 4.11 shows that return of NABIL in 2007/08, 2011/12 are positive & other remaining years negative.

Figure 4.8

Annual Return of Common Stock of BOK
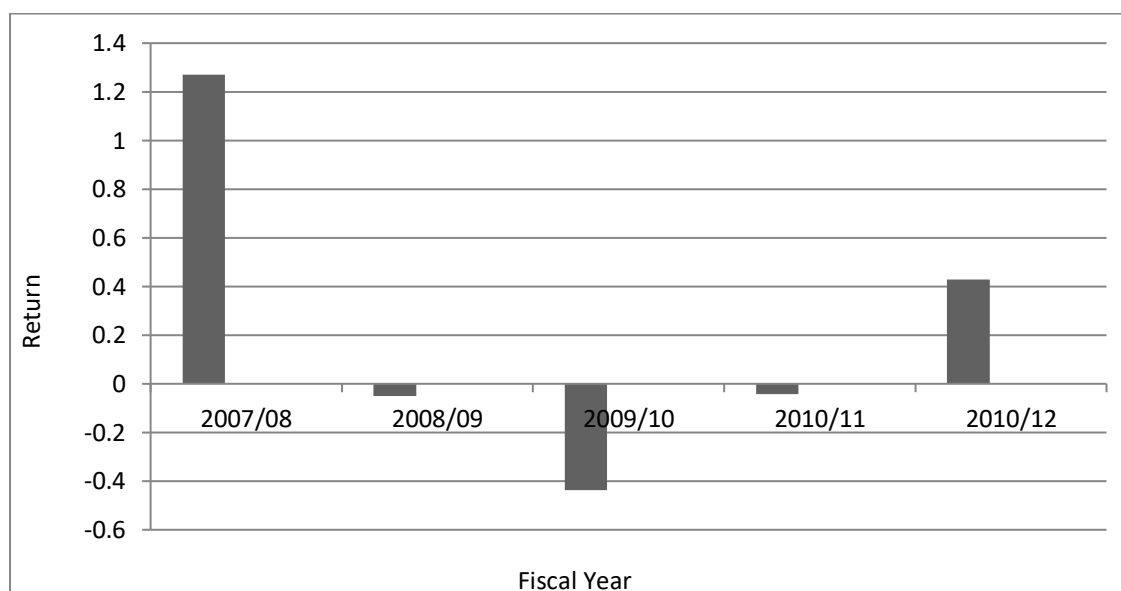
(Source: Table 4.10)

The figure represents the annual return of common stock of BOK. The figure 4.4 shows that there is positive return of BOK in year 2007/08 and negative

return from 2008/09 to 2010/11. The highest return is in year 2007/08 i.e. 1.2695 respectively.

Table 4.12

E.R, S.D & C.V of BOKL

Expected Return	Standard Deviation	Coefficient of variation
0.2336	0.4297	2.8061

(Source: Annex 12)

The expected return of BOK is 0.2336 with total risk (standard deviation) of 0.4297 The C.V of BOK is 2.8061, which indicates that to get per unit return 2.8061 risk must be sacrificed. Hence, we knew that higher CV denotes higher

4.2 Inter Bank Comparison

According to the result from analysis part, a comparative analysis of return, total risk and risk unit performed here. Expected return, standard deviation of return and coefficient of variation of each bank for the year 2007/08 to 2011/12 are given in the table.

Table 4.13

Expected Return, Standard Deviation, Coefficient of

Variation of Each Bank

Banks	Expected Return	Standard Deviation	Coefficient of Variation	Remarks		
				Return	Risk	C.V.
NABIL	0.2979	0.8526	2.8620	Highest	Highest	
NIBL	0.0856	0.4772	5.5748			Highest
EBL	0.0707	0.3469	4.9066	Lowest	Lowest	
BOKL	0.2336	0.6555	2.8061			Lowest

(Source: Annex 9.10,11, 12)

The table illustrates that the investor can get lowest return from investment in the common stock of EBL i.e. 0.0707 and highest return from investment in the common stock of NABIL i.e. 0.2979. The total risk measure by standard deviation is lower the bank EBL and NABIL has highest standard deviation.

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On the risk per unit return (C.V.) NIBL is more profitable than other three banks.

Figure 4.9

Expected Return, Standard Deviation and Coefficient of

Variation of Each Bank
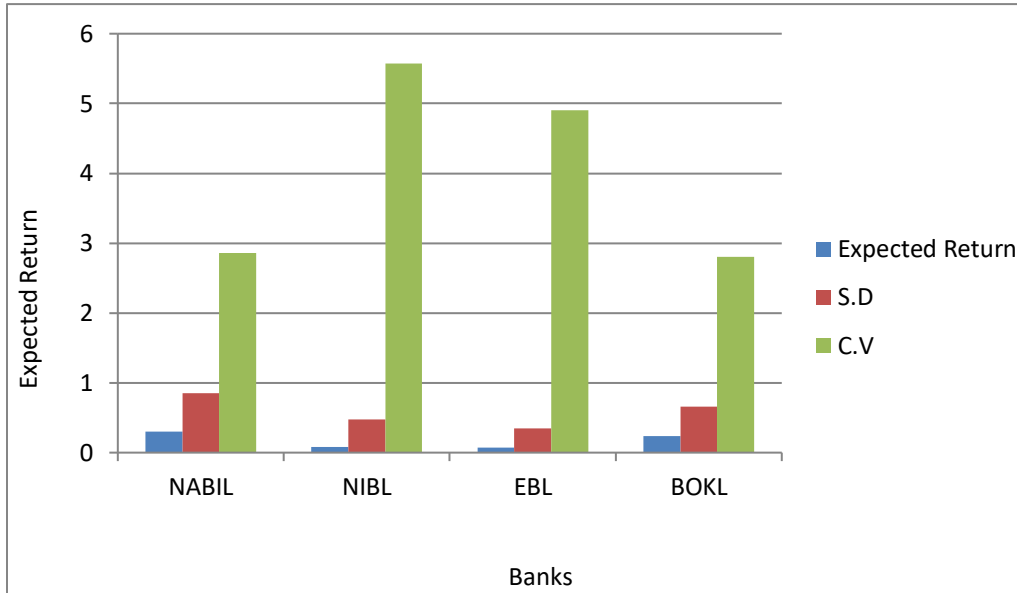
(Source: Table 4.9)

The figure 4.8 shows that the comparison of the sample bank in the terms of risk and return can be clearly seen. It shows that the expected return, standard deviation and coefficient of variation of each individual bank.

