Chapter 1

INTRODUCTION

1.1 Background of the study.

Financial management is important in all types of business including banks and other financial institutions as well as industrial and retail firms. Financial management involves the solution of the three major decision i.e. investment decision, financing decision and dividend decision. A firm always strives to solve jointly for an optimal combination of the three interrelated decision to achieve the objective of maximizing the value of the firms to its shareholders.

The investment decision is the most important of the three decisions when it come to the creation of the value. It is mainly concerned with selecting new investment managing current assets, maintaining proper level of liquidity, establishing credit policy and controlling the level of inventory. A part from above study, investment decision is also important for mergers and acquisitions. Financial decision is concerned with determining the best capital structure to maximize market prices per share, selection of financial instrument, re-arranging existing sources, reduction of financial risk through hedging and negotiating and developing relationship with capital suppliers. And dividend decision concerns with how the firms pays a return to all different types of investors for the use of their funds. It includes the percentage of earning paid to share holders in cash dividend, stock dividends and the repurchase of stock, all these analyzed in relation of financing decision.

Generally all decision makers are risk averse they prefer hither mean return with lower risk of return. Investors usually don't like to invest only in single assets rather they prefer to invest in portfolio of assets. Portfolio of assets usually offers the advantages of reducing risk through diversification.

Portfolio management is concerned with efficient management of portfolio investment in financial assets, including shares and debenture of companies. The

management may be by professionals, by other or by individuals themselves. A portfolio of an individual or a corporate unit is the holding of securities and investment in financial assets. These holding are the results of individual preferences and decisions regarding risk and return. The process of portfolio management is closely and directly linked with process of decision making the correctness of which cannot be ensured in all cases portfolio theory it is necessary to understood corporate finance because the firm is really a portfolio of risky assets and liabilities.

A portfolio simply represents the practice among the investors of having their funds in more then one assets. The combination of investment assets is called a portfolio (Weston and Brigham: 1982, 245). Portfolio means a collection or group of assets (Gitman: 1988, 343). The term “Portfolio" simply means a collection of investment. For investors through the stock exchange the portfolio will be a collection of share holding in different companies. For a property, investors has portfolio will be a collection of a real capital projects. It will be apparent that the actual nature of the components of a portfolio depends on the population of opportunities from which the selection has been made (Brokingtom: 1990, 148). A portfolio is defined as a combination of assets. Portfolio theory deals with the selection of optimal portfolios that is portfolio that provides the highest possible return for any specified degree of risk or the lowest possible risk for any specific rate of return (Weston and Copeland: 1992; 336).

Portfolio investment is an important function of management. Its overall objectives involve primary and secondary objectives. The primary objectives is to maximize the return minimize the risk and other secondary objectives are 1) Regular return 2) Stable income 3)Appreciation of capital 4) Ever liquidity 5)Easy marketability 6)safety of investment 7) Tax benefits.

Portfolio assets usually offer the advantage of reducing risk and increasing return through diversification. In other words the standard deviation of the return on portfolio of assets may be less than sum of standard deviation of the return from

the individual assets or the rate of return on portfolio assets may be higher then sum of rate of returns from the individual assets.

Portfolio management of financial institution assets means allocation of fund to different components of financial institutions assets having different degree of risk and varying rate of return in such way the main goal of financial institution is maximize the return and minimize the risk by selecting a portfolio of securities.

1.2 Statement of the Problem

Many studies are completed on the risk and return management and related topic in the international era. Some examples are as follows. Sharpe (1964) has found diversification does reduce risk and the reduction can be greater the wider the range of possible investment. Shape (1966) and Treynor (1966) found higher the resulting number better the portfolio performance. Wager and Lau (1971) found as a number of security increase the portfolio standard deviation decrease. Elton and Martin (1979) found realized returns are a very poor measure of expected return and that information surprises highly influence a number of factors in assets pricing model. Buser's (1979) study concludes diversification take reduction in cost of equity founds offers by its specific stockholders. According to Koehn and Anthony (1980), to evaluate the result on bank capital regulation of explicit relationship between the risk of the bank portfolio, the amount of bank capital held and the chance of bank ruptcy must be obtained. Shrestha (1993) suggested commercial bank should take their investment function with proper business attitude and should perform lending and investment operation efficiency with the proper analyze of the projects. Brem and Henery (1997) found domestic investors are able to get quick information then foreign investors and take enough benefit by it.

According to Shrestha (1998) investor wants to increase there return by making investment in different sectors. Sapakota (1999) found finance and insurance sectors have highest expected return. Joshi (2001) suggests there should be special

knowledge as well as adequate skill to analyze portfolio in investors. According to Basnet (2002) banks are very strong in investment in comparison to individual investor. Joshi (2002) concludes investors are trading the securities mostly under the pressure of brokers. Khania (2003) there is negative correlation between loans and advance in private sectors in Nepal. According to Crabb (2003) greater the beta more sensitive to the return on the stock. Cheetry (2003) portfolio risk is less than average risk of financial institutions. SCBL has good liquidity position among four sample banks identified by Mustafa (2003). Davis(2003) that book to market ratio, earning yield and cash flow yield have significant explanatory power with respect to the cross section of realize stocks returns during the period of July 1940 to June 1963. Thapa (2003) concludes Nepalese investors are attracted towards common stock because of higher expected return. Poudel (2004) found that commercial banking industry has the highest values of market share than other sector. By diversification of portfolio unsystemic risk can reduce identified by Panti (2004). Acharya (2004) concluded that expected rate of return on banking sectors that expected rate of return on banking sectors is higher than other sectors. Majority of the risk adverse investors find minimum variances portfolio yielding optimal satisfaction, identified by Shrestha (2005). Panti Lal (2005) suggests that measure for the improvement of investment rationalities, investors should be aware of risk and return. Gyawali (2006) found Bangladesh Bank Ltd has high risky with high expected return. Verma (2006) found positive relationship between profitability and dividends. Rajkarnikar (2007) found that Risk and return analysis in common stock investment describe the risk and return and other relevant variable

To sum, the study deals with the following issues.

1. What is the risk and return of Nepalese financial institutions?
2. Which financial institution has largest degree of financial risk and return?
3. What is the risk and return on portfolio in Nepalese financial institutions?

4. In banking sector, which bank has highest degree of financial return and risk?
5. In finance company, which finance company has highest degree of finance risk and return?
6. In insurance company, which insurance company has highest degree of risk and return?
7. Can bank diversify the risk by investing in portfolio?
8. Can finance company diversify the risk by investing in portfolio?
9. Can insurance company diversify the risk by investing in portfolio?
10. Can risk diversify by investing in portfolio?

1.3 Objectives of the Study

Various studies have been conducted and also some models developed about risk and return analysis. Investors are concerned with less risk and high return and they do not want to invest their invisible amount on less profitable project. For this only the appropriate information system helps the investors for diversity of risk and alters prospective portfolios.

The major objectives of the study are to analyses risk and return of Nepalese financial institution. The specific objectives are:

1. To examine the risk and return of Nepalese financial institutions.
2. To evaluate the financial performance in terms of portfolio risk and return.
3. To examine whether risk can be diversified by investing in portfolio or not.

