CHAPTER - I
INTRODUCTION

1.1 General Background of the Study

Changing nature of competition and increasing pressure of globalization on today's business world, investment management has become the most critical determinant of the economy. The most important fact of international business operation is continuous change in economic, political and social dimensions. These changes are beyond the control of international business concern. In recent years international investors are attracted towards the financial markets of developing countries. As a result many joint ventures and multinational companies are being established in the country. Most of commercial banks doing well are also joint ventures banks.

The growth of economy depends on availability of funds to finance the increased needs, not only of government and business, but also of individuals. Private domestic investment can be the contributor to economic growth and employment generation in the developing country. For the economic development of any country, public participation plays a vital role. If the people are rich, the country will be rich and people will have enough to invest on development of the country. To the extent that public investment expenditure result in the provision of public services which reduce the cost of production of the private sector, they have a positive effect on private profitability and investment: An investment in any funds is made to have some positive rate of return. Nobody is ready to bear risk without any return but to have return one must ready to face some risk. To minimize the risk at the given rate of return the concept of portfolio diversification is necessary. Portfolio is simply a collection of securities gathered to achieve certain investment goals. Usually investors diversify their portfolios to have minimum risk and maximum the return. So, to meet the investment goals there should be well-managed portfolio. Most investors hope that if they hold several securities then

even one goes bad; the others will provide some protection from an external loss.

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

➢Set investment policy

➢Perform security analysis

➢Construct a portfolio

➢Revise the portfolio

➢Evaluate the performance of the portfolio *(Sharpe; 1995:9).*

Among these investment processes the research is focused on security analysis and portfolio selection. Security analysis involves examine of individual securities or group of securities within the broad categories of financial assets. Portfolio construction identifies those specific assets in which to invest determining the proportion of the investor's wealth. Diversification should be done to minimize the risk and maximize the return. Portfolio performance involves determining periodically how the portfolio performs in terms of not only the return earned, but also the risk experienced by the investor" *(Sharpe; 1995:10-14).*

Financial market facilitates the flow of funds from surplus to deficit units. Those financial markets that facilitate the flow of short-term funds, that is, less than one year are known as money markets, while those that facilitate the flow of long-term funds are known as capital markets. There are two types of market securities. Securities having life less than one year are called money market securities and securities having life of more than one year are called capital

market securities. Money market securities generally have higher liquidity whereas capital market securities are used to generate a higher annual return to investors.

"Stock market is a financial market which probably has the greatest glamour and is perhaps the least understood. Some observers consider it as a legalized heaven for gambling and many investors consider stock marker investing as a game in which the sole purpose is picking winners" *(Lorie and Dodd; 1985:27).*

The well functioning stock market allows stockholders to achieve efficient diversification, which reduces risk, which in turn, lowers the risk premium component in the cost of capital. Stock markets lower the cost of capital by liquidating investors' investment. It encourages investors to retain their earning and convert it into cash by selling shares in the stock market. The stock market provides an opportunity to the portfolio managers and public for direct participating and sharing the gain of economic progress.

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

The concept of banking system was introduced in Nepal with the establishment of Nepal Bank ltd. in 1937 A.D. But the financial scenario of Nepal changed with the establishment of joint venture banks in 1984 A.D. Nabil Bank ltd. is

the first joint venture bank introduced in Nepal. Since the joint ventures banks introduced in Nepal, the set up of joint ventures banks are increasing day by day and domestic banks like Nepal Bank ltd. and Rastriya Banijya Bank no longer been able to enjoy monopoly. There is cut throat competition among these banks, which is healthy sign for the economic development of the country. Among the established commercial banks ten are listed in NEPSE and for this research only eight joint ventures banks are taken.

There always exists perceptible difference among investors in terms of risk and return and more than often, every investors have their own unique way of response pattern while making investment decision. Generally, investors invest their current cash only to those areas where there is high return and low risk. An investor looking for the common stock investment usually pays the price for stock based on his estimation about future dividends and grown in stock price. Investors can earn in the form of dividend or interest income and the appreciation in the price of the stock hold in stock market investment. So common stock represents a commitment on the part of a corporation to pay periodically whatever, its board of directors determine to assign as a cash dividend.

This study occupies an important role in the development of stock market. In the market, stock price can be affected by interest rate, inflation and strengths of the dollar. The risk of a stock can be measured by its price volatility and its beta, banking sector is the most dynamic part of economy, which collects unused funds and mobilizes it in needed sectors. It is the heart of trade, commerce and industry. In Nepal, foreign joint venture commercial bank perform better than other Nepalese commercial banks because of their higher management efficiency and capacity of proper risk management. Nowadays, there are number of commercial banks growing in the country and numbers of joint ventures among them are also significant. Besides commercial bank, development banks are investing their performance in Nepalese banking sector.

However this study of risk and return is basically focused on listed commercial banks of Nepal and this study analyze the risk and return associated with investment among these banks on the basis of market price of stock and dividend.

1.2 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. Common stock is comparatively risky assets than other security in the capital market. The main 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 analyzed to give an idea to get sustainable profit by diversifying the risk to avoid future loss of the common stock investment.

1.3 Statement of the Problems

Lack of information and lean knowledge is chief problem faced by individual investor who are manipulated and exploited by the financial institutions and their market intermediaries. The attitude and perception of investors play chief role in investment decision which is influenced by the information and access to the data required for analysis. Investors invest their wealth on the basis of guess and hunches because they do not have any information about the financial assets and they also lack the idea to reach to ideal investment decision. Investors purchase stocks merely looking past trend of stock prices and sometimes they have to bear heavy loss due to inadequate knowledge and information related to the stock investment.

Capital market is mat developed in Nepal so that most of people do not know about shares, bond, debenture and other securities. On other hand, there are no strong commitment towards increasing public investment in policy makers and government. Stock brokers and financial institutions have no effective programs to develop investor's knowledge. So that moreover people are

unfamiliar with the stock investment. They would rather prefer to invest in land, buildings, gold other unproductive items.

In an efficient market condition, stock price is equal to the intrinsic value of stock. When required rate of return and expected rate of return are not equal, then intrinsic value and market value of stock will not be equal. It is also assumed that all stock remain in security market line, and if the case is not so, they strive towards this line. But theoretical and practical knowledge may not always much each other.

Therefore it needs courage and at the sometime faith to invest in common stock. In most of the time which can be generated through proper evaluation with giving view to the prevailing market atmosphere. But what are the criteria for evaluation that the stock they are holding will give them favorable return? What should be the compensation they have to receive for bearing risk? How can investors make higher return through lower risk?

Some researches problems are as follows:
1. In what extent, the investors should be compensated for taking a certain degree of risk?
2. How do they know the scale and intensity of risk?
3. One expects favorable returns by holding stock. But what are the criteria for evaluation?
4. How can one make higher return assuming lower risk?

1.4 Objectives of the Study

The main objectives of this study is to assess the risk associated with return on common stock investment of the listed commercial banks on the basis of selective financial tools and techniques. Some objectives of this study are as follow:

⟩ To evaluate risk, return in common stock of selected banks.

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⟩ To make comparative study of sample banks in Nepal, in terms of overpriced, under priced or equilibrium by analyzing expected & required rate of return.

⟩ To analyze comparative risk and return position of commercial banks.

⟩ To analyze the portfolio risk and return of sample banks

⟩ To examine the market risk and market return of banking industry.

⟩ To compare the banks on the basis of market capitalization.

1.5 Significance of the Study

The analysis of the risk and return is a significant in investment decision as well as managerial decision. It influences risk and return of the shareholders. Consequently the risk and return analysis influences the market price of the stock. So before making an investment decision, a person must analyze the risk and return from particular stock as well as they can make a good risk minimizing portfolio between their investments in the stock.

In the context of Nepal, there lacks wider investment opportunities, which provides good rate of return. So there have been huge amount of unutilized saving funds with general public. In the security market, MPS of joint venture commercial bank has higher than others so it attracts the investor. Therefore they are investing their saving funds in common stock of public companies with the good expectation of higher capital gain in future. But, there seems very least consciousness about the real financial conditions of the companies and degree of risk involved in their investment.

This research is not only fulfilling MBS course of T.U, but also to provide some knowledge about Nepalese stock market development along with providing ideas to minimize the risk on stock investment. This study will be helpful for other researcher in the area of investment as it provides suggestion to some extent.

1.6 Limitation of the Study

This study is to fulfill the requirement of Master Degree in Business Studies. It cannot cover all the dimension of the subject matter and resource. The major limitations of the study are as follows.

1. This research concerns only risks and returns common stock of the listed companies.
2. The accuracy of data's are depends upon the data collected and provided by the organization.
3. Analysis is based on secondary data.
4. Data from part time frame i.e. latter seven years will be used.
5. The research will be concerned with certain listed commercial banks only.
6. Time and financial constraints are also major limitation of the study.

1.7 Organization of the Study

This research has been organized in five chapters. The titles of this chapters are listed below:

Chapter-I: Introduction

This chapter is introductory and deals with subject matter of the study including general background of the study, problem of the study, objectives of the study, significance of the study, limitation of the study, organizing of the study etc.

Chapter- II: Review of Literature

This chapter contains the profound review of available literature related to the area of this study. It is directed towards the review of conceptual framework and review of major related studies. Risk and return, its relationship, determinants, measuring techniques and methods etc. are reviewed from the various available literatures.

Chapter-III: Research Methodology

This unit presents research methodology used in the study which includes various tools and techniques of data. It consists of research method as library research and field research, sources of data, population and sample, research design, methods of data analysis etc.

Chapter- IV: Data Presentation and Analysis

This chapter presents the analysis and presentation of data by using various methods of statistical and financial tools. Tables, pie charts, etc. will be used accordingly.

Chapter-V: Summary, Conclusion and Recommendations

This chapter is for summary of main findings conclusion, recommendation and suggestions for further important.

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CHAPTER - II
REVIEW OF LITERATURE

It is very important to study the materials on the topic of research and that is called review of literature. Review of literature deals with the theoretical aspect of the topic on risk and return on common stock investment in more detail and descriptive manner. This chapter helps to take adequate feedback to broaden the information base and inputs to study. This chapter reviews same basic academic courses books, journals and others related studies.

2.1 Conceptual Framework

Various books are reviewed which are related with topic, which may helpful to understand clearly about risk and return. The objective of this section is to know how various writers have described about risk and return.

This study is focused on the common stock investment. It is may be defined as a share in the ownership of the firm. Common stockholder are real owner of business firm common stock are more risky than both preferred stock and bond but it has also benefit like voting right, right in participation in profit. And common stock may be purchase and sold immediately.

"Common stock represents ownership status in a firm. It has a residual claim, in the sense that shareholders can receive earnings only after the payment of all others claims of securities. But it has also an unlimited potential for dividend payment through increasing earnings and for capital gains through raising prices. The risk is highest with common stock investment. Common stock holders usually have voting rights in the management of the corporation bond holders and usually holders of preferred stock have no voting rights. Since the value of common stock depends largely on its earning, it is often issued with on par value. In the case of bankruptcy common stock holders are in the principal entitled only to assets remaining after all period claimants have been satisfied

when investors buy common stock, they receive certificate of ownership as a proof of there being part of the company. The certificate states the number of shares purchased and their par value" *(Bhalla; 2000: 196).*

"Common stock holders are the owner of the corporation. As owners, common stock holder have certain rights, the most important are the right to participate in profit distribution, the right to vote etc. From the corporation viewpoint, common stock represents a fund raising device. From the investors viewpoint, stock ownership gives the stockholders an opportunity to share in the profit when declared as dividend, an opportunities to make money on appreciation in the value of the securities and the opportunity to vote for directors of the corporation" *(Bradley;1993:104).*

The firm's common shareholders are right to receive dividends, if and when they are declared by board of deserters. Dividends are the profits (earnings) of share, which are distributed among all the outstanding shares of common stock. The common stockholder also have the right to elect the members of the board of director, the right to inspect the firm's books and the right to obtain a list of the names and address of other shareholders.

Return is reward received from investment for Sacrifice of present certain amount of assets. Return is the motivational factor, encourages investors to sacrifices some certain amount of assets for uncertain benefit in future.

"The return from holding an investment over some period says a year is simply any cash payments received due to ownership plus the change in market price of stock, derived by the beginning price" *(Van Horn, James and Wachowicz; 1995: 09).*

Return is the income received on investment plus any change in market price usually expressed as a percent of beginning price of the investment "Although

a return on investment is not necessarily guaranteed, it is expected return that motivates people to invest. Every investment doesn't guarantee a return. The return on investment may be made up of more than one source of income.

There are two kinds of return that investor receives from common stock.
i. Current income: It is received periodically in forms of dividends from stock.
ii. Capital gain: The second dimension of return is concerned with change, if any in the market value of a stock. Investors pay a certain amount for stock from which they expect to receive not only current income, but also the return of the invested funds sometimes in the future.

Return is the key variable in the investment decision because this measure allows us to compare the amount of actual or expected gain provided by various investments.

Historical performance: Most people agree that past data often provide a meaningful basis for formulation of future expectation. A common practice in the investment world is to look closely at the historical performance if a given investment when formulating expectation about its future performance.

Expected return: It also can be used in investment decision process rather than historical behaviors. It is what you think the stock an bonds will earn in the future (in terms of dividend/interest plus capital gain) that determines what an investor should be willing to pay for a security.

Return on common stock also known as single period rate of return. It is cash received as dividend plus changes in price of stock. We can calculate actual return of common stock with the help of cash dividend and stock price of

previous year and current years. The rate of return formula can be restated in a form appropriate for almost any investment.

Single period rate of return (r_t) = $\dfrac{\text{Ending Price} - \text{Beginning Price} + \text{Dividend}}{\text{Beginning Price}}$

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

Where,

P_t = Stock price at the end of period t.

P_{t-1}= Stock price at the end of period t-1.

D_t = Cash dividend received during the tth period *(Western & Brigham; 1995:80).*

This formula can be used to calculate both actual single period return (base on historical data) as well as expected single period return (based on expected dividend and price).

Annualized rate of returns are several period can be calculated in two ways. The first one is simply to take the arithmetic average of the annual holding period returns over a given period and the second one, which also takes into account the compounding effects of cash receipts over different time intervals, is the geometric mean rate of return.

The simple arithmetic mean, $E(r_t) = \dfrac{\sum\limits_{t=1}^{n} r_t}{n}$

Where,

$E(r_t)$ = arithmetic mean of return

n = Number of year

r_t = single period rate of return

For investors, return is considered as the main attraction to invest in a risky security as a stock accepting a varying degree of risk tolerance

"Risk and return are the determinant for the valuation of securities. However risks means that we do not know what is going to happened even though we occasionally have a good idea of the range of possibilities that we face. Therefore, risk may be defined as the like-hood that the actual return from an investment will be less than the forecast return. Started differently, it is the variability of return from an investment" *(Hampton; 1996:345).*

"Risk, defined most generally, is the probability of the occurrence of unfavorable outcomes. But risk has different meaning in different context. In our context two measures developed from the probability distribution have been used as initial measures of return and risk. These are the mean and the standard deviation of the probability distribution" *(Weston and Brigham; 1995: 93-94).*

Risk is the fact of life, which is a product of uncertainty and its magnitude depends upon the degree of variability in uncertain cash flows. Risk, in fact is an indication of chance of losing investment value. Different people interpret risk in different ways. To some it is simply a lack of definite outcome, which can be any unknown event, which may be unfavorable. It is a chance of happening some unfavorable event or danger of losing some material value.