4.3 Markets Capitalization

On the basis of market capitalization at the end of 2011/12, size of each bank is presented in table 4.10. The table shows that the comparative proportion of the market capitalization of sampled banks.
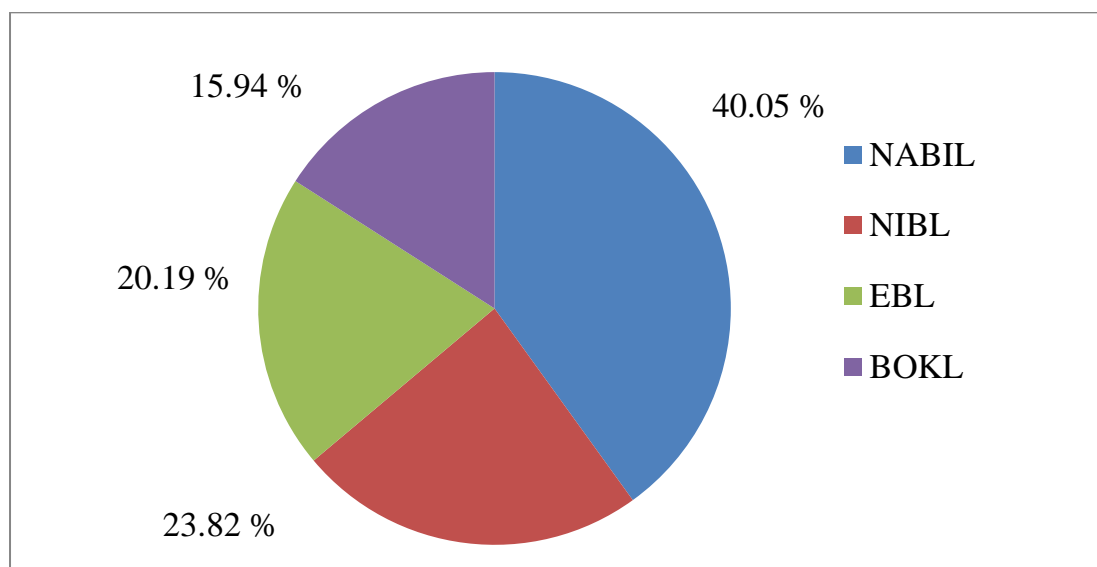
Table 4.14

Market Capitalization of Listed Banks

Banks	Market Capitalization (Rs.)	Percentage %
NABIL	17,658,993,780	40.05
NIBL	10,503,665,972	23.82
EBL	8,900,871,675	20.19
BOKL	7,026,340,374	15.94
Total	44,089,871,801	100.00

(Sources: www.NEPSE.com, 2011/12)

The table 4.14 shows the market capitalization by the sampled commercial banks. NABIL has highest market capitalization, it covered 40% market share out of four sampled commercial banks and BOK has lowest market capitalization, it covered only 16% market share out of sampled banks.

Comparative proportion of market capitalization of listed commercial banks is shown in the given figure:

Figure 4.10

Comparative Proportion of Market Capitalization of

Listed Commercial Bank

(Source: Table 4.14)

The pie chart shows the market capitalization of four banks NABIL, NIBL, EBL and BOKL. Where NABIL covers the highest market capitalization and

BOK has only 16%, which is lowest market capitalization among the four commercial banks.

4.4 Industry Comparison

Besides, the commercial banks there are various sector also actively participate in the in the capital market. There are listed NEPSE, which is commercial banks, finance company, hotel, insurance company, manufacturing , trading and other. The capital markets of these sectors including commercial banks are presented in the following table.

Table 4.15

Sector Wise Market Capitalization

Industries	Market Capitalization (In Millions)	Percentage (%)
Banks	191151.79	59.76
Manufacturing Com.	10421.07	3.26
Hotel	5408.50	1.69
Trading	1387.48	0.43
Finance	26993.76	8.44
Hydropower	12852.14	4.02
Insurance	9101.35	2.84
Others	62568.42	19.56
Total	319884.51	100.00

(Sources: www.NEPSE.com, 2011/12)

The table describes that market capitalization of different parts of business sector. It shows that the banking sector have the majority value of total market share. The market capitalization values of these banks and finance sector were 227246.9 million, which represents 70 % as a whole market. It shows that 50% of Nepalese business market covered by banking sector. That effect of whole economy of country. Moreover, there are only few 0.4% covered by trading sector.

Figure 4.11

Total Market Capitalization of Business Sectors
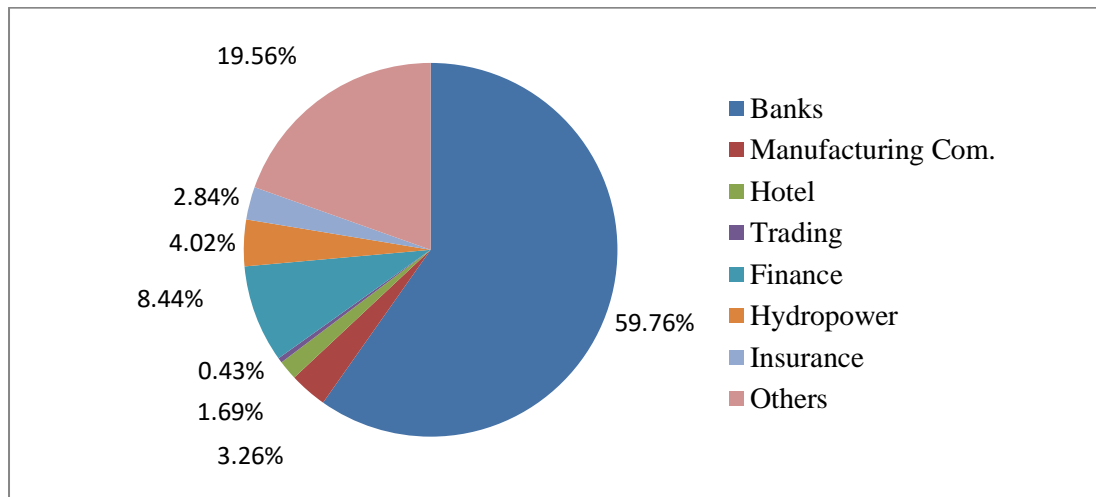
(Source: Table 4.15)

In this chart, the market capitalization is mostly covered by banking sector. That means the banking industries has majority value of total market share.