1.4 Organization of the Study

The study is organized in five chapters. The title of each of the chapter is as follows:

Chapter 1 – Introduction

Chapter 2 – Review of literature

Chapter 3- Research Methodology

Chapter 4 – Presentation and Analysis of Data

Chapter 5 – Summary conclusions and Recommendations

Chapter 1; Introduction

This chapter includes background, statement of the problem, and objectives of the study.

Chapter 2; Review of Literature

This chapter reviews the existing literature in the relevant area and includes the review from different studies, reviews of journals, review of past research.

Chapter 3; Research Methodology

This chapter introduces the research design, nature and source of data, population and sample, methods of data analysis.

Chapter 4; Presentation and Analysis of Data

This chapter deals systematic presentation and analysis of data. Various financial and statistical tools and technique have been used to analyze and interpret the data. This chapter is a key chapter of the study.

Chapter 5; Summary, Conclusions and Recommendations

This is a final chapter of the study and offer necessary recommendations for future improvement of related sectors.

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CHAPTER -2
REVIEW OF LITERATURE

Reviews of literature about "Analysis of Risk and Return in Nepalese Financial Institutions" are presented in this chapter. This chapter basically concerned with review of literature relevant to the risk and return analysis of different writer. Every study or research is very much based on the past knowledge. The past knowledge or the previous studies should not be ignored as it provides foundation to the present study. So review of literature is the most necessary chapter. "The purpose of the reviewing the literature is to develop some expertise one's area to see what new contribution can be made and to review some idea for developing research design" (Wolff and pant: 1999, 30).

This chapter has been divided into three sections. Section I, deals with the conceptual frame work. Review of Empirical studies on risk and return and portfolio management has been described in section II, section (III) is devoted to concluding remarks.

2.1 Conceptual Framework

Conceptual Framework deals with the theoretical assepts of investment, risk, return, portfolio, diversification etc.

2.1.1 Investment

An investment involves the sacrifice of current rupees for future rupees. The sacrifice takes place in the present and certain while the reward comes later and uncertain. Investment involves long-term commitment and waiting for a reward. It involves the commitment of resources that have been saved or put away from current consumption in the hope that some benefit will occur in future.

Investment brings forth vision of profit, risk, speculation, and wealth. They have briefly describes the categories and types of investment alternatives. They describes that the basic investment objectives, the expected rate of return, the expected risk, taxes, the investment horizon and investment strategies are the factors to be considered in choosing among investment alternatives. (Cheney and Mosses: 1992, 8-12)

According to Gitman and Joehnk, "Investment in any vehicle into which funds can be placed with the expectation that will preserve or increase in value and generated and positive return."

In the words Frank and Reilly “An investment is the current commitment of funds for a period of time to derive a future flow of funds that will compensate the investing unit for the time funds are committed for the expected rate of inflation and also for the uncertainty involved in the future flow of the funds.

2.1.2 Investment Process

The investment process describes how an investors makes decision about what securities to invest in, how extensive this investment should be and when they should be made. The investment processes are as follows:

a) Set Investment Policy: The first step of the investment process is to set the investment policy. It determines the objectives and the amount of their investment fund. Investor objective should be stated in terms of both risk and return. This step involves the identification of potential categories of financial assets for consideration in the ultimate portfolio. This identification will be based on the investment objectives, amount of invest able wealth and tax status of investor.

b) Perform Security Analysis: In this step, security analysis involves examining a number of individual securities/group of securities within the broad categories of financial assets. The investor will evaluate them in term of their price whether they are under price or overpriced, risk associated with that specific security, their expected return and real return an so on.

c) Construct Portfolio: Construction of portfolio involves identification of specific securities in which to invest, along with the proportion of invest able wealth to be put into each security. The investor may construct portfolio according to their interest either they want active or passive strategy to manage their investment. There should be clear vision of strategy, risk bearing capacity and required rate of return before deciding the alternatives of investment.

d) Revise the Portfolio: This step involves both realizing that the currently held portfolio is not optimal and specifying another portfolio to hold with superior risk-return characteristic. The investor must balance the cost of moving to the new portfolio against the benefit of the revision.

e) **Evaluation of Portfolio Performance:** Evaluation of portfolio performance involves determination of the actual performance of a portfolio in terms of risk and return, and compares the performance with that of an appropriate "benchmark" portfolio.

2.1.3 Risk and Return

Financial decision possesses certain risk and return characteristics and all major financial decisions must be viewed in terms of risk and return. The amount that invested money earns is called the investment return (Chenny and Mosses: 1982, 28). Return is the benefit associated with ownership includes the cash dividends paid during the year together with an appreciation in market price, or capital gain realized. More formally, the one period return is:

$$\text{One period return} = \frac{\text{Dividends} + (\text{Ending price} - \text{Begining price})}{\text{Beginning}} \quad \text{.... 2.1}$$

Risk can be defined as chance of loss "Risk can be defined as financial loss or more formally the variability of returns associated with the given asset" (Gitman: 1988, 211). Investment risk is associated with the probability of losses. The greater chance of loss, more risky the investment and vice versa. The most common statistical measure of an assets risk is the standard deviations from the mean or expected value of return. To calculate the standard deviation, we proceed as follows.

1. Calculate the expected rate of return:

$$\text{Expected rate of return } (\bar{K}) = \sum_{i=1}^{n} P_{i\,x}\, K_i \quad \text{...(2.2)}$$

2. Subtract expected rate of return from each possible outcome to obtain a set of deviation about the expected rate of return.

$$\text{Deviation (i)} = K_j - \bar{K} \quad \text{... (2.3)}$$

3. Square each deviation, multiply the standard deviation by the probability of occurrence for its related outcome, and sum these products to obtain the variance of the probability distribution.

$$\text{Variance } (\sigma^2) = (K_j - \bar{K}_j)^2 \times p_i \quad \text{... (2.4)}$$

4. The standard deviation is found by obtaining the square root of the variance.

$$\text{Standard deviation} \quad (\sigma) = \sqrt{\sum_{i=1}^{n} (K_j - K_i)^2 \times P_j} \quad \text{...(2.5)}$$

2.1.4 Portfolio Theory and Diversification

Portfolio theory is a normative approach to investment choice under risk (I.M.Panday: 1991, 382). This theory was developed by Harry M. Markowitz. The main assumption of the theory is that investors are risk averse. This shows that investor has a bundle of securities. In stead of holding one single security with highest return, Investor holds bundle of securities to diversified risk. The next assumption of portfolio theory is that security returns are normally distributed. Therefore expected return and variance are sufficient to describe future return of a portfolio

Investment risk can be reduced by including more than one alternative of assets in the portfolios and by including more than one asset from each category. Hence diversification is essential to the certain of efficient because it can reduce the variability of returns around the expected return. The diversification may significantly reduce risk without a corresponding reduction in the expected rate of return on the portfolio (Francis: 2000, 252-265)

Diversification is the one important means that control portfolio risk. Investments are made in a wide variety of assets so that exposure to the risk of any particular security is limited. By placing one's eggs in many baskets , overall portfolio risk actually may be less than the risk of any component security considered in isolation.(Bodie et.al:2002,162-208). If the investors diversify funds into many more securities that continue to spread out firm specific factor and portfolio volatility should continue to fall. Ultimately, however even with a large number of stocks investors cannot avoid risk altogether. Since all securities are factors when all risk is firm specific diversification can reduce risk to a negligible level. When common sources of risk affect all firms however even extensive

diversification cannot eliminate risk that is due to market risk or systematic risk on average portfolio risk does fall with diversification to reduce risk is limited by systematic or common sources of risk.