Risk, as defined above, is the deviation between actual return and expected return. Various factor play important role to bring such deviation or variability. Such variability statistically is measured by standard deviation. The degree of risk of common stock is measured by the standard deviation. We can measure risk by examining the tightness of the probability distribution associated with the possible outcomes. It is widely used to measure risk form holding a single assets. Greater the standard deviation represents a high dispersion of return and is a greater the risk.

On the other hand smaller deviations are a low dispersion and represent smaller risk. Standard deviation is donated by the '∃' (sigma) symbol. It can be expressed mathematically as:

$$\exists = \sqrt{\frac{\sum_{t=1}^{n} \left(r_t - E(r)\right)^2}{n}}$$

where,

∃ = Standard deviation

r_t = Return for t^{th} possibility

E(r) = Expected rate of return

n = Number of years

"Financial analyst and statisticians prefer to use a quantitative risk surrogate called the variance of returns, denoted var (r). The variance is well known among statisticians, several hand calculators and computers are programmed to calculate it. The variance of an asset's rate of return equals the sum of the products of the required deviations of each possible rate of return from the expected rate of return multiplied by the probability that the rate of return occurs.

$$Var\ (r) = \frac{\sum_{t=1}^{n} \left(r_t - E(r)\right)^2}{n}$$

The square root of the variance of the rates of returns is called the standard deviation (∃) of the rate of return.

$$\exists = \sqrt{Var(r)}$$

The standard deviation and the variance are equally acceptable and conceptually equivalent quantitative measures of an asset's total risk *(Francis, Jack Clark; 1991:12 –13).*

"The standard deviation can sometimes be misleading in comparing the risk or uncertainly surrounding alternatives if they differ in size. To adjust for the size or scale, problem, the standard deviation can be divided by the expected return to compute the coefficient of variation (C.V.).

Coefficient of Variation (C.V.) = $\dfrac{\overline{}}{E(r)}$

Where,

Ǝ = Standard deviation

E(r) = Expected rate of return.

The coefficient of variation is a measure of risk per unit of expected return. The larger the C.V., the larger the relative risk of the investment" *(Van Horne and Wachowich; 1995:94).*

C.V is the ratio of the standard deviation of a distribution to the mean of that distribution which is the measure of the relative risk. Total risk of stock is measure by the standard deviation and total risk is composition of systematic risk and unsystematic risk.

The systematic risk is also known as the UN diversifiable risk. It cannot be diversified. This risk is that portion of total variability in return caused by market factor than simultaneously affect the prices of all securities. Systematic risk is due to that factor, which affect the overall market such as changes in the macro economic factors like, interest rate, inflation, expectations of investors, gross domestic product, tax reform by the government etc. Moreover, it is the cause of external environment of the firm. Unsystematic risk can be reducing through diversification. This type of risk is unique to an organization and can be largely eliminated by holding a diversified portfolio of investment. Diversifiable risk creates through the events like, labor strikes, management errors, inventions, advertising campaigns, availability of raw materials etc. The relation among total risk, systematic risk and unsystematic risk are shown below.
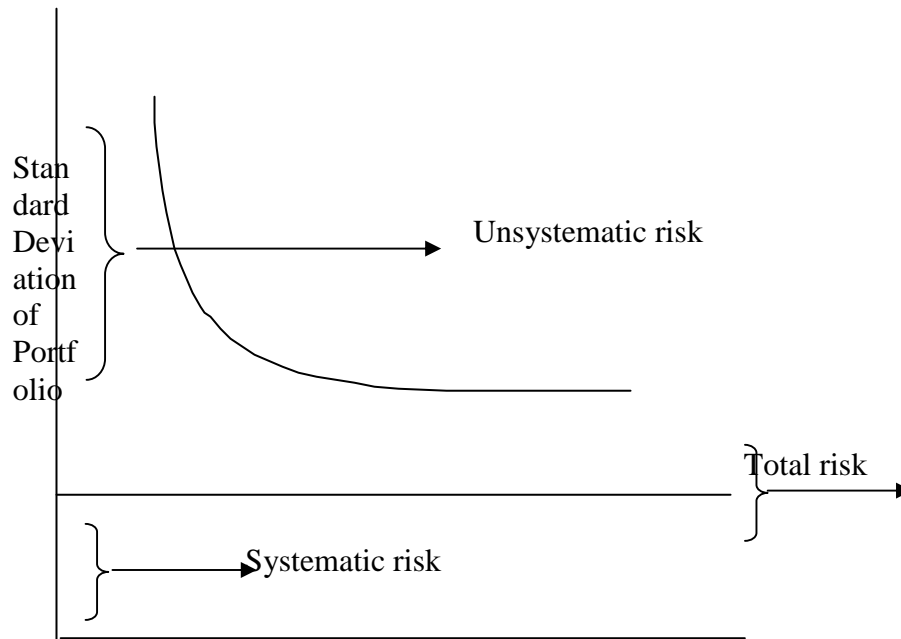
Total risk = systematic risk + unsystematic risk

Systematic risk = b^2 Var ($\exists_m$)

Unsystematic risk = $\exists_j$ - b^2 Var ($\exists_m$)

Figure 2.1

Total Risk, Systematic Risk and Unsystematic Risk

"For most stocks, unsystematic risk accounts for between 60 to 70 percent of stocks total risk or standard deviation" *(Horn and Wachowich; 1995:9).*

Investor invest in only one in the stocks of company is exposed total risk that includes both systematic and unsystematic risk the proportion of unsystematic risk can be avoid by diversification of investment in many company. If the number of security in the portfolio increases, the total risk curve will be decrease and finally reaches to the level of systematic risk. A portfolio containing all the repeatable stocks is completely diversified and its total risk is equal to the market average risk.

Portfolio is combination of individual or a group of assets. Portfolio is the holding of securities and investment in financial assets like, common stock,

preferred stock, bound, debenture etc. Investors have different types of investment opportunity but they have limited resource for investment so that investors have to select that investment, which maximizes return for a given level of risk. Therefore it is needed to extent analysis of risk and return to include portfolio. There are two types of objectives, primary objective and secondary objective. The primary objective of portfolio are to maximize return and to minimize risk and secondary objectives is regular and stable return, safety of investment, appreciation of capital, tax benefits etc.

The expected return on a portfolio is simply the weighted average of expected returns on the individual assets in the portfolio with weights being the fraction of the total portfolio invested in each asset.

CAPM is a model that describes the relationship between risk and expected return. It explains the behavior of security price. It also describes how the price and interest rate on risky financial assets are determined in the capital market. In this model, a security's expected return is the risk free rate plus a premium based on the systematic risk of the security, where risk is measured by the beta coefficient.

"CAPM provides a measure of risk and method of estimating the market's risk return line. The market or systematic risk of security is measured in terms of its sensitivity to the market movement. This sensitivity is referred to the security's beta. Investors can eliminate unsystematic risk when they invest their wealth in a well diversified market portfolio *(Pandy; 1995:344).*

Harry M. Markowitz laid down the foundation of modern portfolio theory in 1952. Capital assets are the long term financial as well as real assets and CAPM is based on the pricing of assets. Modern portfolio theory of Markowitz suggests that the investment decision should base on the total risk and price of assets should also be determined on the basis of total risk. But the CAPM

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suggests that, any investor can create a portfolio of assets that will eliminate virtually all diversifiable risk, the only relevant risk is non diversifiable risk, therefore, the investment decision and pricing of assets should be based on the un-diversifiable risk. This is the primary importance of selecting assets with the most desired risk return characteristics. The CAPM further suggest that the price of capital assets should determine in a way that to compensate the systematic risk.

"The major implication of the CAPM is that the expected return of an assets will be related to measure of risk for that assets known as beta (β). The model provides the intellectual basis for a number of the current practices in the investment industry" *(Sharpe et al; 2000:47).*

'Based on the behavior of risk averter investors, there is an implied equilibrium relationship between risk and expected return for each security. In market equilibrium a security is supposed it provide an expected return commensurate with its systematic risk of a security. Greater the systematic risk greater the return that investors will expect from the security. The relationship between expected return and systematic risk and the valuation of securities that follow, is the essence of Noble laureate William Shaper's capital assets pricing model (CAPM)" *(Horne and Wachowitz; 1996:49).*

"The graphical version of CAPM is called the security market line which shows the relation between risk and the required rate of return" *(Chandra; 1994:59)* The security market line clearly shows that return is the increasing function. The SML equation as suggested for the computation of expected rate of return on common stock. The model is,
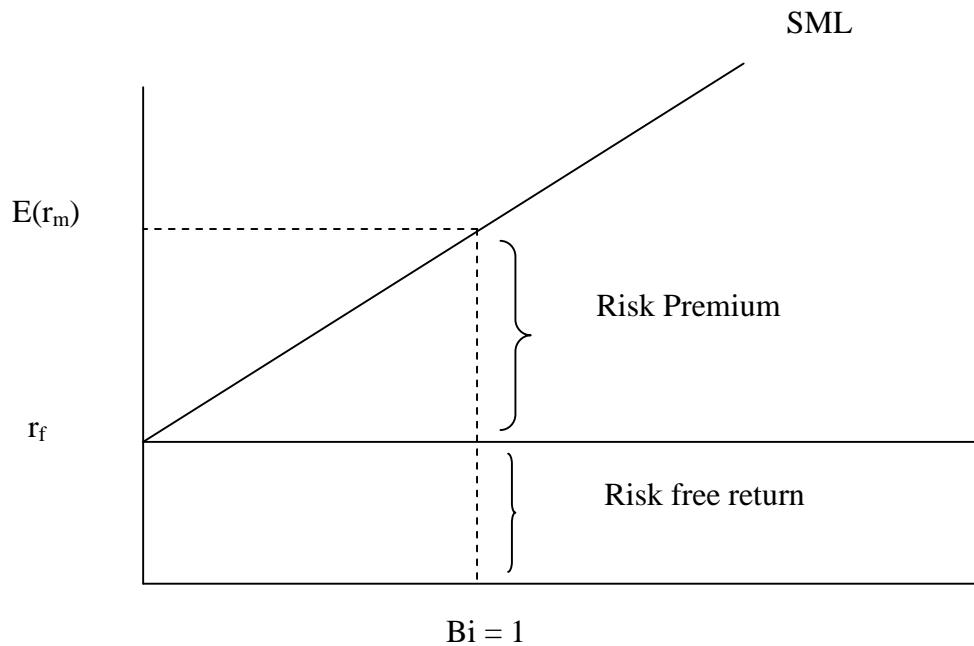
$$E(r_j) = r_f + [E(r_m) - r_f] \beta_j$$

Where,

$E(r_j)$ = Expected return on security j.

r_f = Risk free rate.

$E(r_m)$ = The expected market return.

β = Assetsbeta

Figure 2.2

Security Market Line

(Source: Van Horne and Wachowitz; 1996:49)

"In market equilibrium the required rate of return on stock equals its expected return. That is all stocks will be on the security market line, what happens when this is not so? The primary concern of portfolio management is to identify the overpriced and under priced of security. Overpriced and under priced securities are identified either comparison of their value with market price or compassion of required rate of return and expected return.

Figure 2.3

Under Price and Over-Priced Stock During

Temporary Market Disequilibrium
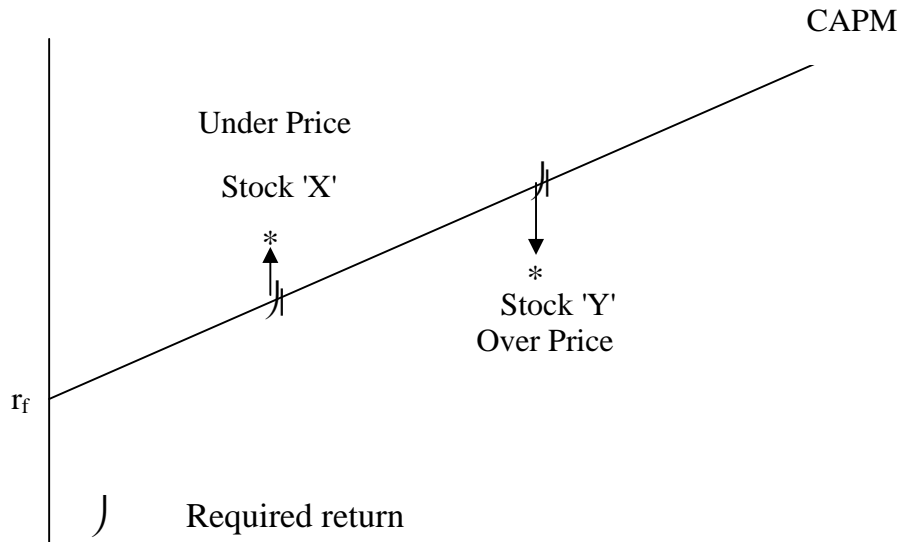
*   Expected return

As a result, stock 'X' is expected to provide a rate of return greater than the required, base on its systematic risk. Stock 'Y' is expected to provide a lower return than required to compensate for its systematic risk. Investors seeing the opportunity for superior returns by investing in stock 'X' should rush to buy it. In the case of stock 'Y', investors holding this stock would sell it, recognizing than they could obtain a higher return for the same amount of systematic risk with other stocks" *(Clark; 1987: 654-655).*

The CAPM is based on the efficient market hypothesis and provides a basis to measure the systematic risk in terms of covariance of its return with the market return.

2.2 Reviews from Related Studies

In this section of review various studies are reviewed related with the topic. The objective of this section is to show how the relation between risk and return is defined, described and measured by different studies. It also helps us to understand more about risk and return.

2.2.1 Review from Journals

Enally and Ravenscraft (1999, June) in "*The performance of Hedge Funds: Risk Return, and Incentives*" journal of finance, have examined "Hedge funds may be enhancing returns by taking on extra risk. Many hedge funds use tools designed to reduce systematic rather than total risk. Though this is obviously true for short sellers and market neutral funds techniques such as short sales are employed by most hedge funds. Combination of incentives alignment and investment flexibility gives hedge funds a clear performance advantage over funds. Incentive funds are the most important and significant determinants of risk adjusted return. Using 2,4,6 and 8 year sample all ending in December 1995 with 547, 272, 150 and 79 hedge fund observations, main findings of this study are the average hedge fund sharp ratio is higher than comparable mutual fund sharp ratio and this performance advantage increases when we match fund by reign Hedge funds achieve this sharp ratio superiority despite their higher total risk. In this study, the average total risk is higher for hedge funds. Thus, some of the characteristics that enhance hedge fund performance may not be appropriate for mutual funds that attract undiversified, risk-averse clients.

This hedge fund concluded that the Flexible investment options employed by hedge funds make it difficult to classify hedge funds, identify the correct benchmark, and thus measure relative performance. Standard deviation of returns measure of total risk may not fully capture the complex risk taking from hedge funds dynamic, highly levered strategies. Monthly incentive fees, therefore, contain an unknown reporting bias that may be as important as depreciation rates, common cost allocation, and transfer pricing issues in accounting profits.

Bowman (1988, Feb) in *"The theoretical relationship between systematic risk and financial variable"* examined the relationship between risk and financial variables. Systematic risk of livered firm is equals to the systematic risk of the same firm without leverage. There is no direct relationship between earning

variability and market risk. Systematic risk is directly related to the accounting beta. There is no theoretical basis for relationship of dividend payout and beta. There is not only theoretical relationship between dividends and systematic risk but also size and growth of the firm and systematic risk.