4.5 Comparison with Market

4.5.1 Market Risk and Return Analysis

Nepal Stock Exchange Ltd. (NEPSE) is only stock market in Nepal overall market movement is represented by market index (i.e. NEPSE Index). The NEPSE index is adjusted and changed continuously which with this NEPSE base market portfolio return it's standard deviation and coefficient of variation is presented below:

Table 4.16
Calculation of Return, SD and CV of Overall Market Index

Fiscal Year	NEPSE Index	$R_m = \dfrac{NI_t - NI_{t-1}}{NI_{t-1}}$	$R_m - \bar{R}_m$	$(R_m - \bar{R}_m)^2$
2007/08	963.36	0.4085	0.4770	0.2275
2008/09	749.10	-0.2224	-0.1539	0.0237
2009/10	477.73	-0.3623	-0.2938	0.0863
2010/11	362.85	-0.2405	-0.1720	0.0296
2011/12	389.74	0.0741	-0.1459	0.0213
		$\sum R_m$= -0.3426		$\sum(R_m - \bar{R}_m)$=0.3884

(Sources: NEPSE Annual Report)

Where,

$$\text{Expected Return } (\bar{R}_m) = \frac{\sum R_m}{n} = \frac{-0.3426}{5} = -0.0685$$

$$\text{Standard Deviation } (\sigma_m) = \sqrt{\frac{\sum(R_m - \bar{R}_m)}{n-1}} = \sqrt{\frac{0.3884}{5-1}} = 0.3116$$

$$\text{Coefficient of Variation } (C.V.) = \frac{\sigma_m}{\bar{R}_m} = \frac{0.3116}{-0.0685} = -4.5489$$

$$\text{Variance } (\sigma_m)^2 = \frac{\sum(R_m - \bar{R}_m)^2}{n-1} = \frac{0.3884}{5-1} = 0.0971$$

The table shows the return of market in several years. These is highest return of market in the year 2007/08 i.e. 0.4085 there is lowest negative return of market in the year 2008/09, and there is negative return of market in the year, 2009/10,2010/11 i.e. -0.3623 and –0.2405 respectively. The expected return of the market is -0.0685 with the total risk (measured by S.D.) of 0.3116. CV of market is -4.5489., which means, -4.5489 risks must by sacrificed to get per unit market return.

Figure 4.12

NEPSE Index Movement
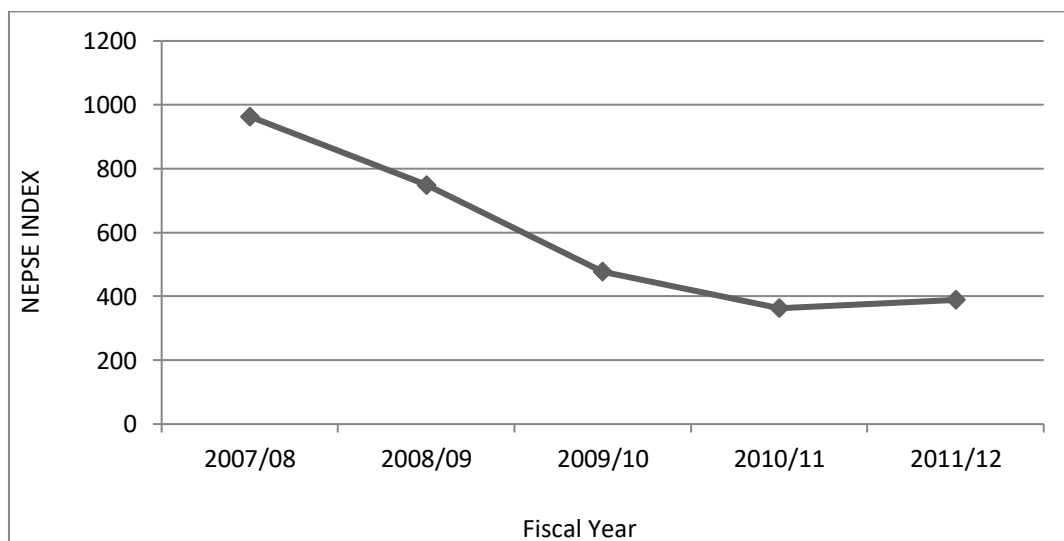
(Source: Table 4. 16)

The figure shows that the movement of NEPSE index is in decreasing in fiscal year from 2007/08 to year 2010/11 and last one year NEPSE index is in increasing.

Figure 4.13

Calculation of Return, SD and CV of Overall Market Index
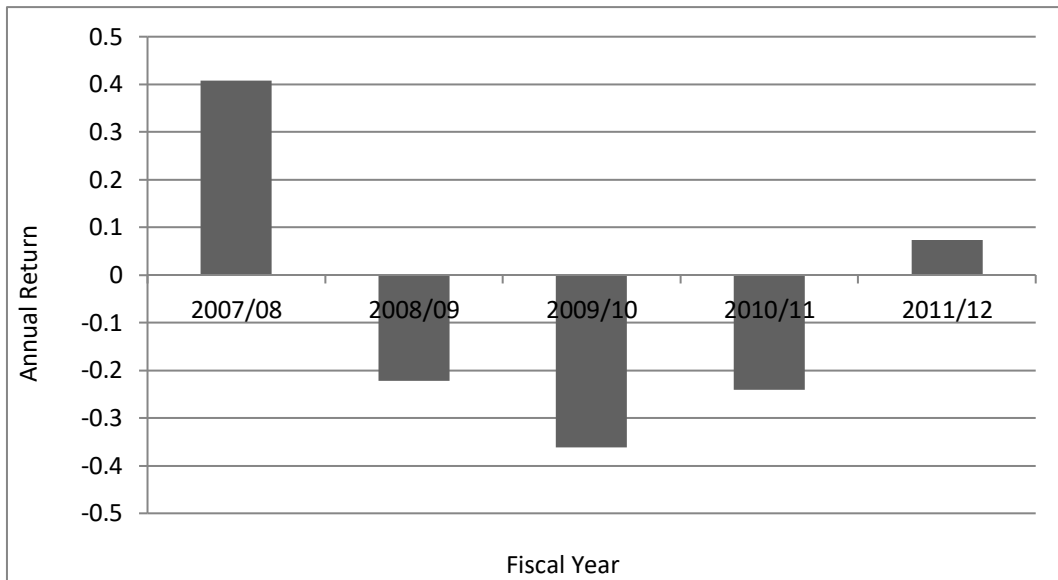
(Source: Table 4.16)

The figure 4.8 shows that the market return is positive in the year 2007/08 &, 2011/12 & others years negative. Last three years 2008/09, 2009/10 and 2010/11, the market return is negative. Therefore market return maximum in the year 2007/08.