Here are some different diversification techniques for reducing a portfolio's risk:

a) Simple Diversification: Simple diversification can be defined as " not putting all the eggs in one basket" or spreading a risk they made the portfolio from randomly selected securities and allocate equal weights. "Spreading the portfolio's assets randomly over two or three times as many stocks can not be expected to reduce risk any further " It is the random selection of securities that are to be added to portfolio . Simple diversification reduces a portfolio's total diversification risk to zero an only the un-diversification risk remains.

b) Diversification Across Industries: Some investment counselors advocate selecting from different industries to achieve better diversification. It is certainly better to follow this advice than select all the securities in a portfolio from one industry. Since all the industries are highly correlated with one another, diversification across industries is not much better than simply selecting securities randomly.

c) Superfluous Diversification: Such portfolio diversification that has excess no. of assets (more than 15) known as superfluous diversification. It refers to the investors spreading himself in so many investments on his portfolio. It may lower the net return to the portfolios owners after the portfolio's management expenses are deducted, even though there will most likely be no concurrent improvement in the portfolio's performance. In this context, Clarke's adds that superfluous diversification usually result in the following portfolio management problems:

1) Impossibility of good portfolio management
2) Purchase of lackluster performers
3) High transactions costs
4) High search costs

He describes that although more money is spent to manage a superfluously diversified portfolio; there will most likely to be no concurrent improvement in the portfolio's performance. Thus superfluous diversification may lower the net return to the portfolio management expenses are deducted.

d) Markowitz Diversification: Markowitz diversification may be defined as combining assets that are less than perfectly positively risk correlated in order to reduce portfolio risk without sacrificing portfolio returns. It can some times reduce risk below the non-diversification level. Markowitz diversification is more analytical than simple diversification and considers assets correlation. The lower correlation between assets the more that Markowitz diversification will be able to reduce the portfolio's risk. Markowitz diversification can lower risk below undiversification level if the securities analyst find securities, whose rates of return have low enough correlations. Unfortunately there are only a few securities that have low correlation. Therefore, using Markowitz diversification requires a data bank of financial static's for many securities a computer and some economic analysis.

Markowitz paper is the first mathematical formalization of the idea of diversification of investment; the financial version of "the whole is greater than the sum of its parts" through diversification, risk can be reduced without changing expected portfolio return. The decision to hold a security should not be made simply comparing its expected return and variance to others, but rather the decision to hold any security would defend on what other securities the investors wants to hold . Securities could not be properly evaluated in isolation, but only as a group.

.2.1.5 Risk and Return of Portfolio

The expected return on portfolio is simply the weight average of the expected returns on the individual assets in portfolio (Brigham, Gapenski and Ehrhardt: 1999, 172).

The Standard deviation of the return on portfolio is to determine of the return on portfolio is to determine its riskness. And the expected return on portfolio is to determine its risk ness. And the expected return on portfolio is to determine its return on portfolio is to determine its return which is expressed below.

Expected return on portfolio

$$E(Rp) = \sum_{i=1}^{n} E(R_i) \times W_i \qquad \text{... (2.6)}$$

Where, $E(R_i)$ =Expected return on security i , W_i = Weight of Security i

$$\sigma p = \sqrt{W_A^2 \sigma_A^2 + W_B^2 \sigma_B^2 + 2Cov_{AB} W_A W_B} \quad \text{... (2.7)}$$

Where, σ_p=Standard deviation on portfolio, W_A= Weight of security 'A', W_B= weight of security 'B', σ_A=Standard deviation of Security 'A', σ_B=Standard deviation of Security 'B'

Cov_{AB}=Covariance of returns between Security A and B

2.1.6 Portfolio Management Process

Portfolio investment process is a chain of actions for an individual to buy or sell order for investment assets such as Stock and bond portfolio investment process are classified in three Stages.

a) Planning: The aspect of portfolio management is the most important element of proper portfolio investment and speculation. In the planning stage a careful review should be conducted of the mission, financial situation and current capital market conditions.

b) Implementation: In this stage three decisions need to be made. The first one is rebalance strategic asset allocation; another one is rebalance tactical asset allocation and last is security selection Investment managers should be made other decisions if necessary.

C) Monitoring: The last stage in the portfolio investment process consists of monitoring portfolio return. There are three stages first is investment policy second is portfolio performance the last is action required to control.

In this section is devoted to discuss portfolio selection model, Capital Assets Pricing Model (CAPM).

2.1.7 Portfolio selection models

Marowitz's Portfolios Selection Model

Portfolio selection model was profound by Markowitz (1952). According to this model, every portfolio emphasizes to two things. This is also called modern theory of portfolio management. This model assumes investors are rational and they always wants highest possible return by diversified risk similarity for a given level of expected return investor prefer less risk.

Markowitz model is based on correlation under this theory if portfolio is made by combination of assets which are less than perfectly positive correlated (+1), the risk can't be minimized. If the assets are perfectly negatively (-1) risk can be minimized.

Investor prefers to select portfolio having higher level of return at a given level of risk. Therefore trade off is required between the risk and return of portfolio. To select the optimal portfolio this model used equation which are given below.

$$E(rp) = W_1E(r_1) + W_2E(r_2) + \ldots\ldots\ldots\ldots\ldots + W_nE(r_n) \quad \ldots (2.8)$$

Where, E (rp) = Expected return on portfolio, W1 = Weight of asset 1, W_2 = Weight of asset 2, E (r_1) = Expected return of asset 1,E (r_2) = Expected return of asset 2, n = Number of assets included in the portfolio

$$\sigma_p = \sqrt{W_1^2\sigma_1^2 + W_2^2\sigma_2^2 + 2Cov_{1,2}\, W_1\, W_2} \quad \ldots (2.9)$$

Where,σp = Standard deviation on portfolio, $Cov_{1,2}$ = Covariance between asset 1 and 2

$$Cov_{1,2} = \frac{\sum [r_1 - E(r_1)]\,[r_2 - E(r_2)]}{n} \quad \ldots (2.10)$$

Where, r_1, r_2 = Single period rate of r, n= Number of observation

$$P_{1,2} = \frac{Cov_{1,2}}{\sigma_1 \times \sigma_2} \quad \ldots (2.11)$$

Where, $P1_{,2}$ = Correlation between asset 1 and 2

According to this modal expected rate of return on portfolio, standard deviation on portfolio and correlation between assets measures portfolio return, portfolio risk and return between assets respectively.