This study shows that there is a theoretical relationship between systematic risk and firms accounting beta and systematic function are not a function of earning variability, dividends policies and size and growth of firm".

Mitchell and Pulvion (1987, Aug) in "characteristics of Risk and return in Risk Arbitrage". Journal of finance, had to determine whether the returns to risk arbitrage reflect market inefficiencies or rewards for bearing rare-event risk over the 1963 to 1986 time period.

"Using a comprehensive sample of cash and stock-for-stock mergers, we examine returns generated from risk arbitrage. For constraints merger an investment in any merger cannot exceed 10 percent of total capital, sizes are limited by the liquidity of the under lying securities. The index fund must have an adequate amount of cash reserves to undertake the investment.

In most market environments, risk arbitrage returns are uncorrelated with market returns however, during market downturns, the correlation between market returns and risk arbitrage returns increases dramatically. From this study suggest that risk arbitrage returns are similar to those obtained from writing uncovered index put options. Risk arbitrage may be better evaluated using a contingent claims analysis rather than a liner asset pricing model such as CAPM. However, this analysis shows that when measuring excess returns, the error associated with CAPM is significant only when the nonlinearity in returns is severe. This tends to be the case in time periods when cash, rather than stocks, is the predominant from merger consideration. Although linear

assets pricing models mark the true risk in risk arbitrage, they do not result in large errors when measuring excess returns".

2.2.2 Review from Nepalese Studies

In the topic of finance very few independent studies can be found. However, the available independent studies which are related to the Nepalese stock market and about shareholders democracy, views expressed by different person in their articles regarding risk and return of common stock of commercial banks are presented or reviewed here in the topic.

Pradhan and Balampaki (2004) conducted a study on "*Fundamental of Stocks Return in Nepal*" based on pooled cross sectional data of 40 listed companies in NEPSE Ltd and traded in the stock market. The study examines if dividend yield, capital gain yield and total yield are related to earning yield, book to market ratio and cash flow yield. Pradhan and Balampaki have summarized the following results.

⎰ Earnings yield and cash flow yield have significant positive impact on dividend yield, and an insignificant impact on book to market value, whereas, size has negative impact on dividend yield. In the case of earnings yield and cash flow yield, cash flow yield has been found to be more informative than earnings yield.

⎰ Capital gain yield is positive influenced by earnings yield and size, whereas, the same is negatively influenced by book to market value and cash flow yield. Book to market value has been found to be statistically strong in predicting capital gain yield.

⎰ Similarly, total yield is positively determined by earnings yield and size, whereas, the same is negatively determined by book to market value has been found to be more informative than other variables.

⎰ The positive relationship exists among earnings yield, book to market value and cash flow yield. However, the size is negatively related to these three variables".

Sherestha (1992), entitled "*Shareholders Democracy and Annual General Meeting Feed Back*" critically analyzed the situation of common stock investors and the situation that is not improving till date.

Shrestha's study has been divided into two part. The first part includes view on the rights of the shareholders regarding how they can exercise then in democratic perspective and second part consists of feedback and the issues raised by shareholders at different annual general meeting of Public Limited Companies and financial institutions.

"In this study, he mentions that government is not interested in formulating separate act to protect the right of shareholders, although the size of shareholders population in Nepal has been growing constantly and, he has viewed the need of separate act regarding the protection of shareholders right. Company and others acts relating to financial and industrial sector has provisioned rights of the shareholders as:

    i.   Voting right

    ii.   Participation in general meeting

    iii.   Right of getting information

    iv.   Electing as a board of director

    v.   Participation in the profit and loss of the company

    vi.   Transferring shares

    vii. Proxy representation

The collective rights of the shareholders are:

    i.   Amend the internal by laws

    ii.   Authorize the sale of assets

    iii.   Inter into merger

    iv.   Change amount of authorize capital

In many cases of the existing authoritarian mentality of management seems to have not considered the shareholders in deciding the managerial plans and policies. Top level decision often by passes the interest of shareholders. As the management lacks serious concern about the protection of shareholder's rights and expectations. The annual general meeting has become a platform for shareholders to express opinions and grievance in front of the management and board of directors. Many general meetings feedback reveal no serious response to the felling of shareholders. It reflects unwillingness of the management and board of directors to change their traditionally held activities towards shareholders.

Khagendre Prasad Ojha (2000), entitled "*Financial Performance and Common Stock Pricing*" concluded that: An investment in common stock of a corporate from neither ensures annual return nor ensure the return of principle. Therefore, investment in common stock is very sensitive on the ground of the risk. Dividend to common stockholders is paid only of the firm marker on operating profit after tax and performance dividend. The company can return the principal in case of its liquidation only to extent of the residual assets after satisfying to all of its creditors and preferential shareholders. Besides this, investor have to sacrifice the return on their investment in common stock, which could be earned investing fund elsewhere in the next best opportunity.

The Study focused on the financial performance where financial activities involve decision regarding

- Forecasting and planning of financial requirement.
- Investment decision
- Financial decision

Further, Ojha added that the stock price in Nepal is determined more by other factors rather than the financial performance of the concerned company.

2.2.3 Review from Thesis

Review of thesis is a section of review of literature where various theses are reviewed which are related its topic and which may be helpful for this study. In this section some thesis are reviewed which have done on risk and return topic and the objective of this section is to know how the relation between risk and return is described and measured by different thesis.

Pandey (2000) entitle of "*Risk and Return Analysis of Common Stock Investment*". In her study, she has taken 7 listed insurance companies data from 2049 to 2056.

She focused on following objectives: -
) To understanding and identify problems faced by an individual investor and insurance company.
) To calculate the risk and return of the common stocks and their portfolio.
) To analyze the volatility of different stock of insurance companies and other variables that should be considered while deciding investment in stocks.

Pandey has used following methodology
) Study design.
) Population & Sample
) Secondary data collection techniques.
) Data Analysis tool included: - MPS, DPS, Expected return and Hypothesis testing

Pandey obtained following findings   from the study in terms of risk and return is as follows: -

Although overall objective of his study is about investment in common stock, it is mainly concentrated on the risk and return trade off economically Nepal is

backward; it is economic performance is not satisfactory. Generally Public are rest understood about the stock market and have fake conceptual thoughts about its risk. Poor education and lack of adequate Source of information are the major Constraints for the development of stock market of Nepal

Based on market capitalization, size of NIC is the biggest one. Expected return on the common stock of NLGI is maximum (i.e. 65.39%). This high rate of return is due to unrealistic annual return in 2050\51. Expected return on common stock of HGI and EIC is lowest with negative value. In overall industrial sector, expected return of finance and industrial sector is highest. . Overall, market expected return is 50%. Annualized return is unexpectedly high in FY 2050\51 and then declines in the preceding Years. This is all about return.

When risk and return compared to different industries, finance and insurance is best as per highest expected return with higher degree of risk whereas trading industry has minimum return and risk.

In Nepal, however, in terms of the volume of transaction the situation of the capital market, according to NEPSE sources has remained quite optimistic, in aggregate, commercial banks occupy large percentage of traded amount whereas insurance sector is being low responsive towards its trading Though it is difficult to estimate the exact volume of business potential in insurance, one can have a rough idea by looking at the insurance depth compared to the potentials in the business, the figure is too low, which is also agreed by both the insurance board and insurance companies they accuse government for not doing enough to realize the potentials. Premium collection per capital of population is quite less not even a dollar.

Pandey has recommended which are related to the study are as follows:

One of the study most important things to consider when choosing an investment strategy is the balance between risk and return that you are comfortable with.

Having all of your egg in one basket can be a risky proposition. It is better to invest in mutual funds; however having all investment in on type of mutual fund still exposes investors to the risk of that asset class. The best way to diversity against market risk is to hold different asset classes in your portfolio that behave differently (not highly correlated). The institution is that an asset with a low correlation to the tangency portfolio is desirable.

Stock market investment is a risky job. To win the stock market, investors should always be clear to his own –strengths, weaknesses, needs desires risk taking capabilities and how to react on different and ever changing market conditions This is one game where self Knowledge, superior forecasting ability, sound understanding on the information of stock market can give a winning edge to the investor.

In most countries, an organization publishes updated information periodically informing the public about its economic condition in Nepal, it is lacking.

There should be an institution to analyze the information provided by the companies' sand to process them to make them understandable by general investors.

There is complete absence of sensitive index of stock prices and government is not much concerned to conduct a survey of investors in Nepal.

Whatever be the drawbacks, stock market investment is important to improve the lives of people and to push the economic state of the country. So, we along with government, regulating authority, the stock exchange listed companies etc

should understand their perspective roles and should give proper attention to play their roles with sincerity.

Sapkota (2001) entitled "*Risk and Return Analysis in Common Stock Investment*" had the main objective to analyze the risk and return of the common stock in Nepalese stock market. This study is focused on the common stock of commercial bands. Mr. Sapkota found that the banking sector is the biggest one in terms of market capitalization and turnovers. Expected return on the common stock of Nepal Bank Ltd is maximum (i.e. 66.99%) and common stock of Nepal SBI Bank Ltd. is found minimum. Common stock of NBL is the most risky and common stock of Nepal SBI is the most risky and common stock of Nepal SBI is least risky. Sapkota has concluded that common stock of Nepal Bangladesh Bank is the best one for investment. On the other hand, portfolio return between the common stock of Nepal Grind lays Bank and Nepal SBL is 26.66 percent but portfolio standard deviation is only 14.97 percent, which is less than single stocks standard deviation.

Sapkota has recommended reducing the risk; investors should diversity this fund proper construction of portfolio never creates any considerable less. Private investors should try and work out their attitude towards the risk of various investment and GON needs to manage the trading of government securities in NEPSE."

Upadhaya (2001) entitled "*Risk and Return on Common Stock Investment of Commercial Bank in Nepal*" With the objectives to evaluate the common stock of the listed commercial banks in terms of risk and return and to perform sector wise comparison on the basis of market capitalization from study. Mr. Upadhaya found the common stock of Nepal Grind lays Bank (Now Standard Chartered Bank) bears the maximum rate of return (127.84%) and Nepal SBI Bank has minimum (7.77%) rate of return. In the context of industries or

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sector, expected return of other sector is highest and manufacturing and production sector is found least performer.

This study had analyzed that "High Risk High Return" because in this study it has found common stock of NGBL is most risky and Nepal SBI is least risky. Common stock of Everest Bank is most volatile, common stock of Nepal Indosuez Bank is the least volatile and common stock of all the commercial banks is overpriced. Mr. Upadhya has recommended for the portfolio construction, to select the stock that have higher return with not correlated or negatively correlated stocks otherwise stock cannot be diversity risk properly."

Shakya (2001) has conducted her master's thesis in "*Risk and Return Analysis on Common Stock Investment*" with the specific objectives of study are to assess the general investors perception, attitude and awareness towards risk associated with return, to calculate risk and return of selected securities and there portfolio and to analyzed the volatility of common stocks and other valuates. The Researchers' result reveals that 58.3 percent investor consider return, and 33.3 percent investor consider risk before investing: To invest in common stock 50 percent prefer primary market, 21.7 percent prefer secondary and 28.3 percent of total investor prefer bath market. 71.7 percent of total investors give first preference to the banking sector. 46.7 percent investors have knowledge about correlation coefficient, 48.3 percent of total investors prefer C.V and 36.7 percent prefer S.D. for measuring risk.

Shakya recommended that, if negatively correlated assets are combined in portfolio, the risk can be minimized to some extent only negatively correlated assets which are favorable with view paint of diversification.

Shrestha (2005), has conducted a study on, *"Analysis of Risk and Return on Commerical Banks of Nepal (with reference to HBL, NABIL, SCBNL and NBBL."* The main objective of this study is to asses the risk associated with

return on the common stock investment. The other specific objectives of the study are;

a. To measure the systematic and unsystematic risk of the individual bank.
b. To study the risk return of the individual bank.
c. To find out the relationship between earning per share and market price per share of the commercial banks.

The major findings of the study are;

a. The expected return on common stock of NBBL is highest, i.e. 31.27%. The reason of expected return being so high is the effect of unrealistic annual return in 199/00. Expected return of Himalayan Bank is the lowest, i.e. 11.65%. Other common stocks having higher return are common stock of NABIL and SCBNL, which is 30.55% and 29.72% respectively.

b. In terms of risk, common stock of NBBL is most risky while SCBNL is least risky. NBBIL has standard deviation of 77.27 and it has the highest expected return. The security of NBBIL is quite risky. Therefore, it is not always true that a riskier asset will pay a higher average rate of return. Similarly, the S.D. of NABIL and SCBNL is 50% and 30.36%.

c. The correlation between return of individual Banks and market portfolio have positive correlation which represents that if market return increases the return of the sampled banks also increases or vice versa.

d. All the selected banks are earning more than required rate of return. Therefore, it can be said that all the stocks are underpriced, which implied that they are the stock with a good investment opportunity. Among them, NABBL is the best investment due to high expected return which is 35.27%.

Manandhar (2006), has conducted a study on, *"Risk, Return and Investment of Commercial Banks in Nepal."* The main objective of the study is to analyze the

risk, return and investment of commercial banks in Nepal. The specific objectives of the study are;

a. To analyze the risk and return and portfolios of different common stocks.

b. To analyze the volatility of different stock and other relevant variables.

c. To identify correlation between return of commercial banks under study.

The major findings of the study are;

a. The return behavior of NABIL bank is fluctuated during the period of the study. The return patterns of NABIL bank for the periods 2057/58, 2058/59, 2059/60, 2060/61 and 2061/62 are 20%, -51.33%, 12.86%, 43.92% and 57.50% respectively.

b. The return behavior of SCBL bank is fluctuated during the period of the study. The returns patterns for SCBNL bank for the periods 2057/58, 2058/59, 2059/60, 2060/61 and 2061/62 are 13.05%, -21.87%, 22.19%, 13.11% and 41.26% respectively.

c. The return behavior of HBL bank is fluctuated during the period of the study. The return patterns for HBL bank for the periods 2057/58, 2058/59, 2059/60, 2060/61 and 2061/62 are 7.5%, -26.09%, 4.73%, 0.48%, and 36.67% respectively.

d. The return behavior of NIBL bank is fluctuated during the period of study. The return patterns for NIBL for the periods 2057/58, 2058/59, 2059/60, 2060/61 and 2061/62 are -17.92%, -13.17%, 7.24%, 20.13% and 53.40% respectively.

e. The standard deviation of NABIL, SCBL, HBL and NIBL is 42.01%, 22.90%, 22.24% and 28.76% respectively. Similarly, the beta coefficient of NABIL, SCBL, HBL and NIBL is 1.3741, 0.7039, 0.7060 and 0.8222 respectively.

Pariyar (2007), has conducted a study on, *"Risk and Return Analysis of Listed Finance Companies of Nepal."* The main objective of the study is to undertake

the risk and return analysis of the common stock of finance companies. However, the specific objectives of the study are as follows;

a. To analyze the holding period return (HPR) and its risk.
b. To assess the volatility of individual stocks, i.e. market sensitivity of the stocks.
c. To assess the systematic and unsystematic risk of the stocks.
d. To identify whether the stocks of the companies are correctly priced or not.