4.5.2 Sensitivity of NEPSE

Market sensitivity is explained by its beta coefficient. Beta is known as systematic risk measure. Higher the beta represents greater the sensitivity and higher the reaction to the market movement and vice-versa. The beta of market is always equal to one. So, beta of stock less than 1 is known as less risky of defensive investment. Therefore, the sensitivity of NEPSE and stock price of selected commercial banks are below:

Table 4.17

Beta Coefficient of Selected Banks

Selected Banks	Beta Coefficient (β)	Remarks
NABIL	1.7958	-
NIBL	1.4089	-
EBL	1.0896	-
BOKL	2.0886	Higher Beta

(Source: Calculation from Annex 5, 6, 7 and 8)

The table shows that the beta coefficient of four banks NABIL, NIBL, BOKL and EBL. The beta coefficient of BOKL is higher than other selected banks that are higher risk.

4.5.3 Required Rata of Return $E(R_j)$, Expected Rate of Return(R_j) and Price Evaluation Analysis

Beta coefficient can also be related with the CAPM equation to determine the required rate of return of a given stock. The required rate of return is the risk free rate of return plus a risk premium based on the beta of the stock(β). Beta coefficient plays a vital role in CAPM approach. If the required rate of return is greater than expected of return, the stock is said to be overpriced and investors tend to sell this type of stock. If required rate of return is less than expected rate of return, the stock is said to be under priced. For this analysis, the risk free rate of return is needed which is taken from the interest rate of Treasury bill issued by Nepal Rastra Bank. NRB issued Treasury bill 365 days duration Treasury bill rate of rate is taken as a weighted average Treasury bill rate from economic bulletin (20010/11) Nepal Rastra Bank, Which is approximately 0.0606.

Hence,

Risk free rate of return $(R_f) = 0.0606 = 6.06\%$

Market rate of return $E(R_m) = -0.0685 = -6.85\%$

Table 4.18

Required Rate of Return, Expected Rate of Return and Price Evaluation

Banks	Beta	$E(R_J) = R_f + [E(R_m) - R_f]\beta_j$	Expected Rate of Return	Price Evaluation
NABIL	1.7958	-0.1712	0.2979	Under priced
NIBL	1.4089	-0.2425	0.0856	Under priced
EBL	1.0896	-0.0801	0.0707	Under priced
BOKL	2.0886	-0.2090	0.2336	Under priced

According to the table 4.18, the expected rate of return is greater than required rate of return so the all four banks are under priced. It shows that all the banks their stock value will be increased in near future and all the stock are in demand. Since, all the stock is underpriced and hence investor can gain profit from by those stock.

4.6 Systematic Risk and Unsystematic Risk

4.6.1 Systematic Risk

This is a part of total risk cannot be diversified through creation of portfolio. This risk creates from systematic factor or market factor or macroeconomic factor like inflation, GDP, Interest etc systematic risk can be expressed in formula as:

$$SR = \frac{Cov(R_j, R_m)}{\sigma_m}$$

Where,

SR = Systematic Risk

$Cov(R_j, R_m)$= Covariance Return of Stock with market

σ_m= S.D. of Market

4.6.2 Unsystematic Risk

This is diversifiable risk can be diversified through creation of portfolio. This risk creates from microeconomics factor or unique factor to a firm like management efficiency, strikes and production policy etc.

USR =Total Risk – SR

$$= \sigma_m - SR$$

Where,

USR = Unsystematic Risk

SR = Systematic Risk

σ_m= S.D. of Stock of Sample Bank

4.6.3 Systematic Risk and Unsystematic Risk of NABIL with Market

$$SR = \frac{Cov(R_j, R_m)}{\sigma_m} = \frac{1.795}{0.0971} = 1.7958$$

$$USR = \sigma_j - SR = 0.7269 - 1.7958 = -1.0689$$

4.6.3.1 Proportion of Systematic and Unsystematic Risk

$$\text{Proportion of SR} = \frac{SR}{TR} = \frac{1.7958}{0.7269} = 2.47$$

$$\text{Proportion of USR} = \frac{USR}{TR} = \frac{-1.0689}{0.7269} = -1.47$$

Out of total risk in stock of NABIL, 2.47 undiversifiable risk and crate from systematic factor or market factor and the remaining –1.47 diversifiable risk and created from company related factor.

4.6.4 Systematic Risk and Unsystematic Risk of NIBL with Market

$$SR = \frac{Cov(R_j, R_m)}{\sigma_m} = \frac{0.1368}{0.0971} = 1.4089$$

$$USR = \sigma_j - SR = 0.2277 - 1.4089 = -1.1812$$

4.6.4.1 Proportion of Systematic and Unsystematic Risk

$$\text{Proportion of SR} = \frac{\text{SR}}{\text{TR}} = \frac{1.4089}{0.2277} = 6.18$$

$$\text{Proportion of USR} = \frac{\text{USR}}{\text{TR}} = \frac{-1.1812}{0.2277} = -5.18$$

Out of total risk in stock of NIBL, 6.18 undiversifiable risk and crate from systematic factor or market factor and the remaining -5.18 diversifiable risk and created from company related factor.

4.6.5 Systematic and Unsystematic Risk of EBL with Market

$$SR = \frac{Cov(R_j, R_m)}{\sigma_m} = \frac{0.1058}{0.0971} = 1.0896$$

$$\text{USR} \quad = \sigma_j - \text{SR}$$

$$= 0.1204 - 1.0896$$

$$= -0.9692$$

4.6.5.1 Proportion of Systematic and Unsystematic Risk

$$\text{Proportion of } SR = \frac{SR}{TR} = \frac{1.0896}{0.1204} = 9.05$$

$$\text{Proportion of } USR = \frac{USR}{TR} = \frac{-0.9692}{0.1204} = -8.05$$

Out of total risk in stock of EBL, 9.05 is undiversifiable risk and created from systematic factor or market factor and the remaining -8.05 is diversifiable risk and created from company related factor.