Sharpe's Capital Assets Pricing Modal (CAPM)

The Capital assets pricing modal (CAPM) was developed 12 years latter by William F. Sharpe (1964). This model assumes all investments are infinitely divisible fractional shares may be purchased in any portfolio or any individual assets. Capital assets are the long term financial assets and CAPM is based on pricing of these assets. CAPM suggests that any investor can create a portfolio of assets that will eliminate all diversifiable risk, the only relevant risk is non diversifiable risk there fore the investment decision and

pricing of Capital assets should be based on the undiversifiable risk. The relationship between an assets return and its systematic risk can be expressed by the CAPM which is also called the Security Market Line (SML).

The equation for the CAPM is given below:

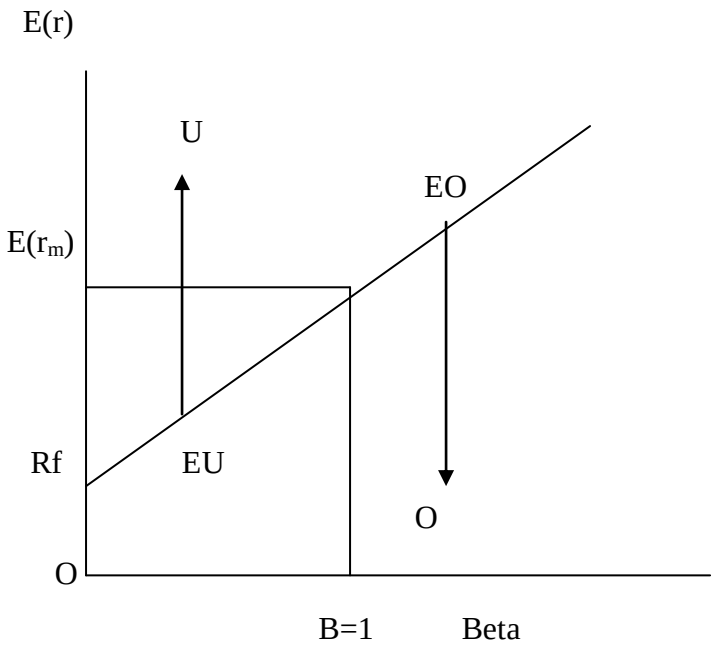
$$E(r) = RF + [E(rm) - RF]\,\beta \qquad \ldots 2.12$$

Where (r) = Expected return on assets, RF = Risk Free rate of return, E (rm) = Expected rate of return on market, β = Beta or systematic risk

The CAPM is equilibrium modal for measuring the risk and return trade off for all assets including both inefficient and efficient portfolios. A graph of the CAPM is given in the figure(2.1)

Figure (2.1)

The CAPM or Security Market Line (SML)



Sources: Jack Clark Francis "Investment"

In figure (2.1) there are two assets denoted O and U. Assets U is under priced because its expected rate of return is too high for the level of systemic risk, it bears assets O is overpriced because its expected rate of return is two low to investor to accept its undiversifiable risk.

Review of Empirical studies

Like books, there is no such advance and research based journals in the field of finance in Nepal. There are very limited numbers of journals available in the subject of management and it is further difficult to find the article in the subject matter of finance. And there is not any article in risk and return analysis of financial institution. Some foreign well-known journals are taken into consideration, which is spread out all over the world. Although the articles publish recently in these journals are based on the foreign stock market, It can give the sound conceptual framework and recent worldwide development on these research topic. This day's information highway or the internet has become to the most easily accessible medium to gain information in any subject matter. In the study period different web site related studies have been viewed. Some articles related to our topics are explained as under.

Ghimire (2001) in their work entitled "Nepal share market an investor's prospect" pointed out some important trends to Nepalese capital market. He has mentioned article many unbalanced factors like political instability etc. are the main case of the decreasing share price. According to him current share prices are on declining process. The fluctuation in NEPSE is due to banking sectors which price change has to logical explanation. Price change was due to availability of bonus, dividend etc. when we analyzed our stock market we find that all the component of the market are lame, weak and perhaps work for wrested interest. The general publics are also reckless in their investment and broker organization is also unqualified and is a one man show. In additional to this board always favors companies and not the investors.

Almost all of the testing, we are aware of using realized returns as a proxy for expected return. The use of average realized as a proxy for expected return relies on a belief that information surprises tend to cancel out over the period of a study and realized return are therefore and unbiased estimated of expected returns. However, we believe that there is sample evidence that this belief is misplaced.

There are periods longer than 10 years during which stock market realized returns are on average less then the risk free rate (1973 to 1984). There are periods longer than 50 years in which risky long-term bonds on average under perform the risk free rate (1927 to 1981). Having risky assets with an expected return above the risk free rate is an extremely weak condition for realized returns to be an appropriate proxy for expected return and 11 to 15 years is an awfully long time for such a weak condition not to be satisfied. In the recent past, the united states has had stock market return of higher than 30 percent per year while Asian market have had negative returns.

The study attempts two sets of questions to answer by his solution. Many emerging stock market have firms with multiple shares classes are tread as single value weighted portfolio of the outstanding equity securities. He concludes that the return factors in emerging market are qualitatively similar to those in developed markets. The low correlation between the county return factors suggests that the premiums have a strong local character. Furthermore global exposure cannot explain the average factors returns of emerging market. There is little evidence that correlation between the local factors portfolio have increased which suggests that, factors responsible for increase of emerging market country relation are separate from those that derived from the differences between expected return with in these market.

Previously journal published in journal of finance entitled the writers investigates the role of information-based trading in affecting return. Using the microstructure model, they drive a measure of the probability of information-based trading and they estimate this measure using data for individual NYSE listed stocks for 1983 to 1998. In this study writers are concluded that information- based trading has a large and significantly positive effect on assets returns. Indeed, there estimated information variable and firm size is the predominant factors explaining returns. That the risk of information-based trading affects assets returns raises a host of important questions regarding asset pricing in general, and asset pricing models

and in particular. Brevity precludes addressing all of these, but they do feel it useful to consider three general issues. These involve the theoretical basic for our result and the implication of our results for future research.

In this study, the writers further added that "Of particular importance is why this can occur in a seemingly efficient capital market. A natural objection to all candidates put forward to explain assets returns is that, with the exception of systematic risk, the actions of arbitrageurs should remove any such proposed influence on the market. While this may be accurate for some factors, we do not believe that it is accurate with respect to asymmetric information. In a word with asymmetric information, uninformed investors are always at a disadvantage relative to trade with better information. In bad times, this disadvantage can result in the uniformed traders portfolio holding too much of the stock, in good times, the traders portfolio has too little of the stock. Holding many stocks cannot remove this effect because the uniformed do not know the proper weights of each asset to hold. In this sense, asymmetric information risk systematic because, like market risk, it cannot diversify away." Thus, this paper shows that the information is important factors while estimating the stock price and its return.

Review of Relative topics

This section is divided into two subsections. First subsection deal with studies on study on portfolio and second section deal with studies on risk and return.