The major findings of the study are;

a. The average return on the CS of Mahalaxmi Finance is the highest, i.e. 57.06% and that of NFCL is the lowest, i.e. 10.22%. On the basis of return, CS of MFC appears the best among the sampled finance companies.

b. Regarding the risk characteristic, the common stock of NFL has the lowest risk, i.e. 27.52% and that of MFC has the highest, i.e. 84.65%. In terms of risk characteristic, the CS of NFL is the best one for investment. All the finance companies are more risky than market.

c. The beta coefficient of ACE is the highest, i.e. 2.89 and that of NFL is the lowest, i.e. -0.02 among all. Hence, the stocks of ACE are the most volatile and most risky and the stocks of NFL are the least volatile and least risky.

d. Required rates of return of NFCL, AFCL, PFL, NABBC, NFL, ACE, YFC and MFC are 1.08%, -5.61%, -5.93%, 1.41%, 4.56%, -12.56%, 1.05% and 1.98% respectively. Where average rate of return of these companies are 10.22%, 54.01%, 12.26%, 43.64%, 31.88%, 35.41%, 28.32% and 57.06% respectively. Since required rate of returns of all the companies are less than the average rates of return of all the companies are less than the average rates of return, the stocks of all the sampled finance companies are under priced in the market.

Pathak (2008), has conducted a study on, *"Analaysis of Risk and Return on Stock of Slected Finance Companies Listed in Nepal Stock Exchange Ltd."* The main objective of the study is to evaluate the risk and return associated with common stock investment of selected (six) finance companies listed in Nepal Stock Exchange. The specific objectives of the study are as follows:

a. To see the portfolio risk and return of selected finance companies.

b. To analyze the relation among the returns of selected finance companies.

The major findings of the study are;

a. Among the selected finance companies, only Citizen Investment Trust (CIT) and Ace Finance Company Limited have favorable expected rate of return, which are 20.70% and 11.35% respectively. Citizen Investment Trust has larger expected return i.e. 20.70% and National Finance Company has lower expected rate of return, i.e. 0.101. The average expected return of finance companies is 19.05%. This is considered as the average return.

b. All the investment involved has certain amount of risk (i.e. standard deviation). The investment on Citizen Investment Trust involves the highest risk, i.e. 86.51%, whereas Kathmandu Finance Company has the lower risk of 22.34%. The average risk on finance company investment is 43.56. Most of the finance company has the risk less than the average. The average risk on finance company investment is 43.56. Most of the finance company has the risk less than the average.

c. The highest value of CV is 1.053 for Ace Finance Company Ltd. Where as the lowest value of CV is for Peoples' Finance Ltd., i.e. -7.71 which indicated that the Re 1 returns from finance companies involve less risk than 1. The average CV for finance companies is -1.27, which indicates that there is low risk associated with investment on stock of finance company.

d. The highest value of , i.e. degree of systematic risk for finance companies is 1.15 for Samjhana Finance Company Ltd. Whereas lower beta for Peoples Finance Limited i.e., 0.13. The average value of is 0.5450. Majority of finance companies have the value of beta less than 1. The value of beta suggests that the majority of finance companies stock volatility is less than the market volatility and they are defensive stock.

e. The average of SR and USR for finance companies is 10.10 and 35.90 respectively. The highest value for SR is 23.56 for Samjhana Finance Company and lowest for National Finance Company, i.e. 2.1. Similarly, the highest value of USR is 70.9 for Citizen Investment Trust and lowest is of 5.4 for National Finance Company.

CHAPTER - III
RESEARCH METHODOLOGY

The research methodology is the systematic way of solving research problems. This chapter refers to the overall research processes, which is a researcher conducts during his/her study. It includes research design, sources of data, analytical tools, and procedures of collection and analysis of data. Research is systematic and organizational effort to investigate a specific problem that needs a solution. This process of investigation involves a series of well thought out activities of gathering, recording, analyzing and interpreting the data with the purpose of finding answer to the problems. This research is on the basis of historical data using both financial and a statistical tool performs detail analysis of different variables. Results are presented in simple way. Detail research methods are described in following headings.

3.1 Research Design

Research design is necessary to fulfill the objectives of well-set research. Research design may be defined as framework, plan and structure for collecting, analyzing and evaluating data. It is a procedure and techniques, which provide ways for research viability. This research is belongs to risk and return analysis so that this research is based on recent historical data, which covers the five years period data from the FY 2056/57 to FY 2060/61. It deals with the common stocks of commercial banks on the basis of available information. As the title of the study suggests, it is more analytical and empirical but less descriptive.

3.2 Sources of Data

The data required for the research is collected from the secondary sources. During the study, informal opinion survey has also been taken with the individuals, bank officials. Security board of Nepal, staff of Nepal stock exchange and stockbrokers. Data related to the market prices of stocks, market

prices of stocks, market capitalization, movement of NEPSE index etc. it is taken from the trading report published by NEPSE and the website of Nepal Stock Exchange (i.e. www.nepalstock.com). Annual report of commercial banks and their financial statement are also collected from the respective sample banks. NEPSE periodicals, articles and previous research report etc. has also been considered.

3.3 Population and Samples

The population of the study is all the listed commercial banks in NEPSE index. This study is concentrated in listed commercial banks only. Total listed commercial banks are 25. For this study 4 commercial banks are selected for study.

1) Nepal Investment Bank Ltd. (NIBL)

Now this bank is operating under the full ownership of Nepalese promoters and shareholders. Market capitalization of this bank is Rs. 19,978,671870 and Total paid up value is Rs. 24, 070, 68,900 with 24070689 numbers of shares as on November 12, 2009.

2) Standard Chartered Bank Nepal Limited (SCBNL)

This is a bank established in joint investment. It was established in 2043/10/16 (1986) and in the same date it started its operation under the Commercial Bank Act 2031 (1974) and the Company Act 2021 (1965). It has earned a lot of popularity in the banking field. The Grind lays Bank has been replaced by the Standard Chartered Bank Nepal limited. Now, the Authorized capital of the bank is Rs. 33,178,003,840 and total paid up value Rs. 93,19,66400 with 9319664 numbers of shares as on November 12, 2009.

3) Nabil Bank Ltd. (NABIL)

Nepal Arab bank Ltd. is the first bank established in joint investment in Nepal. This bank was established in 2041 (1985) under the commercial bank act

2031(1974) and the companies act 2021(1965). Market capitalization amount of the bank is Rs.25,399,146,100 and Total paid up value is Rs.96, 57, 47000 and the number of share is 9657470 as on November 12, 2009.

4) Bank of Kathmandu Limited (BOKL)

Bank of Katmandu Ltd. was established in 2051(1994) under joint investment of SIAM Commercial Bank, Thailand and Nepali promoters. Market capitalization Amount of this bank is Rs 12,708,188,395; total paid up capital is Rs 84, 43, 97,900 and No. of share is 8443979 as on November 12, 2009.

3.4 Data Analysis Tools

To achieve the objectives of research, this study has used various financial and statistical tools that are necessary to find out results. The following tools shall analyze the data presented in the study. The following tools shall analyze the data presented in the study.

3.4.1 Market Price of Stock (P)

Market price of stock is one of the major data of this study. These are three prices high, low and closing price of each year are available. We can be used average price (of high and low) or closing price of the stock. Closing price or average price represents the price of whole year. But, to get the real average volume and price of each transaction in the stock and duration of time of each transaction in the whole year are essential. It is very difficult to obtain and include these all information and average of high and low price is not reliable and representative information. The closing price of stock is used as market price of stock.

3.4.2 Dividend (D)

Dividend is relevant during the computation of rate of return, which is a return to the shareholders for the investment. If company declares only cash dividend there is no problem while taking exact amount of dividend. But if company

declares bonus share, shareholder will receive extra number of shares consequently. price of the stock declines. At this condition,

Total Dividend Amount = Cash Dividend + Stock Dividend% × Next years MPS.

Sometime the company issued right issued at par. In this situation we can calculate total dividend amount by this model.

Total Dividend Amount = Cash Dividend + Right Share% [Next year MPS - Price of Right Share]

3.4.3 Return on Common Stock (R_j)

It is known as realized rate of return or single period rate of return. It is cash received plus price changes in period of stock (capital gain/loss). It is calculated in the form of percentage. It is calculated by adding change in market price with total dividend and then dividing by market price of previous year.

Symbolically

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

Where,

R = annual rate of return

D_t = Cash dividend received at time t.

P_t = Price of a stock at time t.

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

3.4.4 Expected Rate of Return on Common Stock E (R_j)

One of the major aims of the study is to determine the expected return on the investment in common stock. Generally, this rate is obtained by the arithmetic mean of the past year returns.

Symbolically,

$$E(R_j) = \frac{R_j}{n}$$

Where,

E (R_J) = Expected rate of return on Stock j.

R_J = Return on stock j.

n = number of years that the return is taken.

$\quad$ = Sign of summation.

3.4.5 Return on market

It is the percentage increase in NEPSE index. Market return is the average return of the market as a whole. It is calculated as.

$$R_m = \frac{NI_t \; Z \, NI_{tZ1}}{NI_{tZ1}}$$

Where,

R_m = Return on Market

NI_t = NEPSE index at time t

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

3.4.6 Expected Return on Market, E(R_m)

It is average return of future expectation. It is calculated by summing up the past return and dividing by number of samples period.

$$E(R_m) = \frac{R_m}{n}$$

Where,

E (M_r) = Expected return on market.

R_m = Summation of market return.

N = Number of samples period.

3.4.7 Standard Deviation (S.D)

It is a statistical measure of the variability of a set of observations. The symbol is called (∃) sigma. It is the measure the total risk on stock investment. Standard deviation can be calculated using following formula,

If data given as time series

$$_j X \sqrt{\frac{\left(R_j Z E(R_j) \right)^{'2}}{n \, Z1}}$$

If data is probability distribution

$$_j X \sqrt{\sum_{tXl}^{n} \left(R_j Z E(R_j) \right)^{'2} P}$$

Where,

$∃_j$ = Standard Deviation on of return sock j during the time period n.

P_j = Probability distribution of the observation.

R_j = Single period rate of return on stock j.

$E(R_j)$ = Expected rate of return on stock j.

n = Number of years that the returns are taken.

3.4.8 Coefficient of Variation (C.V.)

It is the relative measurement of risk with return. It measures the risk per unit of return. It provides a more meaningful basis for comparison when the expected returns on two alternatives are not the same. The higher coefficient of variation, higher the risk. It is calculated as

$$C.V. = \frac{j}{E(R_j)}$$

Where,

C.V. = Coefficient of variation of stock.

$\exists_j$ = Standard deviation of return on stock j.

$E(R_j)$ = Expected rate of return on stock j.

3.4.9 Beta Coefficient (ß)

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.

$$\beta = \frac{\text{Cov}(R_j, R_m)}{\exists^2_m}$$

Where,

β = Beta coefficient of stock j .

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

$$= \frac{\bullet R_j \, Z \, E(R_j)' \bullet R_m \, Z \, E(R_m)'}{n \, Z1}|$$

$\exists^2_m$ = Variance of Market Return.

(Western & Brigham; 1995: 86)

3.4.10 Correlation Coefficient (P_{ij})

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 return on two securities is 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. It can be calculated as.

$$P_{ij} = \frac{\text{Cov}_{ij}}{\exists_i \, \exists_j}$$

where,

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

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

$\exists_i \, \exists_j$ = Standard deviation of returns for securities i and j.

3.4.11 Portfolio Risk and Return

Portfolio is combination of individual or a group of assets. Investors have different types of investment opportunity but they have limited resource for investment so that investors have to choose that investment opportunity which maximizes return for a given level of risk or minimize risk for a given level of return. Thus the combination of this investment is called portfolio.

Portfolio Return, E (R$_P$)

The expected return on a portfolio is simply the weighted average of expected returns on the individual assets in the portfolio with weights being the fraction of the total portfolio invested in each assets.

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 invested in i assets.

W_j = Proportion of wealth invested in j assets.

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

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

Portfolio Risk,

It is the combined standard deviation of individual stock return. It is the risk of individual securities plus covariance between the securities. The formula for the calculation of portfolio risk for two assets case is given by

$$\exists_P = \sqrt{\ _i^2 w_i^2\ \Gamma\ _j^2 w_j^2\ \Gamma\ 2 w_i w_j\ cov(R_j, R_j)}$$

Where,

$\exists_P$ = Standard deviation of stock i & j.

$\exists_i^2$ = Variance of assets i.

w_i = proportion of assets i.

$\exists_j^2$ = Variance of assets j.

w_j = Proportion of assets j.

Cov (R_i, R_j) = Covariance between the return of assets i & j.

3.4.12 Risk Minimizing Portfolio

It is the portfolio with lowest level of risk in the efficient frontier. In other word it is the proportion of stock that minimizes the risk. In two stock portfolio the optimal weight to invest in stock i and j are calculated as follows

$$W_i = \frac{\exists_j^2 \, Z Cov \, \int R_i, R_j \, A}{\exists_i^2 \, \Gamma \, \exists_j^2 \, Z 2 Cov\,(R_i, R_j)}$$

$W_j = 1 - W_i$

Where,

w_i = optimal weight to invest in stock i.

w_j = optimal weight to invest in stock j.

$\exists_j^2$ = Variance of stock j.

$\exists_i^2$ = Variance of stock i.

Cov (R_i, R_j) = Covariance of returns between stock i and j.

3.4.13 Partitioning of Total Risk

$$\text{Systematic Risk Proportion } (\partial^2) = \frac{\exists_j^2 \; \exists_m^2}{\exists_j^2}$$

$$\text{Unsystematic Risk Proportion } (1-P^2) = \frac{Var\,(e)}{\exists_j^2}$$

Where,

$\exists_j^2$ = Variance of stock j.

β_j^2 = Square beta of stock j.

$\exists_m^2$ = variance of market return.

Var (e) = residual variance.

3.5 Method of Analysis and Presentation

Results are presented in tabular form and clear interpretation on it is given simultaneously. All the method of analysis and presentation are applied as

simple as possible. Detail calculations are presented in appendices at the end of report. To make report simple and easily understandable charts, diagrams and graphs have been used. Summary conclusion and recommendations are presented finally.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

4.1 Data Presentation and Analysis

This chapter including analysis of data collected and their presentation. In this chapter the effort has been made to analyze. "Risk and return analysis on the basis of common stock investment of commercial banks; with reference to Four commercial banks." Detailed data of MPS and dividend of each and sector, NEPSE index of each sector and market is presented and their interpretation and analysis is done. With reference to the various readings and literature review in the previous chapter, effort is made to diagnose and analyze the recent Nepalese stock market movement with taking a special reference to listed commercial banks. Different tables and figures are drawn to make the result more simple and understandable.

The use of secondary data is much extensive which are collected through the records of annual report. The data have been collected from the published and unpublished official records of samples four commercial bonus and paper, previous studies, financial statement and annual report of the selected companies.

In this study the analysis is based on the secondary data that is presented in this way

- ∫ Expected Return
- ∫ Standard Deviation
- ∫ Coefficient of Variation
- ∫ Analysis of Market Sensitivity
- ∫ Analysis of Portfolio

4.1.1 Analysis of Individual Commercial Banks

As the study has been taken special reference to listed commercial banks, common stock of listed commercial banks is analyzed individually. There are Eighteen commercial banks and all are in operation till to date. Among them only four commercial bank are as sample of study. Each company is introduced and their common stock risk and return are analyzed and interpreted here. Name of the selected four commercial banks are as follows.