4.6.6 Systematic Risk and Unsystematic Risk of BOK with Market

$$SR = \frac{Cov(R_j, R_m)}{\sigma_m} = \frac{0.2028}{0.0971} = 2.0886$$

$$\text{USR} \quad = \sigma_j - \text{SR}$$

$$= 0.4297 - 2.0886$$

$$= -1.6589$$

4.6.6.1 Proportion of Systematic and Unsystematic Risk

$$\text{Proportion of } SR = \frac{SR}{TR} = \frac{2.0886}{0.4297} = 4.86$$

$$\text{Proportion of } USR = \frac{USR}{TR} = \frac{-1.6589}{0.4297} = -3.86$$

Out of total risk in stock of BOK, 4.86 undiversifiable risk and crate from systematic factor or market factor and the remaining -3.86 diversifiable risk and created from company related factor.

4.7 Major Finding of the Study

Major findings of the above calculation are presented as follows:

4.7.1 Return and Risk Characteristics

- Among 32 commercial banks, 27 commercial banks are listed in NEPSE. Out of the listed commercial banks, only four commercial banks I.e. NABIL, NIBL, EBL and BOKL are taken into consideration. The return is the income received on a stock investment, which is usually expressed in percentage. Expected return on common stock of NABIL is maximum& similarly the expected return on common stock of NIBL, EBL and BOK respectively.

- Risk is the variability of return, which is measured in terms of standard deviation. Observing the standard deviation of returns of the commercial banks, NABIL has the highest standard deviation which is high risky i.e. 0 and EBL has the low risky because it has low standard deviation i..

- Coefficient of variation can represent the exact position of risk per unit of return. Therefore higher the CV higher the risk and lower the CV lower the risk. So that lower coefficient of variation is preferable. On the basis of CV common stock of BOK is best than other banks. BOK has lower CV. On other hand coefficient of variation NIBL has the higher risky because it has higher CV. Therefore, the bank BOK has the best common stock of investment.

4.7.2 Market Risk and Return

Sector wise NEPSE index is in increasing in fiscal year from 2007/08 & year 2008/09 and last two-year NEPSE index is in decreasing& at last in year end of 2011/12 increase by few. Average rate of return of market is -0.0685% with a standard deviation of market is 8.94% and coefficient of variation, which measure the risk per unit of return is - 0.4131.

4.7.3 Market Sensitivity

Beta coefficient explains the sensitivity or volatility of the stock with market. Higher the beta represents greater the volatility and beta is lower than one are less volatility. The beta coefficient of BOKL has higher sensitivity i.e. 2.0886 that means the beta measured the more risky. EBL has the lowest beta of 1.0896 that means beta stock least volatility in the market.

4.7.4 Systematic and Unsystematic Risk

Systematic risk cannot be diversified through creation of portfolio. It is occurred due to market factor. Unsystematic risk can be diversified through creation of portfolio. It is occurred due to internal management factor. This study that BOKL has high unsystematic risk -1.6589 and EBL, NABIL & NIBL has low proportion of unsystematic risk i.e. -0.9622, -1.0689, -1.1812 respectively and which can be minimized from the internal management. Whereas BOK and NABIL have high proportion of systematic, risk i.e. 2.0886 and 1.7958. This cannot be minimized from the internal management. Common stock of BOK is best among these banks due to its highest proportion of unsystematic risk.

4.7.5 Market Capitalization

Among the banks the market capitalization of NABIL is in the highest position that covered by 40.05% and BOKL is the lowest position of market capitalization i.e. 15.94% in the year 2010/11. Whereas among the inter industry comparison has placed banking sector in the highest position and

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trading company in the lowest position. It shows that 59.76% of Nepalese business market covered by banking sector. That effect of whole economy of country. Moreover, there are only few 0.43% covered by trading sector.

CHAPTER -V
SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is concerned with the overall analysis of this study in a summarized way, draft a conclusion and provide vital recommendation on the basis of the study findings. Logically, this chapter is divided into three sections, Summary, Conclusion and Recommendations.

5.1 Summary

Each and every business organization should base their decision-making in financial management. Financial management is mainly concerned with the acquisition and utilization of funds. For this, financial market plays vital role in utilizing financial resources for expanding productive sectors in the country. It mobilizes unproductive and unutilized financial resources towards productive sectors and helps in expanding economic growth of a country.

Investment in capital market collects necessary funds and diverts the collected funds towards the productive sectors. Capital market plays a vital role in economic development of the country. It reinvigorates and boosts up the economic activities by encouraging and mobilizing the saving especially domestic financial resources to provide the entrepreneurs for investment in profitable projects. It provides best investment opportunities by transferring the funds from surplus saving to need based sectors through the transaction of financial instruments. Integrated and speedily development of the country is possible only when competitive capital market, i.e. capital formation and its proper utilization, reach corner of the country. Hence, investment portfolio is one such tool that helps for proper utilization of resources. Successful formulation and effective implementation of investment policy is the prime essential for the successful performance of capital market. Capital market is a part of financial market. Financial market comprises of money market and capital market. Stock market is the largest financial market all over the world

where stocks of various business organizations are traded. It has the greatest role in the development of financial system. Capital market consists of primary and secondary market.

Risk and return analysis is the part of the business sector. Risk and return measure the performance on any corporate house. It is the key factor in the financial sector and could be good indicator to the prospect who one to make investment on the securities on enterprises. The market economy is growing rapidly which forces the change in the variable of world economy. No investors would like to make their investment in the risky asset, which holds higher risk and lower rate of return.

Common stock is the most risky security and support of stock market. Because of higher expected return an investment, in common stock of a corporate firm neither ensures an annual return nor ensures the return of principle. Therefore, investment in common stock is very sensitive on the ground of its uncertainty nature. Dividends to common stocks holders are only paid if the firm makes profit after tax and preference share dividend. The company can return the principal in case of its liquidation only to the extent of the residual assets after satisfying to all its preference shareholders. Besides this, the investors have to sacrifice the return on their investment in common stock, which would be earned investing elsewhere.

The main objectives of the study are to analyze the risk and return in common stock investment of Nepalese market. The study focused on the analysis of risk and return on listed commercial banks in the context of Nepal, especially focused in the commercial banks listed in the NEPSE. Only 32 commercial banks are operation in Nepal. Thus, listed four commercial banks NABIL, NIBL, EBL and BOKL are taken as reference to analyze the risk and return on common stock investment. While analyzing the risk and return brief review of related studies has been performed. Scientific methods are used in data

analysis. Graphs, tables and diagrams are used to present the data and results more clearly. Secondary data are collected from the NEPSE, SEBO, NRB, private investors, financial executives companies and other related banks. While analyzing the risk and return, research variables and tools namely expected return, required rate of return, standard deviation, coefficient of variance, have been used for the analysis and interpretation of the data, which are employed in this research as secondary in nature. The study is based on the fundamental analysis of the risk and return on listed commercial banks. The published data from fiscal year 2007/08 to 2011/12 have been taken to analyze.