Study on portfolio theory

This part briefly reviews available literature on portfolio theory.

Markowitz (1952)

Harry M. Markowitz studied portfolio selected model in 1952, the main objective of the study is to show risk can be reduced with higher level of expected utility

than with other risk reduction techniques by diversification. This study deal about optimal portfolio. Every portfolio emphasizes return and risk. And investors give emphasis to two things. There is total risk and it is symbolized by standard deviation.

According to this study the return dependent on three things.

1. The number of securities in portfolio.
2. Correlation between rates of return of securities.
3. Proportion investment in different securities.

This study used expected rate of return on portfolio standard deviation of portfolio and correlation between the securities to show the reduction of risk by diversification of assets. Markowitz found most effective way of reducing risk. That is rational investors will be concerned with the correlation between assets, in addition to the assets expected returns and standard deviation on portfolio.

Sharpe (1966)

This study mainly focused on portfolio performance evaluation on basic of return and risk. Sharpe develop a ratio is called share ratio to evaluate the performance of portfolio. Sharpe ratio is also called Sharpe index. This study measures the amount of return from an investment portfolio from a given level of risk. The real need is for an index for portfolio performance evaluation is given below.

$$Sp = \frac{\text{Risk premium}}{\text{Total risk}} = \frac{r_p - r_f}{\sigma_p} \qquad 2.14$$

Where, S_p=Sharpe index of portfolio, r_p=Average return on portfolio, r_f=Risk free rate of return, σ_p=standard deviation of portfolio, $r_p r_f$=Risk premium for portfolio.

This study found the higher the resulting number (index), the better is the portfolio performance, this ratio also known as the reward to variability ratio is used to rank the performance of investment funds.

Treynor (1966)

This study is also focused portfolio performance. Tyenor used systematic risk and risk premium to evaluate portfolio performance. Treynor suggested the use of beta coefficient of portfolio, a measure of systematic risk index instead of standard deviation of portfolio. Risk premium of the port folio is equal index is equal to the different between the return of the portfolio is equal to the different between the return of portfolio and the risk less rate. This risk premium is related the amount of systematic risk assumed in the portfolio. The equation measures the portfolio performance under Treynor[s] study.

$$Tp = \frac{\text{Risk premium}}{\text{Systematic risk index}} = \frac{\bar{r}_p - r_f}{b_p} \qquad 2.15$$

Where, T_p=Trey nor index of portfolio performance, $\bar{r}_p$=Average return for portfolio, r_f=Risk free rate of return, b_p=Systematic risk index of portfolio.

This study found the higher index; the better is the portfolio performance. More over the higher the risk index premium per unit of systematic risk index the better the portfolio performance.

Jenson (1969)

Jenson studied portfolio performance is based on the Capital Asset Pricing Model (CAPM). This study measure of portfolio performance in the average return on the portfolio over and above that predicted by the CAPM given the portfolio beta and average market return. Jensen's portfolio approach for evaluating portfolio performance involves two steps.

Steps-1

Using CAPM equation

ie. $E(r_p) = r_f + [E(r_m) - r_f]\, bp$

Step-2

Portfolio manager compares the actual realized return of portfolio with the required rate of return as suggests by CAPM equation.

On the basis of CAPM this study found the greater the excess of realized return over the required rate of return, the better the performance of the portfolio.

Portfolio manager compares the actual realize return of portfolio with the require rate on return as suggests by CAPM equation.

Jensen's measures if the portfolio alpha value,

$$A_p=\alpha_p\ r_p-r_f+ [E\ (r_m) – r_f]\ b_p \qquad 2.17$$

Where, A_p or α_p = Jensen's alpha value of Jensen's performance measure, r_p = Average realized return on portfolio, r_f = Risk free rate of return, E (r_m) = Expected market return. bp= Beta portfolio.

On the based of alpha value of this study found if alpha value is +ve value it will indicate that this portfolio is over performing the overall market. If alpha value is – ve it will indicate that this portfolio is under performed the overall market.

Wagner and Lau (1971)

Wagner and Lau studied the effect of simple diversification. They divided a sample of 200 NYSE stocks into six subgroups. They constructed portfolio from each of the sub groups using 1 to 20 randomly selected securities and applying equal weight to each security. The main objective of the study is reduction of risk through diversification.

This study used the given table to summarize some effect of diversification. As the number of securities in the portfolio increase. The standard deviation on portfolio returns decrease, but at a decreasing rate with further reduction in risk beings relatively small after about 10 securities is included on the third column on the table correlation with the market shortly.

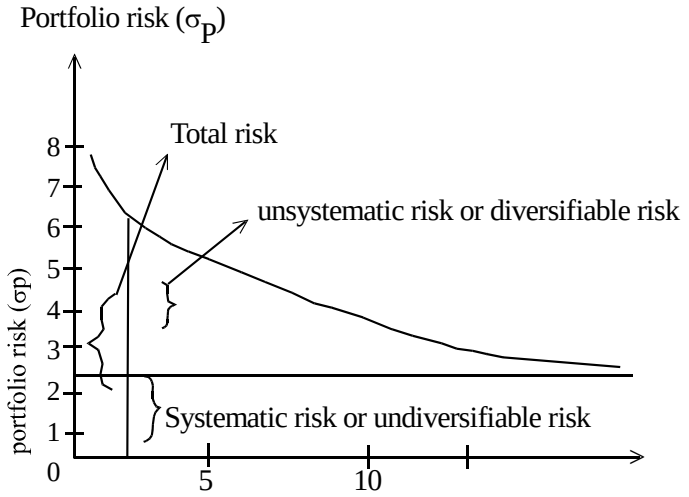
Table (2.2)
Reduction of risk through diversification

Number of securities in portfolio	Standard deviation of portfolio returns (σp) (Percent per month)	Correlation with return on market index
1	7	0.54
2	5	0.63
3	4.8	0.75
4	4.6	0.77
5	4.6	0.79
10	4.2	0.85
15	4	0.88
20	3.9	0.89

Source; Jack Clark Francis "Investment analysis and Management"

Based on the table, when the number of security is 1 standard deviation of portfolio returns is 7 and correlation with return on market index is 0.54. When the number of security is 2 standard deviation of portfolio return is 5 and correlation with return on market index is 0.63. in the same way when the number of securities in portfolio are 3,4,5,10,15,20 standard deviation of portfolio returns are 0.75, 0.79, 0.85, 0.88, 0.89 respectively. This shows the number of securities in portfolio increase standard deviation of portfolio decrease and correlation with returns on market index increase but in declining way.

Figure (2.3)
Reduction of Fisk thought diversification



This study found the part that part that cannot be eliminated is define as systematic or market relative risk and the part that can be reduced through the diversification is define as Unsystematic risk.

Kane and Buser (1979)

The Edward J. Kane and Stephen a Buser in the title "Portfolio diversification at Commercial bank" deals with how a firm's performance a use full function by holding a portfolio of efficiently priced securities.