- Nepal Investment Bank Limited (NIBL)
- Standard Chartered Bank Nepal Limited(SCBNL)
- Nabil Bank Limited (NABIL)
- Bank of Kathmandu Limited (BOKL)

4.1.1.1 Nepal Investment Bank Ltd. (NIBL)

Now this bank is operating under the full ownership of Nepalese promoters and shareholders. Market capitalization of this bank is Rs. 27,68,1292,350 and Total paid up value is Rs. 24, 070, 68,900 with 24070689 numbers of shares.

Table 4.1

MPS and DPS of Common Stocks of NIBL

Fiscal Year	Market Price Per Share			Cash Dividend	Stock Dividend	Total Dividend
	High	Low	Closing			
2001/02	1150	575	760	-	30	238.5
2002/03	890	635	795	20	-	20
2003/04	942	745	940	15	-	15
2004/05	1430	760	800	12.5	-	12.5
2005/06	1265	762	1260	20	35.46	633.103
2006/07	1729	1000	1729	5	25	617.5
2007/08	3101	1305	2450	7.5	33.33	424

(Source: Annual Trading Report/NEPSE, 2001-2008)

Note: The closing MPS of NIBL is Rs. 830 per share as on November 12, 2009.

Total dividend is calculated using the tools mentioned in Research methodology section chapter-3.

Figure 4.1

Year End Market Price Movement of the Common Stock of NIBL
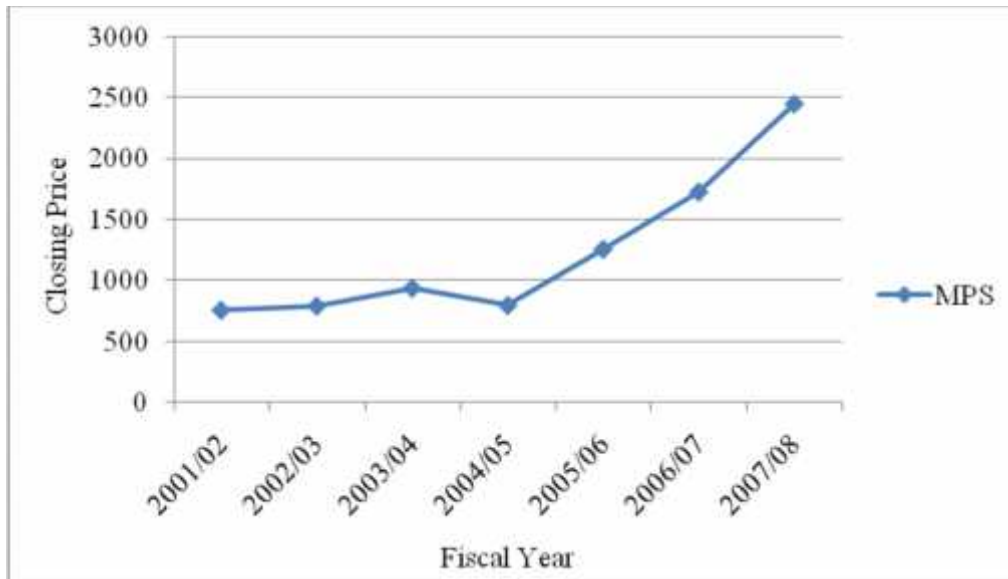
According to year end market price of share, the market price of the shares of NIBL in the fiscal year 2007/08 is high. In 2001/02 the market price was very low in above chart. After 2004/05 market price of NIBL is increasing efficiently.

Calculation of risk, return and coefficient of variation of Nepal Investment Bank Limited.

Table 4.2

Statistical Analysis of NIBL

Fiscal year	Year End Price	Dividend	$R = \dfrac{P_t - P_{t-1} + D_t}{P_{t-1}}$	R-$\bar{R}$	(R-$\bar{R}$)^2
2001/02	760	238.5	-	-	-
2002/03	795	20	0.07237	-0.43303	0.1875
2003/04	940	15	0.20126	-0.30414	0.09250
2004/05	800	12.5	-0.13564	-0.64104	0.41093
2005/06	1260	633.103	1.37	0.8646	0.7475
2006/07	1729	617.5	0.862302	0.356902	0.1274
2007/08	2450	424	0.662233	0.1568	0.02459
		Total	$\sum R = $**3.0326**		$\sum(R - \bar{R})^2 = 1.5$

(Source: Annual Trading Report/NEPSE, 2001-2008)

Calculation of expected rate of return,

We have,

Expected Rate of Return $(\bar{R})$ = $\dfrac{\sum R}{n}$ X $\dfrac{3.0326}{6}$ = 0.5054 or 50.545%

Standard Deviation (σ) = $\sqrt{\dfrac{\sum(R - \bar{R})^2}{n}}$

$= \sqrt{\dfrac{1.59035}{6 - 1}}$

= 0.5640 i.e. 56.40%

Coefficient of Variation (C.V.) = $\dfrac{\sigma}{\bar{R}}$ = $\dfrac{0.5640}{0.5054}$ = 1.12

Here, it can be concluded that the risk and return of NIBL is 56.40% and 50.45% respectively. The C.V is 1.12, which means for earning 1 unit of return the investor has to bear 1.12 units of risk. The annual rate of return is

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maximum in the year 2005/06 which is 1.37 and minimum rate of return is in the year 2004/05 by -0.1356%.

4.1.1.2 Standard Chartered Bank Nepal Limited (SCBNL)

This is a bank established in joint investment. It was established in 2043/10/16 (1986) and in the same date it started its operation under the Commercial Bank Act 2031 (1974) and the Company Act 2021 (1965). It has earned a lot of popularity in the banking field. The Grind lays Bank has been replaced by the Standard Chartered Bank Nepal limited. Now, the Authorized capital of the bank is Rs. 52,37,6511680 and total paid up value Rs. 93,19,66400 with 9319664 numbers of shares.

Table4.3

MPS & DPS of SCBNL

Fiscal Year	Market Price Per Share			Dividend	Stock Dividend	Total Dividend
	High	Low	Closing			
2001/02	2100	1000	1550	100	-	100
2002/03	1760	1380	1640	110	10	284.5
2003/04	1800	1520	1745	110	-	110
2004/05	2350	1553	2345	120	-	120
2005/06	3775	2200	3775	130	10	720
2006/07	5900	3058	5900	80	50	3495
2007/08	9025	4505	6830	80	50	2795

Source: *Refer Annual Trading Report/NEPSE, 2001-2008*

Note: The closing MPS of SCBNL is Rs. 3560 per share as on November 12, 2009.

Figure 4.2

Year–end Market Price Movement of the Common Stock of SCBNL
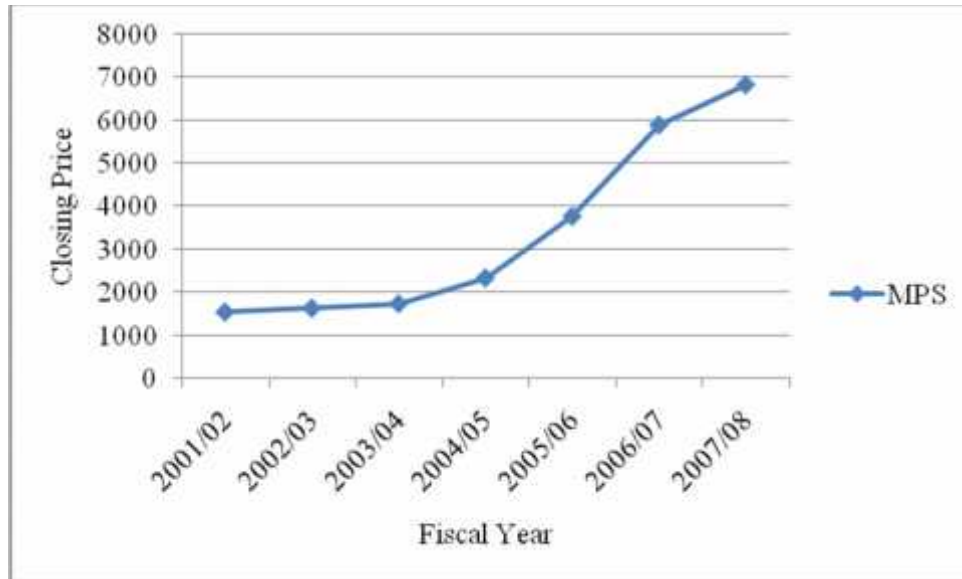
From the above diagram, it can be concluded that the movement of price of shares of SCBNL is in increasing trends from 2001/02 to 2007/08.

Table 4.4

Statistical Analysis of Common Stock of SCBNL

Fiscal Year	Year End Price	Dividend	$R \, X \dfrac{P_t \, Z P_{tZ1} \, \Gamma D_t}{P_{tZ1}}$	R- $\overline{R}$	(R- $\overline{R}$)^2
2001/02	1550	100	-	-	-
2002/03	1640	284.5	0.2416	-0.3957	0.1566
2003/04	1745	110	0.1311	-0.5062	0.2562
2004/05	2345	120	0.4126	-0.2247	0.05049
2005/06	3775	720	0.9168	0.2795	0.07812
2006/07	5900	3495	1.49	0.8527	0.7271
2007/08	6830	2795	0.6314	-0.0059	0.00003481
		Total	$R \, X$ **3.8235**		$(R \, Z R)^2$ **=1.27**

(Source: Annual Trading Report/NEPSE, 2001-2008)

We have,

$$\text{Expected Return } (\overline{R}) = \frac{R}{n} \times \frac{3.8235}{6} \times 0.6373 \text{ i.e } 63.73\%$$

$$\text{Standard Deviation } (\dagger) = \sqrt{\frac{(R Z \overline{R})^2}{n Z 1}} \times \sqrt{\frac{1.27}{6 Z 1}} = 0.5040 \text{ i.e. } 50.40\%$$

$$\text{Coefficient of Variation (C.V.)} = \frac{\dagger}{\overline{R}} = \frac{0.5040}{0.6373} = 0.79$$

Now, it can be concluded that the risk and return of SCBNL is 50.40% and 63.73% respectively. The CV is 0.79, which means for earning 1 unit of return the investor has to bear 0.79 units of risk.

4.1.1.3 Nepal Arab Bank Ltd. (NABIL)

Nepal Arab bank Ltd. is the first bank established in joint investment in Nepal. This bank was established in 2041 (1985) under the commercial bank act 2031(1974) and the companies act 2021(1965). Market capitalization amount of the bank is Rs.40, 55, 1716,530 and Total paid up value is Rs.96, 57, 47000 and the number of share is 9657470.

Table 4.5

MPS and DPS of NABIL

Fiscal Year	Market Price Per Share			Cash Dividend	Stock Dividend	Total Dividend
	High	Low	Closing			
2001/02	1500	465	735	30	-	30
2002/03	875	700	735	50	-	50
2003/04	1005	705	1000	65	-	65
2004/05	1515	1000	1505	70	-	70
2005/06	2300	1500	2240	85	-	85
2006/07	5050	2025	5050	100	40	2210
2007/08	6700	3410	5275	60	40	1701

(Source: Annual Trading Report/NEPSE, 2001-2008)

Note: The closing MPS of NABIL is Rs. 2630 as on November 12, 2009.

Figure 4.3

Year End Market Price Movement of the Common Stock of NABIL
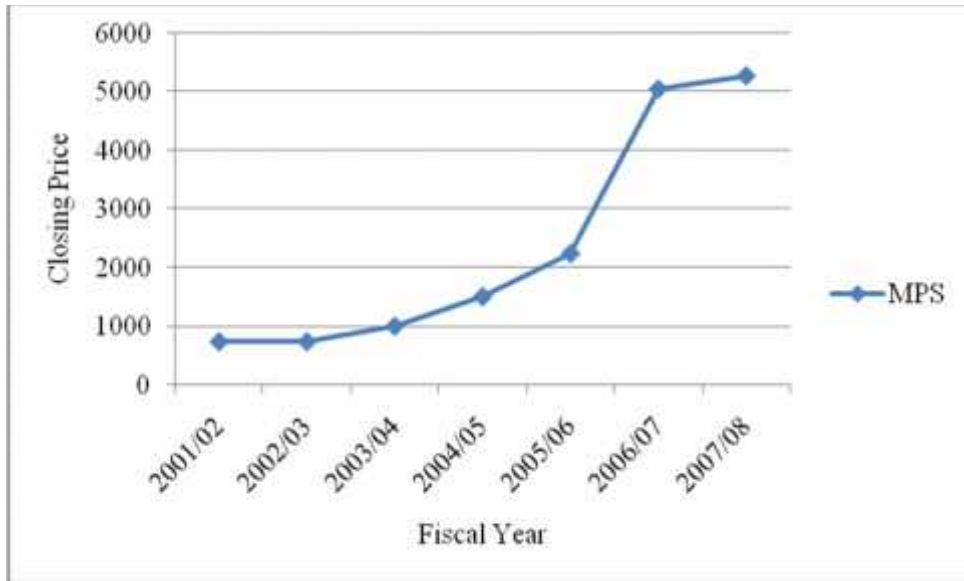
From the above diagram it can be understood that the price of common stock of NABIL is equal in 2001/02 and 2002/03 is 735. From 2003/04 it is increasing efficiently and reached 5275 in 2007/08.

Table 4.6

Statistical Analysis of Common Stock of NABIL

Fiscal year	Year End Price	Dividend	$R \times \dfrac{P_t - P_{t-1} + D_t}{P_{t-1}}$	$R - \bar{R}$	$(R - \bar{R})^2$
2001/02	735	30	-	-	-
2002/03	735	50	0.06803	-0.6419	0.4120
2003/04	1000	65	0.4490	-0.2609	0.06807
2004/05	1505	70	0.575	-0.1349	0.01820
2005/06	2240	85	0.5449	-0.165	0.02723
2006/07	5050	2210	2.2411	1.5312	2.3446
2007/08	5275	1701	0.3814	-0.3285	0.1079
	Total		$R \times$ **4.26**		$(R - R)^2$ **=2.9746**

(Source: Annual Trading Report/NEPSE, 2001-2008)

We have,

$$\text{Expected Return } (\bar{R}) = \frac{R}{n} = \frac{4.26}{6} = 0.71 \text{ or } 71\%$$

$$\text{Standard Deviation } (\quad) = \sqrt{\frac{(R - \bar{R})^2}{n-1}} = 0.7713 \text{ or } 77.13\%$$

$$\text{Coefficient of Variation (C.V.)} = \frac{\dagger}{\bar{R}} = 1.09$$

Here, from the above calculation we can see that the risk and return of NABIL is 77.13% and 71% respectively. The coefficient of the variation is 1.09, which means for earning 1 unit of return the investor has to bear 1.09 units of risk.