5.2 Conclusion

The study based on risk and return analysis of listed commercial banks on secondary data from fiscal year 2007/08 to 2011/12. . In this study the expected return on the common stock of NAIBL is maximum, which is very high, rate of return. In addition, EBL offers the minimum expected rate of return. Observing the standard deviation of returns of the selected commercial banks, NABIL has the highest standard deviation which is more risky and EBL has lowest standard deviation, which is least risky. However, general standard deviation is not used to determining risk, as there may be different expected return. Coefficient of variation can depict the exact position of risk per unit of return. It is considered as the best mechanism to measure the risk. Higher the CV higher the risk and lower the CV lower the risk. Therefore, lower CV is preferable. On the basis of coefficient of variation, NIBL bank's seems to be the most risk with 5.5748 C.V.

Standard deviation is only the measure of unsystematic risk, which is not defined by the market. Another major aspect of the risk is systematic risk, which is defined by the market and measured by beta coefficient. Beta coefficient explains the sensitivity or volatility of the stock with market. Higher the beta, greater the volatility in this contest beta coefficient of BOK has 2.30886 which is greater than other sample banks. Therefore, beta coefficient

of BOK is most volatile. The relation between earning per share and market price per share of all sampled banks goes positively. Theory suggests that when EPS increases than MPS should also increases. On the main significant of beta is in CAPM. The model describes the relation between risk and required rate of return. If required rate of return is lower than expected rate of return stock is under priced. If the required rate of return is higher than expected rate of return so the stock is overpriced. This study shows that all the stocks of commercial banks which are under priced. This means that all the stocks are demand and stock value will be increased in near future.

5.3 Recommendation

The focus of the study is to assess risk associated with return on common stock considering individual and private investors. On the basis of major findings of the study based on secondary data analysis, the researcher thinks appropriate to recommend the concerned institutions, individuals, authorized as well as other to consider the followings.

- The study mainly focused on the analysis of risk and return on common stock. It shows that NABIL has the highest expected return, so it is recommended for investors to invest on NABIL's securities. In other hand the coefficient of variation is considered the best tool for relative measurement of risk. BOK has the lowest coefficient of variation, so its stock has low risk. For this reason, it is recommended that the stock of BOK is the best for investment.

- Beta coefficient measure the sensitivity of the stock with market. Higher the beta greater the volatility. The beta coefficient of market should always equal to one. Therefore beta coefficient of the sample banks NABIL, BOK, NIBL & EBL more than one so it is recommended that the investor could not select any of the banks stock according to their investment desire.

- After partition of total risk into systematic and unsystematic risk, it is clearly seen that NIBL and BOK are more risky in comparison to other

commercial banks with high systematic risk. It seems that stock can be diversified since unsystematic risk is controllable in nature therefore companies should try to minimize it by effective management. So due to the undiversified mature of systematic risk investors should not always follow traditional system while buying common stock further they also need to concentrate on the related companies systematic risk.

- Government needs to amend the rules and regulation regarding stock market in time to time and to make the policy that protects the individual investor's right.

- The secondary market is centralized in capital city and investors are few, the government is required to decentralize the market to cover the more investors.

- Generally, it is thought 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.

- Financial information must be published regularly so that existing as well as prospective investors are informed about the changes that take place.

- The public limited companies that have listed their shares in NEPSE should disseminated the exact and update information to the general public. NEPSE need to modernize the trading system and effective information channel. The financial statements of year should be published through appropriate means. The system of manipulation should be removed. Manipulated and inconsistent information make investment analysis and decision very difficult making the decisions wrong. Hence, the updated and exact statements should be published.

- The political environment of our country must be quiet for the growing up industrial sector. Investors can invest freely with their wants and their growing market for business.

- Academicians are undertaking no sufficient studies regarding risk and return analysis. Hence, the researcher strongly recommends the future investigators to conduct studies related to risk, return management. Further studies can be conducted by increasing sample size, writing other methodologies.

ANNEXES

ANNEX-1

Calculation of Total Dividend of NABIL

Total Dividend in (Rs.) = Cash dividend + % of Stock Dividend * Next Year MPS

2007/08	60	+	100%	*	4899	=	4959
2008/09	35	+	85%	*	2384	=	2061.4
2009/10	30	+	70%	*	1252	=	906.4
2010/11	30	+	30%	*	1355	=	436.5
2011/12	40	+	60%	*	1355	=	853

Value of stock Dividend for the Year 2011/2012 = Dividend % × Same Year MPS

ANNEX-2

Calculation of Total Dividend of NIBL

Total Dividend in (Rs.) = Cash dividend + % of Stock Dividend * Next Year MPS

2007/08	7.5	+	40.8%	*	1388	=	573.804
2008/09	20	+	20%	*	705	=	161
2009/10	25	+	25%	*	515	=	153.75
2010/11	25	+	50%	*	511	=	280.5
2011/12	5	+	30%	*	511	=	158.3

Value of stock Dividend for the Year 2011/2012 = Dividend % × Same Year MPS

Calculation of Total Dividend of EBL

Total Dividend in (Rs.) = Cash dividend + % of Stock Dividend * Next Year MPS

200708	20	+	30	*	2455	=	756.5
2008/09	30	+	30	*	1630	=	519
2009/10	30	+	30	*	1094	=	358.2
2010/11	50	+	10	*	1033	=	153.3
2011/12	1.58	+	30	*	1033	=	311.48

Value of stock Dividend for the Year 2011/2012 = Dividend % × Same Year MPS

ANNEX -4

Calculation of Total Dividend of BOK

Total Dividend in (Rs.) = Cash dividend + % of Stock Dividend * Next Year MPS

2007/08	2.11	+	42.11	*	1825	=	770.62
2008/09	7.37	+	47.37	*	840	=	405.28
2009/10	15	+	30	*	570	=	186
2010/11	16.75	+	34.75	*	628	=	234.98
2011/12	21.32	+	26.32	*	628	=	186.613