According to them, it is rational for the form to engage in prior found of assets diversification on behalf of its shareholders even when all assets are priced efficiently and available for testing there prospective empirically, they estimated regression model design to explain the no of distinct of us treasury and federal agency debt held in a time series of cross section a large us commercial banks as evidence that banks stock holder for a relatively uniform diversification clientele. For firm marginal benefit from diversification take reduction on cost equity funds offered by its specific clientele of stockholders. To maximize the value of the firm, these benefits must be weighted against the explicit marginal cost of diversification.

The Edward J. Khan and Stephen A Buser drown following concluding remarks.

1. Even wealthy investor should be sensitive to administrative costs associated with selection, evaluation, managing and continually keeping track a large number of securities.
2. Either homemade of firm produce diversification reduce the variance of shareholders portfolio returns if homemade diversification bears in ordinary high levels of information risk, some benefit of firms produced diversification might not be reproduce able by individual investors acting on there own.
3. Investors with even modest resources, the stock of financial institutions should be relatively less attractive than the stock of the avoided extensive diversification costs by engaging in specialized activities.

Koehn and Anthony (1980)

"Regulation of banks capital and portfolio risk " by Michael Koehn and Anthony M. Santomero in their study examined the portfolio allocation that flows the portfolio decision of the firm and the effects on banks portfolio risk of a regulator increase in the minimum capital assets ratio that is acceptable to the supervisory agency. The allocation across assets becomes the choice variable driving the optimal mean rate of return per unit of the capital and the variance of that return. Therefore, the analysis will be developed in terms of risk and return per unit of capital with no loss in generality. According to them an explicit relationship between the risk of bank portfolio, the amount of bank capital held and the chance of bankruptcy must, therefore, be obtained to evaluate the result of bank capital regulation.

Shrestha (1993)

Sunity Shrestha express his view on research," investment planning of commercial banks in Nepal "has remark efforts to examine the investment planning of commercial banks in Nepal. The study concludes that bank portfolio (loan and advance) of commercial banks has been influence by the variable securities rates. This study is directly traced of fiscal policy of government and heavy regulatory procedure of the central bank (NRB). So, the investments are not made in professional manners. Investment planning and operation of commercial in Nepal has not been found satisfactory in terms of profitability. To over comes this problem the study has suggested, "commercial banks should take their investment function with proper business attitude and should perform lending and investment operation efficiently with the proper and analyze of the project".

Bhatta(1995)

The study by Mr. Bhatta on the topic of "Assessment of performance of listed companies in Nepal" is based on 10 listed companies' data. using five years data from 1990 to1995. Among different objectives, the one is to analyze the performance of listed companies in

terms of risk and return i.e. expected rate of return and company specific risk, required rate of return and internal rate of return systematic risk and diversification of through portfolio context is related to this study.

This study has summarized the findings as, "A highly significant positive correlation has been addressed between risk and return character of the company. Investors expect higher returns form those stocks, which associates higher risk. Nepalese capital market is not efficient one. So the stock price does not contain all the information relating to market and company itself. Neither investor s analyzes the overall relevant information. So the market return and risk both may not represent reality. However the analyze based on the available information shows that high prices stocks has higher beta risk than other.

Investors in Nepal have not yet practiced to invest in portfolio of securities. An analysis of two securities portfolio shows that the risk can be totally minimized if the correlation is perfectly negative. in this situation, the risk can be totally diversified but when there is perfectly positive correlation between the returns of the two securities , the risk is un diversifiable . The analysis shows some correlation has negative and some has positive one. Negative correlation between securities returns is preferred for diversification of risk.

The study concluded that the analysis of risk and return shows many companies with higher unsystematic or specific risk. The study has realized the need of expert institution to provide consultancy services to the investors to the investors to maximize their wealth through rational investment decision. This study is mainly focused on companies and stock market rather than investors. However, this study has helped for the research of researcher topic

Shrestha (1996)

Sunity Shrestha conducted the study in the title "portfolio behavior of commercial banks in Nepal" In this research five commercial banks are taken under study. They are Nepal Bank ltd. Data are collected from various sources from 1975 to 1990 A. D. The objective of the research was to evaluate the financial performance of the commercial banks, to analyze the investment pattern of commercial banks on securities and loans, to observe the relationship of bank portfolio variables with national income and other fiscal variable. Among these objectives financial performance of the commercial banks and observe bank

portfolio variables is some how related to this research. From the analysis of commercial banks the researcher has made following decision.

1. The general trend of commercial banks asset holding is growing.
2. Spread of foreign banks is relatively higher than that of Nepalese bank.
3. The relationship of banks portfolio variable is found to be best explained by log linear equations.

Borrowing of commercial banks from the central bank has been found to be positively affected by the cash reserve requirement, bank rate and treasury bill rate.

Breman and Henry (1997)

Breman and Henry concluded the study about international portfolio investment flows in journal of finance. In this study they construct a portfolio between foreign as well as domestic market and find out that information than foreign investors are able to get quick information than foreign investors and take enough benefit by it. According to them they develop a model of international endowments between foreign and domestic investors. It is shown that when domestic investors process a cumulative information advantage over foreign investors periods when the return on foreign assets in high and to sell when the return is low. The study assume that the higher turn over rate than on foreign domestic portfolio and to place testable restriction on the relation between internal flow of portfolio investment between exchange risk and international flow of portfolio investment between exchange risk and international ignored and analysis period is only single consumption period. The major empirical implication of the model is that purchase foreign equities will be positive a linear function of return on the domestic and foreign equity markets and that the coefficient of return on the foreign market index will be positive, provided that foreign investors are less well informed about the payoff on there are local investors and provided that the information advantage of local the result of a gradual process of supervision information acquisitions rather of periodic large information leakages to locals. The sign of the coefficient of the return of the domestic market is indeterminate.

Shrestha (1998)

Shiba Raj Shrestha in his article "Portfolio Management in Commercial Banks, Theory and Practice" revealed the portfolio management becomes very important both for individual as well as institutional investors would like to select a best mix of investment assets subject to the following aspects;

1. Higher return which is comparable with alternative opportunity available according to the risk class of investors.
2. Good liquidity with adequate safety of investment.
3. Certain capital gains.
4. Maximum tax concessions.
5. Flexible investment.
6. Economic, efficient and effective investment mix.

In view of above aspects, Shrestha stated that the investors try to hold a well diversified portfolio that helps to achieve those benefit. Investors wants to increase there return by making investment in different sectors with certainty.

However, Shrestha have presented approaches to find out the risk of securities depending up on the attitude of investor towards risk, to develop alternative investment alternative strategic for selecting a better portfolio, which will ensure a trade of between risk and return so as to attaché to primary objective of wealth maximization of lowest risk and finally to identify securities for investment to refuse volatility of return and risk.

Shrestha further stated that the commercial banks need competent manpower for continuous research and analysis and proper management information system to get success in portfolio management and customers confidence. Regarding the portfolio management in Nepal joints venture banks; he concluded that the portfolio management activities on Nepalese commercial banks at presents are in nascent stage. Due to less development capital instrument in financial marker. Lack of proper techniques to run portfolio management activities in the best and

successful manner, etc have constrained the portfolio management of most of the joint venture banks.