4.1.1.4 Bank of Kathmandu Limited (BOKL)

Bank of Katmandu Ltd. was established in 2051(1994) under joint investment of SIAM Commercial Bank, Thailand and Nepali promoters. Market capitalization Amount of this bank is Rs 12, 497, 088920; total paid up capital is Rs 84, 43, 97,900 and No. of share is 8443979.
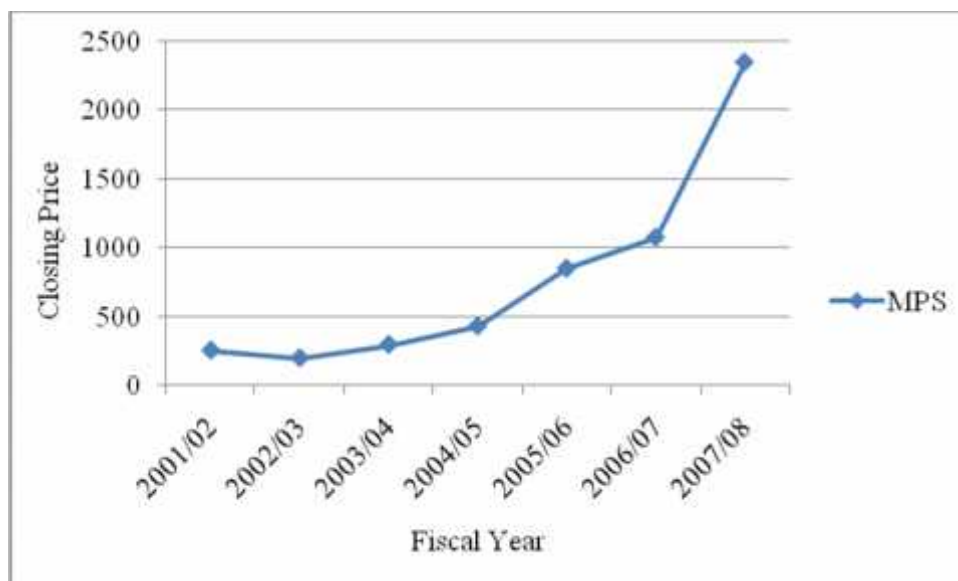
Table 4.7

MPS and DPS of BOKL

Fiscal year	Market Price Per Share			Cash Dividend	Stock Dividend	Total Dividend
	High	Low	Closing			
2001/02	850	225	254	10	-	10
2002/03	300	195	198	5	-	5
2003/04	310	175	295	10	-	10
2004/05	472	280	430	15	-	15
2005/06	881	422	850	18	30	340.5
2006/07	1375	691	1075	20	-	20
2007/08	2361	1200	2350	2.1053	40	608

(Source: Annual Trading Report/NEPSE, 2001-2008)

Note: The closing MPS of BOKL is Rs. 1505 as on November 12, 2009.

Figure 4.4

Year End Price Movement of Common Stock of BOKL

Above diagram indicate that the price of stock of BOKL is decrease in the year 2003/04 afterward 2001/02 is 175.From 2004/05 it is increased to some extent up to 2006/07 and in 2007/08 it reach in tremendous level by 2350.

Table 4.8

Statistical Analysis of Common Stocks of BOKL

Fiscal year	Year End Price	Dividend	$R \text{ X} \dfrac{P_t Z P_{tZ1} \Gamma D_t}{P_{tZ1}}$	R-$\bar{R}$	(R-$\bar{R}$)^2
2001/02	254	10	-	-	-
2002/03	198	5	-0.20079	-0.977	0.9555
2003/04	295	10	0.54040	-0.2363	0.05584
2004/05	430	15	0.5085	-0.2682	0.072
2005/06	850	340.5	1.77	0.9933	0.9866
2006/07	1075	20	0.2882	-0.4885	0.2386
2007/08	2350	608	1.7516	0.9749	0.9504
	Total		$R \text{ X}$ **4.66**		$(R\,Z R)^2$ **=3.25**

(Source: Annual Trading Report/NEPSE, 2001-2008)

We have,

$$\text{Expected Return } (\bar{R}) = \frac{R}{n} = 0.7766 \text{ i.e. } 77.66\%$$

$$\text{Standard Deviation } (\ ) = \sqrt{\frac{(R\,Z\bar{R})^2}{n\,Z1}} = 0.8062 \text{ i.e. } 80.62\%$$

$$\text{Coefficient of Variation (C.V.)} = \frac{\dagger}{\bar{R}} = 1.04$$

In above calculation, we conclude that the risk and return of BOKL is 80.62% and 77.66% respectively. The C.V is 1.04 which means for earning 1 unit of return the investor has to bear 1.04 units of risk.

4.2 Comparative Analysis of Obtained Results

4.2.1 Inter Bank Comparisons

The result from previous section (4.1) is presented here in a tabular, Graphic form. From the year 2002/03 to2007/08.

Table 4.9

Expected Return, S.D. and Coefficient of Variation Of each Bank

Banks	Expected Return	Standard Deviation	Coefficient of Variation	Remarks
NIBL	50.54%	56.40%	1.12	Highest C.V/Risk
SCBNL	63.73%	50.40%	0.79	Lowest C.V/Risk
NABIL	71%	77.13%	1.09	
BOKL	77.66%	80.62%	1.04	Highest Return

(Source: Annual Trading Report/NEPSE, 2001-2008)

Investment in common stock of NIBL is highly risky for investors considering return, risk and coefficient of variation. Investor can get highest return from the common stock of BOKL but from the risk and the coefficient of variation point of view SCBNL has lowest C.V and risk.

To make the comparison easily understandable from the figure 4.5 presented below.

Figure 4.5

Risk and Return of Selected Commercial Banks
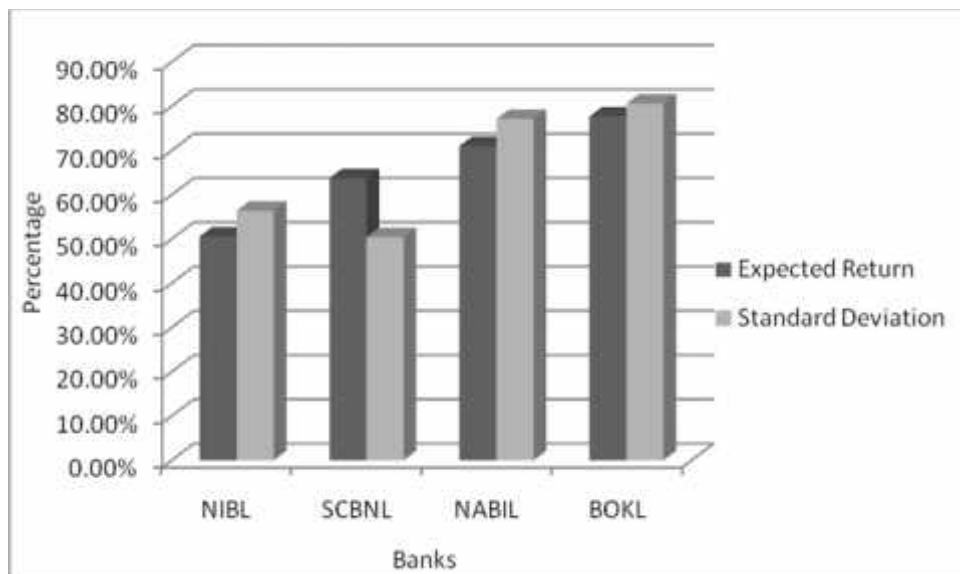
4.2.2 Comparison of Selected Commercial Banks on the Basis of Market Capitalization

Market Capitalization is the total value at time specific period .The market capitalization of listed securities of four commercial banks at the end of the fiscal year 2007/08 is presented below.

Table 4.10

Market Capitalization of four Commercial Banks from July 2007-2008

(Rs. In millions)

S. No	Company	Market capitalization	Percentage
1	NIBL	15866.78	21.55%
2	NABIL	24598.85	33.41%
3	SCBNL	25621.80	34.80%
6	BOKL	7539.27	10.24%
	TOTAL	73626.7	100

Source: *Refer Annual Trading Report 2007/08, NEPSE*

Table 4.10 shows the market capitalization of selected commercial banks at the end of the fiscal year 2007/08. The market capitalization of SCBNL is highest by 34.80% and the market capitalization BOKL is low by 10.24%

Figure 4.6

Market Capitalization of Four Selected Commercial Banks
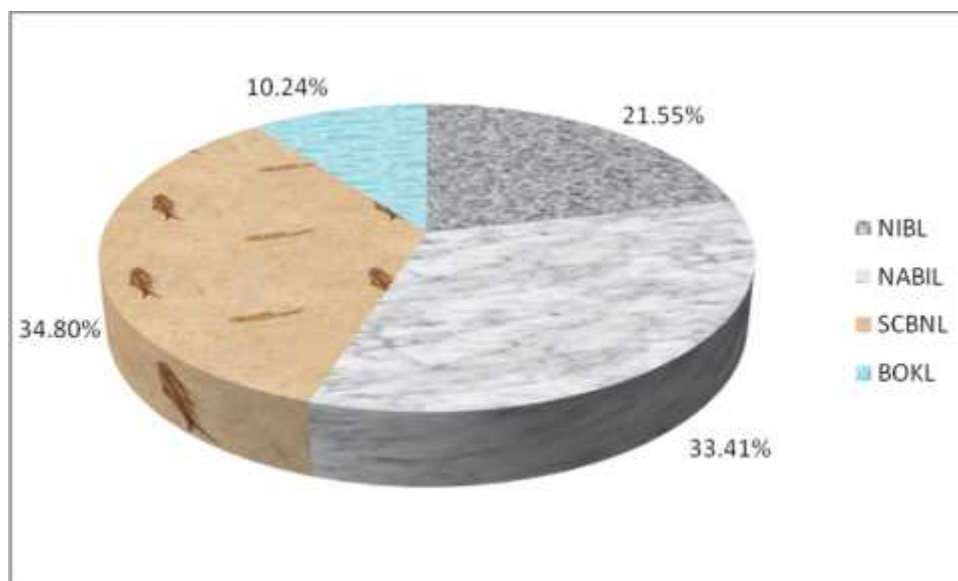
4.2.3 Inter Industry Comparison on the Basis of NEPSE Index

Table 4.11

Sector wise NEPSE index at the End Price of each year

Sectors	Fiscal Year						
	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
C. Banking	219.35	199.90	231.97	304.64	437.49	789.21	782.55
Mfg. & Processing	273.67	250.13	255.58	276.50	301.11	348.63	347.54
Hotel	216.51	196.68	184.41	178.00	180.77	251.47	274.35
Trading	102.2	94.56	95.01	123.20	148.11	155.37	162.08
Insurance	315.22	240.64	237.62	320.24	381.25	612.46	653.37
Finance	262.29	208.14	195.99	228.39	261.37	471.82	513.92
Hydropower	-	-	-	-	-	847.93	1121.49
Dev.Banking	262.94	246.72	190.03	237.86	294.40	539.66	542.05
Others	77.34	48.56	142.65	347.65	410	818.12	818.12

(Source: Annual Trading Report/NEPSE, Year 2001-2008)

The table shows the sector wise NEPSE index at the end of each year, i.e. from the fiscal year 2001/02 to 2007/08. The NEPSE sub-index contains nine sectors, which have been delineated in the above table. The table further shows that the stock market of commercial banks opened with the NEPSE index of 219.35 points at the beginning of the FY 2001/02 and ended with 782.55 points in the FY 2007/08. Of the NEPSE Index, banking sub-index went up by 181.39 points to 985.65 (which is also the highest point) during the fiscal year 2007/08. The banking sub-index measures the transactions of companies listed under commercial bank group. It touched the lowest point of 759.67 on 31 July August 2007 in the last two years.

The table shows that the NEPSE index of each sector decreased in the fiscal year 2002/03 compared to that in the fiscal year 2001/02. Further from the fiscal year 2003/04 to 2006/07, the NEPSE index of each sector followed increasing trend. The table showed that Hydropower sector started to trade only from the fiscal year 2006/07. Commercial banks, insurance and manufacturing & processing were the main components of the NEPSE index. Due to a whopping increment in the share prices of banks, financial institutions,

hydropower companies and development banks, the NEPSE index increased notably over the year.

Table 4.12

Expected Return, Standard Deviation and Coefficient of Variation of Commercial Banking Sectors

Year	Year-end Index	Return (R)	$(R - \bar{R})$	$(R - \bar{R})^2$
2001/02	219.35	-	-	-
2002/03	199.90	-0.08867	-0.3587	0.1287
2003/04	231.97	0.1604	-0.1096	0.012012
2004/05	304.64	0.3133	0.0433	0.001875
2005/06	437.49	0.4361	0.1661	0.02759
2006/07	789.21	0.8039	0.5339	0.2850
2007/08	782.55	-0.008439	-0.278439	0.07753
	Total	$\sum R = $**1.62**		$\sum(R - \bar{R})^2 = $**0.532707**

Source: *Refer Table 4.11*
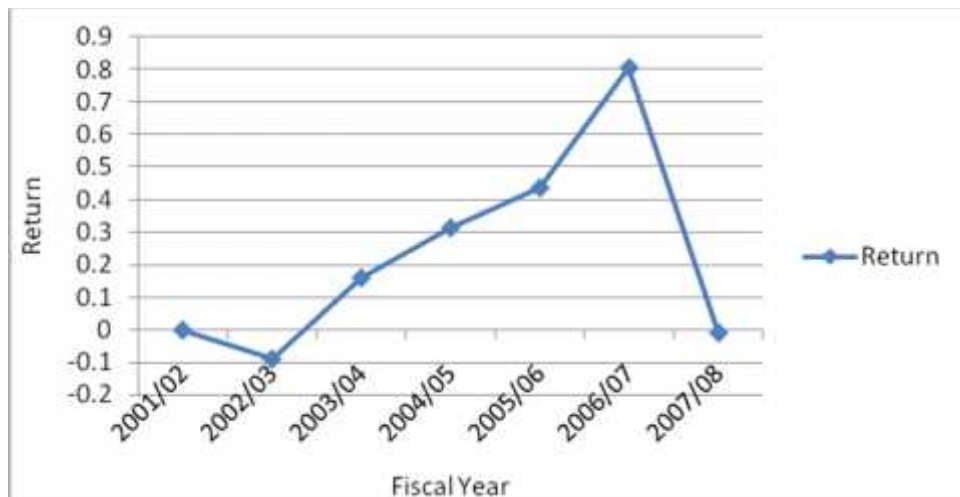
Expected Return $(\bar{R}) = \dfrac{\sum R}{n} = \dfrac{1.62}{6} = 0.27$ i.e. 27%

Standard deviation $(\sigma) = \sqrt{\dfrac{\sum(R - \bar{R})^2}{n - 1}} = \sqrt{\dfrac{0.532707}{6 - 1}}$

$= 0.3264$ i.e. 32.64%

Coefficient of variation (C.V.) $= \dfrac{\sigma}{\bar{R}} = \dfrac{0.3264}{0.27} = 1.21$

Figure 4.7

Annual Rate of Return of Banking Sector (On the Basis of Index)

4.2.4 Market Risk and Return

Nepal stock Exchange limited (NEPSE) is only one stock market of Nepal. Hence, NEPSE index represents the overall market movement .Market Risk and Return is determined on the basis of year-end NEPSE index.

Realized return, Expected return, standard deviation and coefficient of the variation of Market index are summarized below.