Value of stock Dividend for the Year 2011/2012= Dividend % × Same Year MPS

Calculation of Beta Coefficient of Common Stock of NABIL

Fiscal Year	$(R_m - \bar{R}_m)$	$(R_j - \bar{R}_j)$	$(R_m - \bar{R}_m)\,(R_j - \bar{R}_j)$
2007/08	0.4770	0.7286	0.3475
2008/09	-0.1539	0.0216	-0.0033
2009/10	-0.2938	-0.6263	0.1840
2010/11	-0.1720	-0.5896	0.1014
2011/12	0.1459	0.4656	0.0679
Total			$\sum(R_m - \bar{R}_m)(R_j - \bar{R}_j) = 0.6975$

We have,

$$Cov(R_j, R_m) = \frac{(R_j - \bar{R}_j)(R_m - \bar{R}_m)}{n-1} = \frac{0.6975}{5-1} = 0.1744$$

Therefore,

$$Beta(\beta) = \frac{Cov(R_j, R_m)}{\sigma_m^2} = \frac{0.6975}{0.0971} = 1.7958$$

Where,

$\bar{R}_m$ = Expected Return of Market

$\bar{R}_j$ = Expected Return of Stock BOK

R_m = Return of Market

R_j = Return of Stock BOK

σ_m^2 = Variance of Market

n = Number of Observation

ANNEX-6

Calculation of Beta Coefficient of Common Stock of NIBL

Fiscal Year	$(R_m - \bar{R}_m)$	$(R_j - \bar{R}_j)$	$(R_m - \bar{R}_m)\,(R_j - \bar{R}_j)$
2007/08	0.4770	0.6633	0.3164
2008/09	-0.1539	-0.4534	0.0698
2009/10	-0.2938	-0.4669	0.1372
2010/11	-0.1720	0.0428	0.0074
2011/12	0.1459	0.2140	0.0312
Total			$\sum(R_m - \bar{R}_m)(R_j - \bar{R}_j) = 0.5472$

We have,

$$Cov(R_j, R_m) = \frac{(R_j - \bar{R}_j)(R_m - \bar{R}_m)}{n - 1} = \frac{0.5472}{5 - 1} = 0.1368$$

Therefore,

$$Beta(\beta) = \frac{Cov(R_j, R_m)}{\sigma_m{}^2} = \frac{0.1368}{0.0971} = 1.4089$$

Where,

$\bar{R}_m$ = Expected Return of Market

$\bar{R}_j$ = Expected Return of Stock BOK

R_m = Return of Market

R_j = Return of Stock BOK

$\sigma_m{}^2$ = Variance of Market

n = Number of Observation

Where,

$\bar{R}_m$ = Expected Return of Market

$\bar{R}_j$ = Expected Return of Stock BOK

R_m = Return of Market

R_j = Return of Stock BOK

$\sigma_m{}^2$ = Variance of Market

n = Number of Observation

ANNEX-7

Calculation of Beta Coefficient of Common Stock of EBL

Fiscal Year	$(R_m - \bar{R}_m)$	$(R_j - \bar{R}_j)$	$(R_m - \bar{R}_m)(R_j - \bar{R}_j)$
2007/08	0.4770	0.5295	0.2526
2008/09	-0.1539	-0.1211	0.0186
2009/10	-0.2938	-0.2609	0.0766
2010/11	-0.1720	-0.3055	0.0525
2011/12	0.1459	0.1578	0.0230
Total			$\sum(R_m - \bar{R}_m)(R_j - \bar{R}_j)=0.4233$

We have,

$$Cov(R_j, R_m) = \frac{(R_j - \bar{R}_j)(R_m - \bar{R}_m)}{n-1} = \frac{0.4233}{5-1} = 0.1058$$

Therefore,

$$Beta(\beta) = \frac{Cov(R_j, R_m)}{\sigma_m{}^2} = \frac{0.1058}{0.0971} = 1.0896$$

Where,

$\bar{R}_m$ = Expected Return of Market

$\bar{R}_j$ = Expected Return of Stock BOK

R_m = Return of Market

R_j = Return of Stock BOK

$\sigma_m{}^2$ = Variance of Market

n = Number of Observation

ANNEX- 8

Calculation of Beta Coefficient of Common Stock of BOK

Fiscal Year	$(R_m - \bar{R}_m)$	$(R_j - \bar{R}_j)$	$(R_m - \bar{R}_m)(R_j - \bar{R}_j)$
2007/08	0.4770	1.0359	0.4941
2008/09	-0.1539	-0.2845	0.0438
2009/10	-0.2938	-0.6714	0.1973
2010/11	-0.1720	-0.2753	0.0474
2011/12	0.1459	0.1955	0.0285
Total			$\sum(R_m - \bar{R}_m)(R_j - \bar{R}_j)$ =0.8111

We have,

$$Cov(R_j, R_m) = \frac{(R_j - \bar{R}_j)(R_m - \bar{R}_m)}{n - 1} = \frac{0.8111}{5 - 1} = 0.2028$$

$$Beta(\beta) = \frac{Cov(R_j, R_m)}{\sigma_m{}^2} = \frac{0.2028}{0.0971} = 2.0886$$

Therefore,

Where,

$\bar{R}_m$ = Expected Return of Market

$\bar{R}_j$ = Expected Return of Stock BOK

R_m = Return of Market

R_j = Return of Stock BOK

$\sigma_m{}^2$ = Variance of Market

n = Number of Observation

ANNEX- 9

Calculation of Expected Return, Standard Deviation and Coefficient of Variation of NABIL

Risk and Return of NABIL

Fiscal Year	Closing MPS	Total Dividend	$R_j = \dfrac{P_t - P_{t-1} + D_t}{P_{t-1}}$	$R_j - \bar{R_J}$	$(R_j - \bar{R_J})^2$
2007/08	5275	4959	1.0265	0.7286	0.5309
2008/09	4899	2061.4	0.3195	0.0216	0.0005
2009/10	2384	906.4	-0.3284	-0.6263	0.3923
2010/11	1252	436.5	-0.2917	-0.5896	0.3476
2011/12	1355	853	0.7635	0.4656	0.2168
			$\sum(R_j) = 1.4894$		$\sum(R_j - \bar{R}j)^2 = 2.9078$

We have,

$$ExpectedReturn(\bar{R}_J) = E(R_j) = \frac{\sum R_j}{n} = \frac{1.4894}{5} = 0.2979 = 29.79\%$$

$$Variance(\sigma_j)^2 = \frac{\sum(R_j - \bar{R}j)^2}{n-1} = \frac{2.9078}{5-1} = 0.7269$$

$$StandardDeviation(\sigma_j) = \sqrt{\frac{\sum(R_j - \bar{R}_j)^2}{n-1}} = \sqrt{\frac{2.9078}{5-1}} = 0.8526$$

$$Coefficient of Variation\ (C.V.) = \frac{\sigma_j}{\bar{R}_J} = \frac{0.8526}{0.2979} = 2.8620$$