Joshi (2001)

Joshi has submitted a these "investors problem in choice of optimum portfolio of stock market in stock exchange" the main objective of the study was to identify to investors problem in study was to identify the investors problems in choice of optimum portfolio of stock in NEPSE which concluded that portfolio management is a new concept for Nepalese investors. Due to lack of sufficient information internal as well external the stock market of Nepal is also in growing stage only. The only one stock exchange location on Kathamandu. Traditional cry system for trading stock exchange located in stock. Limited number of broker securities broker, lack of opportunity of invest and many other reason are there, which is acting as barrier of development of NEPSE, Due to lack of finance tools only three stock portfolio were constructed and analyze, investor does not known in which stock to investment how to formulated portfolio. Even many stock brokers do not give the information to the investors. Investors are purchasing and selling their stocks mostly on the pressure of broker. Due to lack of sufficient information the decision needs special knowledge as well as adequate skill to analyze portfolio.

Basnet (2002)

This study "portfolio management of joint venture banks in Nepal "was undertaken by Jagadish Basnet in 2002. The study is some how related to this research. Among various objectives, the relevant one related with the research was to identify the situation of portfolio management on joint venture banks in Nepal. Furthermore, another related specific objective was to evaluate the investment and advances portfolio of joint venture banks. Basnet choose NBBL, HBL, and EBL as a sample. The study covered the eight years (F/Y 1994 – 2001) data in order to achieve the study objective. The major finding of the study was.

1. Among the four joint venture banks, NBBL is investing very high amount of its fund in government securities. The share and debenture stool second position in the investment portfolio.
2. The calculate value of beta coefficient of the Standard Chartered Bank in Nepal limited was 0.37. The bank was less risky asset in the market.
3. HBL, NBBL and EBL all were defensive stocks.
4. The Everest bank ltd was the highly risky asset in the comparison the four banks. HBL had very nominal risk than market.

The study concluded "Standard Chartered Bank limited is the best and Everest Bank is least performance among the four joint venture Banks."

Joshi (2002)

Roopak Joshi undertook his thesis work entitled "investors problem in choice of optimum portfolio of stock in Nepal Stock Exchange" in July 2002.

The main objective of the study was to find out and analysis the major problem of investors facing regarding the selection of most profitable stocks in NEPSE. Joshi used historical common stocks data in order to achieve the objective. Joshi reiterated "portfolio management is a new concept for Nepalese investors" due to lack of sufficient information, proper investment is not possible. Proper investment needs huge information internal as well as external. The stock market of Nepal is also in growing stage only. The only one stock exchange located in kathamandu. Traditional cry system for trading stocks, limited number of securities broker, lack of opportunity of investment and many reasons are there, which are acting as barrier of development of NEPSE.

Joshi future stated that Nepalese investors don't know in which stock to make investment and how to construct a portfolio. Many brokers are not willing to provide information to the investor. Investors are trading the securities mostly under the pressure of brokers.

Bhatta (2003)

Dipesh Bhatta undertook the study "portfolio management of listed finance companies in Nepal ". The study of Bhatta is a new concept in portfolio management of Nepalese companies. Under the study, the main objective was to study and analyze the existing situation of portfolio management of listed finance companies in Nepal. The study used secondary as well as primary data through opinion survey. The study period is 7 year from 1997 to 2002. The study used 20 percentage samples and analyzed data in order to fulfill the set objective. After analyzing the secondary data, the study conduced "Expected market return is lower in comparison to market risk, so market is highly risky place to invest". Moreover, the study found. All the listed six finance companies stock are under priced. So investors need to buy these stocks. In most of case, portfolio management of listed finances companies in Nepal is not systematically organized. The process of determining the division of a corporate investor's portfolio among available classes in heavily based on experience. To reduce portfolio risk, most industries techniques. The major objective of portfolio management is to minimize the risk. Generally 2.5 years time horizon is appropriate for portfolio in most cases, in Nepalese stock market, it is found that passive portfolio strategy is more suitable than active strategic to achieve better results. Majority of the corporate investor's dependents on fundamental analysis than technical analysis for portfolio securities selection. Corporate investors revise their portfolio time to time using experience.

Khania (2003)

Khaina has studies on "Investment portfolio Analysis of Joint venture banks" The study is based on five joint venture banks and they are NABIL, SCBNL, HBL, NBBL, and EBL. The objective of the study is to identify the current situation of investment portfolio on joint venture banks in Nepal. The objective is to analyze the risk and return ratio of commercial banks, to evaluate the financial performance of joint venture banks and portfolio structure of Nabil bank for investment between loan investments. Investment is a real fixed asset and investment is financial assets. The major finding of the analysis is Nabil is

investing the highest amounts of funds of NRB bond as compare to other joint venture banks i.e. 3 percentages. Beta coefficient of HBL is lowest among all the banks so the systematic risk of HBL is low. The coefficient of correlation between loans and advance in private sector and portfolio returns of joint venture banks come out to be $r_{xy=-0.60}$ there for it indicates that there is negatives correlation between loans and advance in private sector and portfolio returns of five joint venture banks in Nepal.

Chhetry (2003)

Chhetry has submitted a thesis "A Study of application of portfolio theory in financial institution of Nepal" for the fulfillment of master degree. The study is based on secondary data analysis. Necessary data was taken from the NEPSE (1995-1999).

Chhetry has made this research with fifteen financial institutions.

The main objectives of Chhetry research work were below.

1. To examine the application of portfolio theory in financial institution of Nepal.
2. To examine whether the risk can be diversified by investing in portfolio of assets.
3. To examine to differentiation of risk ness inherent in any single asset held in portfolio from the risk ness of that held in isolation.

The study used statically as well as ratio analysis to analysis the data in this research work to fulfill this study's objective. The study pointed out various finding based on analysis of data and information. There are some major finding are given below.

1. The portfolio risks of fifteen financial institutions were diversified.
2. The portfolio of risk of fifteen financial institutions was less than the average risk of fifteen financial institutions.

3. The relationship between risk and return was negative for insurance and finance company were as banking industry shows positive relationship between risk and return.

Mustafa (2004)

Mustafa has concluded a research about "Portfolio Management of listed joint venture banks in Nepal". The study period is of seven years from 1994/95 to 2000/01. This study used secondary data analysis with four joint venture banks. The main objectives of Mustafa's are given below.

1. To examine the riskness on Nepalese joint venture banks.
2. To analysis the risk return ratio of commercial banks.
3. To evaluate the financial performance of joint venture banks.

The study used statistical tools to analysis the data in this research work to fulfill the above objectives. This study found various finding based on analysis of data. There are few major finding which are given below.

1. The mean investment of join ratios on Everest Bank Limited is higher among banks.
2. Everest Bank Limited is the highest risky among four joint venture banks.
3. Standard Chartered Bank Nepal Limited is the best among sample banks.