Table 4.13

Statistical Analysis of Overall Market on the Basis of NEPSE index

Year	Year-end Index	R_M	$R_M Z\bar{R}_M$	$(R_M Z\bar{R}_M)^2$
2001/02	227.54	-	-	-
2002/03	204.86	-0.09967	-0.25039	0.06270
2003/04	222.04	0.083862	-0.06686	0.004470
2004/05	286.67	0.2911	0.14038	0.01971
2005/06	386.83	0.3494	0.1987	0.0395
2006/07	683.95	0.7681	0.6174	0.3812
2007/08	963.36	0.4085	0.2578	0.06646
	Total	R_m **=1.80**		$(R_M ZR^-_M)^2$ **=0.4398**

(Source: Annual Trading Report/NEPSE, 2001-2008)

We have,

Expected return $(\bar{R}) = \dfrac{R_M}{n} = \dfrac{1.80}{6} = 0.3$ i.e. 30%

Standard deviation $(\dagger_M) = \sqrt{\dfrac{(R_M Z\bar{R}_M)^2}{n Z1}} = 0.2966$ i.e. 29.66 %
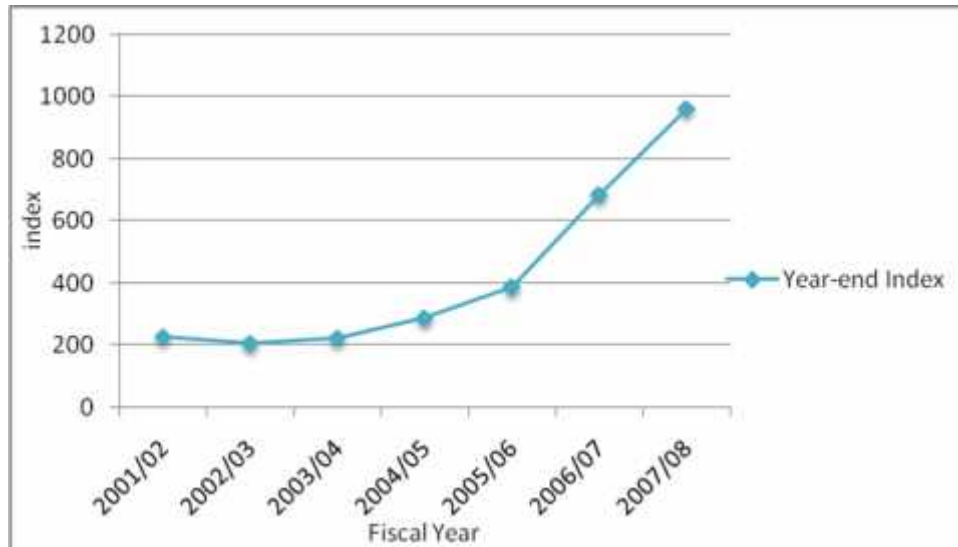
$= 0.2335$

Coefficient of variation (C.V.) $= \dfrac{\dfrac{\dagger_M}{\bar{R}_M}}{} = \dfrac{0.2966}{0.30} = 0.99$

The expected rate of overall return Market is 0.3, i.e. 30 % by the end of the fiscal year 2007/08.

During fiscal year period the NEPSE index is highest in the year 2007/08 by 963.36 and minimum in the year 2002/03 by 204.8

Figure 4.8

Year End NEPSE Index of Overall

4.2.5 Hypothesis - I

Followings hypothesis are tested in this study.

Null Hypothesis (H_0): There is no significance difference between the portfolio return of the common stock of the commercial banking in Group 'A' and overall market returns.

Alternative Hypothesis (H_1): There is significance difference between the portfolio return of the common stock of the commercial banks and overall market returns.

"The hypothesis-I is based on the test of significance for difference between two sample independent same means (students "t" test)"

Null Hypothesis (H_0)

$H_0 : \mu_1 = \mu_2$, there is no significance difference between the portfolio return of the common stock of the commercial banks and overall market returns.

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Alternative Hypothesis (H$_1$)

H$_1$: μ_1 μ_2 there is significance difference between the portfolio return of the common stock of the commercial banking in Group 'A' and overall market returns.

We have,

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

Where,

$\overline{X}_1$ = Average return of the portfolio of the banking sector $\left(\overline{R}_B\right) = 0.27$

$n_1 = n2 =$ No. of observation $= 6$

$\overline{X}_2 =$ Average return of the portfolio of market $\left(\overline{R}_M\right) = 0.30$

$S^2 =$ Unbiased sample variance of population.

Here,

$$s^2 = \frac{n_1 s_1^{\,2} + n_2 s_2^{\,2}}{n_1 + n_2 - 2} = \frac{6(0.3264)^2 + 6(0.2966)^2}{6 + 6 - 2} = 0.1167 \text{ i.e. } 11.67\%$$

Where,

S$_1$= Standard deviation of Commercial Banking Sector = 0.3264

S$_2$ =Standard deviation of market = 0.2966

Therefore,

$$t = \frac{\overline{X}_1 - \overline{X}_2}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$$t = \frac{0.27 - 0.30}{\sqrt{0.1167 \left(\frac{1}{6} + \frac{1}{6}\right)}} = -15.21 \text{ i.e. } 0.1521$$

$$\therefore \ |t| = 0.1521$$

Degree of freedom (d. f.) = n$_1$ + n$_2$ -2=10

From the "student's t distribution" , the tabulated value of "t" for 10 degree of freedom (d. f.) at 10%, 5%, 2% and 1% levels of significance are 1.812, 2.228, 2.764 and 3.169 respectively.

Conclusion

As the calculated value of "t" is less than the all tabulated value at 10%, 5%, 2% and 1% levels of significance, it is not significant an H_0 is accepted. Thus, we may conclude that there is no significant difference between the portfolio return of the common stocks of commercial banks and overall market return. In other words overall return on common stocks of commercial banks (banking sector) is equal to the market return.

4.2.6 Market Sensitivity Analysis

Market sensitivity of stock is measured by its beta coefficient. The beta coefficient of NIBL is shown in the following table

Table 4.14

Calculation of Beta Coefficient of the Common Stock of NIBL

Year	$R_J\,Z\bar{R}_J$	$R_M\,Z\bar{R}_M$	$(R_J\,Z\bar{R}_J)(R_m\,Z\bar{R}_m)$
2002/03	-0.43303	-0.39	0.1689
2003/04	-0.30414	-0.2164	0.06581
2004/05	-0.64104	-0.0089	0.0057049
2005/06	0.8646	0.0493	0.04262
2006/07	0.356902	0.4681	0.1671
2007/08	0.1568	0.1085	0.017
	Total		$(\,(R_J\,Z\bar{R}_J)(R_m\,Z\bar{R}_m) = 0.4671$

(Source: Annual Trading Report/NEPSE, 2001-2008)

We have,

$$COV\, fR_J R_M\, AX\, \frac{fR_J\,Z\bar{R}_J\,AfR_M\,Z\bar{R}_M\,A}{n\,Z1}\,X\frac{0.4671}{6\,Z1} \quad =0.09342$$

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$$_{J} X \frac{COV \int R_{J} R_{M} A}{_{M}^{2}} X \frac{0.09342}{0.08797} X 1.06$$

Where,

n = no. of observation = 6

$\dagger_{m}^{2}$ = variance of market return (NEPSE) = $(0.2966)^{2}$ = 0.08797

Since, the beta coefficient of NIBL is 1.06 which is more than 1. It can be concluded that the common stock of NIBL is aggressive stock. The common stock of NIBL is more volatile stock in the market.

Similarly the beta coefficient of SCBNL, NABIL and BOKL is calculated at appendix at the end of this study (*See appendix table 1, 2 &3*).

Table 4.15

Beta Coefficient of Selected Four Commercial Banks

S. No.	Banks	Beta coefficient
1.	NIBL	1.06
2.	SCBNL	1.54
3.	NABIL	2.23
4.	BOKL	0.819

(Source: Annual Trading Report/NEPSE, 2001-2008)

Table 4.15 shows that the beta of NABIL is 2.23 and beta of BOKL is minimum by 0.819. The common stock of NABIL is most volatile because its beta is maximum and the common stock of BOKL is least volatile because its beta is minimum.

Table 4.16

Calculation of Required Rate of Return (RRR), Expected Rate of Return (ERR) and evaluation of each stock using CAPM method are shown

S. No.	Banks	Beta (β_j)	RRR	ERR	Price situation
1.	NIBL	1.06	0.3147	0.5054	Under Pricing
2.	SCBNL	1.54	0.4324	0.6373	Under Pricing
3.	NABIL	2.23	0.6015	0.7099	Under Pricing
4.	BOKL	0.819	0.2556	0.7767	Under Pricing

(Source: Annual Trading Report/NEPSE, 2001-2008)

We have,

$$\text{Required Rate of Return (RRR)} = R_F + (R_M - R_F')_J$$

The Required Rate of Return in each asset is calculated at appendix at the end of this study. (See at appendix calculation 1)

Where,

$R_{f=}$Risk free rate of return $=0.0549(5.49\%)$

{$R_f = 5.49\%$, Quarterly Economic Bulletin mid July 2008, Nepal Rastra Bank, (VOL-42., 2008).}

Comparing RRR and ERR determines whether the stock is under pricing or overpricing. RRR of NIBL, SCBNL and BOKL is 0.3147, 0.4324, 0.6015 and 0.2556 respectively.

R_m =Market rate of return (NEPSE) $= 0.3$

Above calculation shows that the common stock of NIBL, SCBNL, NABIL and BOKL is under pricing because their RRR is less than ERR.

4.2.7 Hypothesis II

Null Hypothesis $|H_0|$: There is no significant difference between the portfolio beta of commercial banks and market beta. In other words, portfolio beta of commercial banks is equal to 1.

Alternative Hypothesis $|H_1|$: There is significant difference between the portfolio beta of commercial banks and market beta.

Test of Hypothesis-II

This Hypothesis-II is based on the test of significance for single mean.

Null Hypothesis $|H_0|$: H_O: μ_1=1, There is no significant difference between the portfolio beta of commercial banks and market beta.

We have,

Under H_0, test of static (t) is:

$$t\ \text{X}\frac{\overline{X}\ \text{Z}\sim}{\dfrac{s}{\sqrt{n}}}\ \text{X}\frac{B_P\ \text{Z1}}{\dfrac{S}{\sqrt{N}}}$$

Where,

B_P X W_J $|$ S$_J$ = 1.59 (weighed Average of the beta of commercial banks on the basis of Market Capitalization the commercial banks at the end of fiscal year 2007/08.) (*See appendix table 4*).

S = Estimated population standard deviation of beta
= 0.6218 (*See appendix table 5*)
n = no. of samples (selected four commercial banks) = 4

Hence,

$$t = \dfrac{1.59 \ Z1}{\dfrac{0.6218}{\sqrt{4}}} = 1.90$$

Now,

Degree of freedom (d. f.) = 4 - 1 = 3

From the student's 't' distribution the tabulated value of 't' for 3 degree of freedom at 10%, 5%, 2% and 1% level of significance are 2.353, 3.182, 4.541 and 5.841 respectively.

Conclusion

The calculated value of 't' is 1.90. As calculated value of 't' is less than all tabulated value at 10%, 5%, 2% and 1% level of significance, it is not significant and null hypothesis $|H_0|$ is accepted. Therefore, we may conclude that there is no significant difference between the portfolio beta of banking sector and market beta. In other words, portfolio beta of banking sector is equal to overall market beta.

4.3 Portfolio Analysis

A portfolio is a combination if different investment assets .The portfolio would be able to reduce unsystematic or diversifiable risk. It is the random selections of securities that are to be added to a portfolio. It reduces a portfolio's total diversifiable risk to zero. In previous topic and headings the analysis is based on the investment in single security. The expected return of portfolio is simply a weighted average of the expected return of the securities comprising that portfolio that the weights are equal to the proportion of total fund invested in each security. The sum of weight must be 100%. Analysis have shown that many Nepalese prorate investor placed their entire wealth is single assets investment if they construct ion of the portfolio or a group of investment in such kind of assets, which are negatively correlated. They can reduce unsystematic risk dramatically without losing their return. Therefore, we need to extend our analysis of risk and return to portfolio context. Here, we are

going to analyze the portfolio. The analysis is based on four assets portfolio and the tools for analysis are described in the Research Methodology at chapter-3.

To analyze the four assets portfolios among the four selected commercial banks, at first equal proportion of investment of capital should invest in common stock of each commercial bank i.e. 25% weight in each common stock and usually, common stock of four selected sample commercial banks are taken to construct the four assets portfolio.

Detailed analyses of common stock of pooled four commercial banks are shown before going to compare with analysis of the portfolio of seven assets.

4.4 Analysis of Average / Pooled Four Sample Commercial Banks

The calculation of the return, expected return, standard deviation, and coefficient of variation of the common stock of average/pooled four commercial banks is given.

Table 4.17

Average Return of four Commercial Banks

Banks	Fiscal Year/Return						Total
	2002/03	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	
NIBL	0.07237	0.20126	-0.13564	1.37	0.8623	0.662233	
SCBL	0.2416	0.1311	0.4126	0.9168	1.49	0.6314	
NABIL	0.06803	0.4490	0.575	0.5449	2.2411	0.3814	
BOKL	-0.20079	0.54040	0.5085	1.77	0.2882	1.7516	
Total	**0.18121**	**1.32176**	**1.36046**	**4.6017**	**4.8816**	**3.43**	
Average	0.04530	0.33044	0.34012	1.15043	1.2204	0.8575	**3.9442**

(Source: Annual Trading Report/NEPSE, 2001-2008)

Calculation of expected return, standard deviation, and coefficient of variation combined /pooled selected commercial banks.

Table 4.18

Statistical Analysis of Common Stock of Four Commercial Banks

Fiscal Year	Average Return (R)	$(R Z \overline{R})$	$(R Z \overline{R})^2$
2002\03	0.04530	-0.6114	**0.3738**
2003\04	0.33044	-0.3263	**0.1065**
2004\05	0.34012	-0.3166	**0.10024**
2005\06	1.15043	0.4937	**0.2437**
2006\07	1.2204	0.5637	**0.3178**
2007/08	0.8575	0.2008	**0.0403**
Total	R **=3.95**		$(R Z \overline{R})^2$ **=1.18**

We have,

$$\text{Expected return } (\overline{R}) = \frac{R}{n} = \frac{3.95}{6} = 0.6583$$

$$\text{Standard deviation } (\dagger j) = \sqrt{\frac{(R Z \overline{R})^2}{n Z1}} = \sqrt{\frac{1.18}{6 Z1}} = 0.4858$$

$$\text{Coefficient of variation (C.V.)} = \frac{\dagger_j}{\overline{R}_j} = 0.7380$$

From above calculation, the expected return is 65.83%, standard deviation is 48.58% and coefficient of variation is 73.80% of four sample commercial banks.

4.5 Portfolio Analysis among Four Selected Commercial Banks

For the four assets portfolio, let us consider A, B, C & D be the common stock of the commercial banks NIBL, SCBNL, NABIL and BOKL respectively. To calculate the four assets portfolio risk, we have to calculate covariance of four commercial banks. Thus, the table 4.19 shows the calculation of covariance of assets.

Table 4.19

Calculation of Covariance of Asset of A and asset B

Fiscal year	$\left(R_A - \overline{R}_A\right)$	$\left(R_B - \overline{R}_B\right)$	$\left(R_A - \overline{R}_A\right)\left(R_B - \overline{R}_B\right)$
2002/03	-0.43303	-0.3957	**0.1713**
2003/04	-0.30414	-0.5062	**0.1540**
2004/05	-0.64104	-0.2247	**0.1440**
2005/06	0.8646	0.2795	**0.2417**
2006/07	0.356902	0.8527	**0.3043**
2007/08	0.1568	-0.0059	**-0.00092512**
		Total	$\left(R_A - \overline{R}_A\right)\left(R_B - \overline{R}_B\right)$**=1.01427**

(Source: Annual Trading Report/NEPSE, 2001-2008)

$$COV\left(R_A R_B\right) = \frac{\left(R_A - \overline{R}_A\right)\left(R_B - \overline{R}_B\right)}{n-1} = \frac{1.01427}{6-1} = 0.2029$$

The covariance between asset A and asset B is 0.2029

Similarly, the covariance between asset B and C, asset C and D, asset D and asset A, asset A and asset C & asset B and asset D is calculated at appendix at the end of this study *(See page no.6, 7, 8, 9 & 10 at appendix).*

As assuming before, proportion investment in each four assets is equal to 25% of capital to minimize the risk.