The closing MPS for 2007 is Rs. 5050,

ANNEX- 10

Calculation of Expected Return, Standard Deviation and Coefficient of Variation of NIBL

Risk and Return of NIBL

Fiscal Year	Closing MPS	Total Dividend	$R_j = \dfrac{P_t - P_{t-1} + D_t}{P_{t-1}}$	$R_j - \overline{R_J}$	$(R_j - \bar{R}j)^2$
2007/08	2450	573.804	0.7489	0.6633	0.4399
2008/09	1388	161	-0.3678	-0.4534	0.2056
2009/10	705	153.75	-0.3813	-0.4669	0.2179
2010/11	515	280.5	0.1284	0.0428	0.0018
2011/12	511	158.3	0.2996	0.2140	0.0458
			$\sum(R_j) = 0.4278$		$\sum(R_j - \bar{R}j)^2 = 0.9110$

We have,

$$ExpectedReturn(\bar{R}j) = E(R_j) = \frac{\sum R_j}{n} = \frac{0.4278}{5} = 0.0856$$

$$Variance(\sigma_j)^2 = \frac{\sum(R_j - \bar{R}j)^2}{n-1} = \frac{0.9110}{5-1} = 0.2277$$

$$StandardDeviation(\sigma_j) = \sqrt{\frac{\sum(R_j - \bar{R}_j)^2}{n-1}} = \sqrt{\frac{0.9110}{5-1}} = 0.4772$$

$$Coefficient of Variation\ (C.V.) = \frac{\sigma_j}{\bar{R}_J} = \frac{0.4772}{0.0856} = 5.5748$$

The closing MPS 2006/07 is Rs 1729.

Calculation of Expected Return, Standard Deviation and Coefficient of Variation of EBL

Risk and Return of EBL

Fiscal Year	Closing MPS	Total Dividend	$R_j = \dfrac{P_t - P_{t-1} + D_t}{P_{t-1}}$	$R_j - \overline{R_J}$	$(R_j - \overline{R}j)^2$
2007/08	3132	756.5	0.6002	05295	0.2804
2008/09	2455	519	-0.0504	-0.1211	0.0147
2009/10	1630	358.2	-0.1902	-0.2609	0.0681
2010/11	1094	153.3	-0.2348	-0.3055	0.0933
2011/12	1033	311.48	0.2285	0.1578	0.0249
			$\Sigma R_j = 0.3533$		$\Sigma (R_j - \overline{R}j)^2 = 0.4814$

Where,

$$\text{ExpectedReturn}(\overline{R}j) = E(R_j) = \frac{\sum R_j}{n} = \frac{0.3533}{5} = 0.0707$$

$$\text{Variance}(\sigma_j)^2 = \frac{\sum(R_j - \overline{R}j)^2}{n-1} = \frac{0.4814}{5-1} = 0.1204$$

$$\text{StandardDeviation}(\sigma_j) = \sqrt{\frac{\sum(R_j - \overline{R}_j)^2}{n-1}} = \sqrt{\frac{0.4814}{5-1}} = 0.3469$$

$$\text{CoefficientofVariation(C.V.)} = \frac{\sigma_j}{\overline{R}_J} = \frac{0.3469}{0.0707} = 4.9066$$

Calculation of Expected Return, Standard Deviation and Coefficient of variation of BOK

Risk and Return of BOKL

Fiscal Year	Closing MPS	Total Dividend	$R_j = \dfrac{P_t - P_{t-1} + D_t}{P_{t-1}}$	$R_j - \overline{R_j}$	$(R_j - \overline{R}j)^2$
2007/08	2350	770.62	1.2695	1.0359	1.0731
2008/09	1825	405.28	-0.0509	-0.2845	0.0809
2009/10	840	186	-0.4378	-0.6714	0.4508
2010/11	570	234.98	-0.0417	-0.2753	0.0758
2010/12	628	186.613	0.4291	0.1955	0.0382
			$\Sigma R_j = 1.1682$		$\Sigma(R_j - \overline{R}_j)^2 = 1.7188$

Where,

$$\text{ExpectedReturn}(\overline{R}j) = E(R_j) = \frac{\Sigma R_j}{n} = \frac{1.1682}{5} = 0.2336$$

$$\text{Variance}(\sigma_j)^2 = \frac{\Sigma(R_j - \overline{R}j)^2}{n-1} = \frac{1.7188}{5-1} = 0.4297$$

$$\text{StandardDeviation}(\sigma_j) = \sqrt{\frac{\Sigma(R_j - \overline{R}_j)^2}{n-1}} = \sqrt{\frac{1.7188}{5-1}} = 0.6555$$

$$\text{CoefficientofVariation}(C.V.) = \frac{\sigma_j}{\overline{R}_j} = \frac{0.6555}{0.2336} = 2.8061$$

Calculation of Return, SD and CV of Overall Market Index

Fiscal Year	NEPSE Index	$R_m = \dfrac{NI_t - NI_{t-1}}{NI_{t-1}}$	$R_m - \bar{R}_m$	$(R_m - \bar{R}_m)^2$
2007/08	963.36	0.4085	0.4770	0.2275
2008/09	749.10	-0.2224	-0.1539	0.0237
2009/10	477.73	-0.3623	-0.2938	0.0863
2010/11	362.85	-0.2405	-0.1720	0.0296
2011/12	389.74	0.0741	-0.1459	0.0213
		$\sum R_m = -0.3426$		$\sum(R_m - \bar{R}_m) = 0.3884$

(Sources: NEPSE Annual Report)

Where,

Expected Return $(\bar{R}_m) = \dfrac{\sum R_m}{n} = \dfrac{-0.3426}{5} = -0.0685$

Standard Deviation $(\sigma_m) = \sqrt{\dfrac{\sum(R_m - \bar{R}_m)}{n-1}} = \sqrt{\dfrac{0.3884}{5-1}} = 0.3116$

Coefficient of Variation $(C.V.) = \dfrac{\sigma_m}{\bar{R}_m} = \dfrac{0.3116}{-0.0685} = -4.5489$

Variance $(\sigma_m)^2 = \dfrac{\sum(R_m - \bar{R}_m)^2}{n-1} = \dfrac{0.3884}{5-1} = 0.0971$

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