Therefore,

$W_A = W_B = W_C = W_{D=}$ 25%

And the Portfolio return will be,

$\overline{R}_P = W_A \overline{R}_A + W_B \overline{R}_B + W_C \overline{R}_C + W_D \overline{R}_D$

Where,

the Portfolio Risk is,

$$\sigma = \sqrt{\sigma_p \sigma^2_A W^2_A + \sigma^2 B W_B{}^2 + \sigma^2{}_c W_C^2 + \sigma_D^2 W_D^2 + 2W_A W_B COV_{AB} + 2W_B W_C COV_{BC}}$$

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$$\sigma_p = \sqrt{\sigma_A^2 w_A^2 + \sigma_B^2 w_B^2 + \sigma_C^2 w_C^2 + \sigma_D^2 w_D^2 + 2w_A^2 w_B^2 Cov_{AB} + 2w_B^2 w_C^2 Cov_{BC} + 2w_C^2 w_D^2 Cov_{CD} + 2w_D^2 w_A^2 Cov_{DA}}$$

$$= \sqrt{0.20554}$$

$$= 0.4534 \text{ i.e. } 45.34\%$$

Since, the Expected portfolio return of b assets is 65.83%. It is possible only when the investor invert in each asset in equal proportion i.e. 25% in each stock. After diversification the risk of portfolio is 45.34% which is minimized than average risk.

4.6 Portfolio Analysis in each two Assets among Selected Assets

As assuming before, proportion investment in each two assets is equal to 50% of capital to minimize the risk.

Therefore,

Portfolio analysis between each two commercial banks:

Here,

at first assets A & B i.e. NIBL & SCBNL

$W_A = W_B = 50\%$

And the Portfolio return will be,

$$\overline{R_P} X W_A \overline{R_A} \Gamma W_B \overline{R_B}$$

$$= 0.50 \times 0.5054 + 0.50 \times 0.6373$$

$$= 0.57135 \text{ i.e. } 57.135\%$$

Where,

the Portfolio Risk is,

$$_p X \sqrt{\ _A^2 w_A^2 \Gamma\ _B^2 w_B^2 \Gamma 2W_A W_B COV_{AB}}$$

$$= \sqrt{0.244478}$$

$$= 0.4944 \text{ i.e. } 49.44\%$$

Similarly, the portfolio analysis of remaining group is calculated at appendix at the end of this study *(See page no.13, 14 and 15 at appendix).*

Table 4.20

Portfolio Return & Risk in each two Assets

Assets	Portfolio Return	Portfolio Risk
A & B(NIBL & SCBNL)	57.14%	49.44%
B & C(SCBNL & NABIL)	67.37%	61.66%
C & D(NABIL & BOKL)	74.33%	51.050%
D & A(BOKL & NIBL)	64.1%	62.64%
A & C(NIBL & NABIL)	60.77%	30.79%
B & D(SCBNL & BOKL)	70.70%	51.78%

Source: *Refer Annual Trading Report 2007/08, NEPSE*

Here, the portfolio return of NABIL & BOKL is maximum by 74.33% and NIBL & SCBNL is minimum by 57.14%. Similarly the portfolio risk of BOKL & NIBL is maximum by 62.64% & NIBL & NABIL is less risk by 30.79%.
It can be concluded that the portfolio of all group is very authentic for investing to investor because of less risk than return.

4.6.1 Comparison of Risk and Return of Portfolio Analysis of four Assets and Average of Four Sample Commercial Banks

The following table 4.21 shows the comparison study of expected portfolio return and expected portfolio risk of two investments.

Table 4.21

Portfolio Return and Risk of Two Investments

Investment	Expected Return	Risk%
Average of Four Commercial Banks	0.6583	0.4858
Portfolio of Four Assets	**0.6583**	**0.4534**

Source: Refer Annual Trading Report 2007/08, NEPSE

Above table 4.21 clearly states that the average expected return of four commercial banks is 65.83% and the risk associated with this return is 48.58%. Whether the expected return of portfolio is 65.83% which is exactly equal with average expected return and the portfolio risk associated with portfolio expected return is 45.34%.

4.7 Major Findings

Major findings of the above calculation are presenting as follows:

1. Among 25 commercial banks, 18 commercial banks are listed in NEPSE. Among listed commercial banks, four commercial banks i.e. NIBL, SCNBL NABIL and BOKL are taken into consideration. The Expected return of four commercial banks is 50.54%, 63.73%, 71% and 77.66% respectively.

2. On the basis of standard deviation of NIBL, SCBNL, NABIL and BOKL is 56.40%, 50.40%, 77.13% and 80.62% respectively. Standard deviation of common stock of BOKL is maximum by 80.62%.whatever the standard deviation of common stock of SCBNL is minimum by 50.40%.

3. On the basis of coefficient of variation, the coefficient of variation of NIBL, SCNBL, NABIL and BOKL is 1.12, 0.79, 1.09 and 1.04 respectively. The coefficient of variation of NIBL is maximum by 1.12 units which are risky too, and the C.V. of SCBNL is minimum by 0.79.

4. Sector wise NEPSE index is an increasing trend from 2004/05 to 2007/08. So that considering Market risk and return, expected return of overall market from fiscal year 2001/02 to 2007/08 is 30% and the risk associated with expected return is 29.66% and the coefficient of variation is 0.99 units. Overall Market is increasing slightly in this period so risk is less than expected return.

5. In Hypothesis-I, the calculated value of 't' is 0.1521 is less than the all tabulated value at 10%,5%,2%and 1% level of significance i.e. 1.812,

2.278, 2.764 and 3.169 respectively. It is not significant and therefore H_0 is accepted.

6. The beta coefficient of NIBL, SCBNL, NABIL and BOKL is 1.06, 1.54, 2.23 and 0.819 respectively. It proves that the common stock of NABIL is most aggressive and the beta coefficient of common stock of BOKL is minimum by 0.819 and it is better to invest for investor because the beta coefficient indicates systematic risk of the asset...

7. In hypothesis-II the calculated value t = 1.90 calculated value of 't' is less than all tabulated value at 10%, 5%, 2% and 1% level of significance and null hypothesis is accepted .

8. Considering market capitalization of four commercial banks the market capitalization of NIBL, SCBNL, NABIL and BOKL is 21.55%, 34.80%, 33.41% & 10.24% respectively in the year 2007/08. The market capitalization of SCBNL is maximum by 34.80% and the market capitalization of BOKL is minimum by 10.24%.

9. On the basis of required rate of return and expected rate of return the study shows RRR of NIBL, SCBNL, NABIL and BOKL is 0.3147, 0.4324, 0.6015 & 0.2556 respectively. The ERR of NIBL, SCBNL, NABIL & BOKL is 0.5054, 0.6373, 0.71 & 0.7766 respectively. Analysis of RRR and ERR shows that the common stock of all four banks are under priced.

10. The average expected return of common stock of four sample commercial banks is 65.83% and the risk associated with return is 48.58%. On the basis of Portfolio analysis, four assets portfolio is constructed and the portfolio return is similar with average expected return i.e. 65.83% and the portfolio risk is 45.34%.

11. The portfolio return of NABIL & BOKL is maximum by 74.33% and NIBL & SCBNL is minimum by 57.14%.Similarly the portfolio risk of BOKL & NIBL is maximum by 62.64% & NIBL & NABIL is less risk by 30.79%. It can be concluded that the portfolio of all group is very authentic for investing to investor because of less risk than return.

CHAPTER - V
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Financial analysis consists on the acquisition, utilization, control and administration of funds. Managerial finance and investment analysis are an exciting and dynamic area of study and its importance to long run success of today's business is unquestioned.

Risk and return is getting considerable attention in financial management and central focus of finance is tradeoff between risk and return. And its major part, stock market had greatest glamour, not only for the professional or institutional investors but also for the individual or private investors. The relationship between risk and return is described by investor's perception about risk and their demand for compensation. No investors will like to invest in risky assets. Common stock is the most risky security and life blood of stock market. Investment in common stock is very sensitive on the basis of risk. Dividends to common stock holders are paid only if the firm makes an operating profit after tax and preference dividend. Common stock has attracted more investors in Nepal. Rush in the primary market during the period of issue is on example. Although private common stock holders are the passive owners of the company, they play vital role in economic development of nation by mobilizing the dispersed capital in different form in the society due to change in economic policy of the nation and adoption of open economic policy of government, the establishment of the commercial banks are increasing and the peoples participation in security investment and stock trading is increasing unexpectedly. Even though the investors do not have enough knowledge to investment in security.

Considering overall economy, Nepalese stock market is in emerging trend. Nepalese people's participation in common stock investment and stock trading

is increasing unexpectedly. Common stock is the most risky security. To get success from it, we need sound knowledge about the situation of market and in which common stock we are going to invest. But we see that due to lack of information and poor knowledge, Nepalese private investors cannot analyze the securities as well as market properly as a result, there may be chance of loss. The investor's are responsible to make rational investment decision. For this rational knowledge is essential.

The main objective of the study is to analyze the risk and return in common stock investment of commercial banks, which are listed in NEPSE. The study is focused on the common stock of listed four commercial banks. Hence, listed commercial banks are taken as reference to analyze the risk and return in common stock investment. While analyzing the risk and return brief review of related studies has been performed scientific methods are used in data analysis and tables, graphs and diagrams are used to present the data and findings clearly. Both quantitative and qualitative analysis has performed by using statistical tools as well as personal judgment. Secondary data are collected from the NEPSE, annual and quarterly publication of NRB, SEBON and from other individual commercial banks. Remaining subjective information are collected through questionnaire and discussions with private investors, finance executive of companies and officials of NRB, SEBON, NEPSE and through individual brokers. Finding of analysis are summarized and conclusions are drawn as follows.

5.2 Conclusion

This study enables investors to put the returns they can expect and the risk they may take into better perspective because most of the people considered stock market investment as a black art that they have unrealistically optimistic or pessimistic expectations about stock market investments or perhaps a fear of the unknown. Nepalese stock market is in emerging stage and its development is accelerating since the political change in 2046 B.S. which is the effect of

open economy and liberalization in national economy. But, Nepalese individual investors cannot analyze the securities as well as market properly because of lack of information and poor knowledge about the analysis of securities investment. Followings are the major conclusion summarized;

a. The return is the income received on common stock investment, which is usually expressed in percentage. Among selected four commercial banks expected return on the common stock of BOKL is maximum (i.e. 77.66%) and NIBL is minimum by 50.54%.

b. Risk is associated with return and it is variability of returns which is measured in terms of standard deviation, common stock of BOKL is most risky, since it has the highest standard deviation and common stock of SCBNL is less risky because of its lowest standard deviation.

c. On the other hand, coefficient of variation is more rational basis of investment decision which measures the risk per unit of variation, common stock of SCBNL is best among all selected commercial banks. SCBNL has 0.79 unit of risk per unit of return. Whether common stock of NIBL has highest risk considering per unit return (i.e. 1.12 unit)

d. The null hypothesis is accepted by testing the hypothesis – I at different level of significance (i.e. 10%, 5%, 2% and 1%). So it can be concluded that there is no significant difference between the portfolio return of the common stock of commercial banks is equal to the market rate of return.

e. Standard deviation measures unsystematic risk which is not defined by the market. Another aspect of the risk is systematic risk which is defined by the market and measured by beta coefficient. Beta coefficient measures the sensitivity or volatility of the stock with market.

f. The null hypothesis is accepted by testing the hypothesis – II at 10%, 5%, 2% and 1% level of significance. So, it can be concluded that there is no significant different between the portfolio beta of commercial banks and market beta.

g. Capital asset pricing model (CAPM) describes the relationship between risk and required rate of return. Summation of risk free rate (R_F) and

premium based in the systematic risk of the security is required rate of return of that common stock. Comparison between required rate of return (RRR) and expected rate of return (ERR) helps to predict whether the stock is overpriced or under priced. If the required rate of return is greater than expected rate of return, the price of stock is overpriced or vice versa. The study shows that common stock of all selected commercial banks is under priced. All the stocks are in demand and investor can buy the stock of NIBL, SCBNL, NABIL and BOKL.

h. It can be concluded that diversification of fund by making a portfolio can reduce unsystematic risk of individual security significantly. If investors select the securities for investment, which has highly negative correlations of returns, the risk can be reduced totally. If the correlation between the return of two stocks is highly positive, risk reduction is not too significant. So, portfolio between the common stock of same industry cannot reduce risk properly. In this study portfolio investment has less risk (i.e. 45.34% < 48.58%) than average risk of four assets. But the average return and portfolio return are exactly similar.

i. Among four selected commercial banks if investor invest in each two assets (Like NIBL & SCBNL, NIBL & NABIL, NIBL & BOKL, SCBNL & NABIL, NABIL & BOKL, and SCBNL & BOKL) they will get good result in their investing.

j. Investors of NEPSE invest on common stock only keeping the return in the mind and they are found unable to calculate the risk factors of the security. Most of the Nepalese individual investors invest in single security. Some of the investors invest their funds in two or more securities without any portfolio analysis. With the help of majority questionnaire it is also found that if investors never calculate risk and return over their investment.

5.3 Recommendations

The focus of the study is to assess risk associated with return on common stock considering individual and private investors. The following facts are recommended on the basis of data analysis and major findings of this research.

a. Proper analysis of individual security industry and overall market is always essential to make possible to conquer the stock market. General knowledge about economic, political as well as technological trend will be advantageous which is proved by the present political situation of Nepal, it cause a great deterioration in share price. To win in the market, sell shares when the market is risking and buy share when the market is declining and hold share which will perform better than market.

b. It is recommended to shareholders that investment in among four selected commercial banks SCBNL because its coefficient of variation is minimum by 0.79 times.

c. Investors need to diversify their fund to reduce risk. Proper construction of portfolio will reduce considerable potential loss, which can be defined in terms of risk. For the portfolio construction select the stock that have higher return with low risk and stock from different industries, this study suggests that similar stock cannot diversify the risk properly and some risk can be reduced by investing in constructing (four assets) rather than investing in single / individual asset. So the construction of portfolio among the common stock of four assets i.e. NIBL, SCBNL, NABIL and BOKL is recommended due to more expected rate of return with less risk.

d. Analysis of personal risk attitude, needs and requirements will be helpful before making an investment decision in stock market. Investors should make several discussions with stockholders before reaching at decision. Investors should make their decision on the basis of reliable information rather than the imagination and rumors.

e. Before making investment decision, it is recommended to visit and discussion with investment companies, with individual expert and

researchers. In case of Nepal NCM mutual fund is worthwhile for people. So, sharing experience, idea and view of experts will provide greater help.

f. It is recommended to organized bodies like SEBON & NEPSE to hold meeting and gathering about common stock investment in Nepalese financial as well as other markets.

g. By making seminars and meetings it is fruitful for investors to know about 'Trading System' NEPSE is following 'open out and cry system' of trading even in the age of modern technology. It should be modernize and needs to develop efficient and effective information channel to provide up to date data.

h. Corporate organizations must publicize the financial statements, value of assets and liabilities should not be manipulated. Each and every managerial decision of organization must be made to maximize shareholders wealth.