Shrestha (2006)

Hari Pati Lal Shrestha has studies on "optimal portfolio investment in Nepal" the main theme of this study is to analyze rationalities of portfolio theory in context of Nepalese securities market. Always investor tries best of make sure return is not sure or investment will not ruin. The study mainly focused on the specific sector of market currently listing in NEPSE for last 6 year. and this study mainly based on the different categories. The study is based on the companies listed in NEPSE and applies the different categories. This study is based on secondary data as well as primary data of six year collected by small survey of 25 investor main objective of this study are to find out and analyze the major problem on investor regarding

selection of optimal portfolio, by develop understanding for portfolio investment. This study tries to analyze the risk and return market sensitively, composition of risk and pricing status of securities and to suggest the measure for the improvement of investment rationalities. Investors should be aware to risk and return. This research helps them to find out the degree of risk associated with the stock systematic and unsystematic risk estimation of stock.

Studies on Risk and Return

Several studies have been complete on Risk and return by applying different tool of that this section briefly reviews the available on risk and return.

Sharpe (1975)

William F. Sharpe studies a capital assets pricing model. Under this study the total risk can divided into two main parts first systematic risk and next unsystematic. The systematic risk includes change in the purchasing power of money, fluctuations in interest rates, and other factors that contribute to undiversifiable fluctuations. The portion of total risk that is not explained by and assets characteristic line is called unsystematic risk. Unsystematic risk can diversified to zero by spreading the investment fund. The main objective of the study is to show the positive relationship between assets systematic risk and their expected rate of return. To show that this study used security market line (SML) or characteristic line. This study used the given equation of fulfill the given objective.

$$E(r) = RF + (E(m) - RF)\,\beta$$

Where, E(r) = Expected rate of return.

E (m) = Expected rate of return on market.

Rf = Risk free rate of return

β = Systematic risk

This study found from the given equation and security market line if systematic risk or Beta increase Expected rate of return also increases if systematic risk or

Beta decreases Expected rate of return also decreases that means there positive relationship between systematic risk and Expected rate of return.

Elton and Gruber (1979)

This study name "Expected return, realized return and asset pricing tests" one of the fundamental issues in finance is what the factors are that affect expected return on assets, the sensitivity of expected return to those factors and the reward for bearing this sensitivity. The data set covers the period from July 1, 1991 through December 31,1997.the history shows almost all the testing are done realize return as a proxy for expected return. Using realized return as a proxy for expected return is that the unexpected returns are independent, so that as the observation interval increase they tend to a mean of zero.

The purpose of this article is to convince the reader there is a distinction and worth to find out alternative ways to estimated expected returns.

1) Fowling preliminary testing are done in the study;
2) A constant risk premium
3) Forward rate and risk premium
4) Factors analysis
5) Changing risk premiums

According to the researcher "realized return are very poor measure of expected return and that information surprise highly influence a numbers of factors in assets pricing model" The empirical use of judgment and factors dependability can be used to draw implication which will govern the great extent the pricing decision fix and accurate.

Sapkota (1999)

The study entitled "risk and Return Analysis in common stock investment" with special reference to banking industry is also found relevant with this study. The

main object of the study is to analyze the risk and return of the common stocks in Nepalese stock market. The study is focused on the common of commercial banks. In his findings, the study summarized, Bank industry is the biggest one in terms of market capitalization and turnover. Expected return of the common stocks of Nepal Bank Limited is maximum i.e. 66.99% and common stock of SBI banks ltd is found minimum. In this regard, common stock of Nepal Banks Limited is most risky and common stock of SBI banks Ltd is less risky. In the context of industries, expected rate of return of finance and insurance industry is found highest expected return of banking industry is 60.83%.

Pandey (2001)

The study conducted by Mrs. Pramina Pandey also related with research study. The main objective of the study was to identify the risk and return situation of the insurance companies' common stock which concluded that.

1) Poor education and lack of adequate source of information are the major constrains for the development of stock market in Nepal.
2) Among all securities common stock is known to be the most risky securities.
3) When risk and return compared to different industries, finance and insurance is best as per highest expected return with higher degree of risk where as trading industry has minimum return and risk.
4) There is no signification different between the portfolio return of insurance companies stock and overall market portfolio.
5) Market sensitivity is measured by beta coefficient which cannot be reduced by diversification.
6) General public invest their funds in different securities on the basic of expectation and assumption rather than analysis.
7) The proper selection of portfolio approach is better way to get success in stock market.

Upadhyaya (2002)

The study "Risk and Return of common stock investment of commercial Banks in Nepal "conducted by sudeep upadhaya. This study has taken 8 commercial banks with covering five year period 1994/95 to 1998/99.

The main objectives of the study were to assess the risk associated with returns on common stock investment on the listed commercial banks on the basic of selective financial tool to evaluate common stocks of listed commercial banks in terms of risk and returns, and to analyze the volatility of common stocks and other relevant variables as an affecting factor in portfolio construction of common stocks.

This study found the various finding but there are some important findings are given below.

1) Common stock of Nepal Grindlays Bank Limited is most risky and of SBI is least risky, these proves 'high risk high return'.
2) Reading the market volatility, EBL's common stock is more volatile which has beta value of 0.875.others are also volatile.
3) All the stock of commercial banks is over priced.NGBL stock has maximum difference of expected rate of return and require rate of return.
4) Most of the Nepalese private investors invest in single securities. Some of the investors use their fund in two or more securities. But it is found that they don't make any analysis of portfolio before selecting. They invest their fund in different securities on the basic of expectation and assumption of individual securities rather than analysis of the effect to portfolio.
5) Portfolio standard deviation is less than individual standard deviation. So the portfolio approach of investment in betters way to get the maximum return.

Mr. Narayan poudal (April 2002) in his study "Investing in Commercial Banks in Nepal". An Assessment in Risk and Return Elements" has come up with the conclusion that the risk-return characteristics do not seem to be the same for all the shares review. He further adds that the shares with large standard deviations seem to be able to produce higher rate of return. The portion of unsystematic risk is very

high with the share having negative beta coefficient. The risk per return of return, as measured by coefficient of variation, is less than that of the market as whole for the individual shares. Most of the share fall under the category of defensive stocks,(having beta coefficient less than 1)

Paudel (2003)

The study by Mr. Narayan Prasad Paudel entitled "investing in share of commercial Banks in Nepal; An Assessment of Return and Risk Elements" is founds to be relevant in context of the study. This study is conducted with the objective of whether the share of commercial banks where correctly prices by analyzing the realized rate of returns and the require rate of return using the CAPM. The study was based on the data of share of seven sample commercial banks from mid July 2001. for the purpose of analyzing risk characteristics of the share of those commercial banks, standard deviation, the coefficient of variation, the correlation coefficient between the returns of individuals banks share and the return on market portfolio and the beta coefficient were used. Average return on the 91-day Treasury bill was taken as a proxy of the risk free rate of return. On the basic of this study, it was found that the share of BOK offered the highest realized rate of return. It was also found that none of the share prices were in equilibrium. The prices of the share of SCBNL, NSBIB, NBBL, EBL and BOK were under priced.

Based on the standard deviation of the return on share, the share of EBL could be considered as high risk security. The standard deviation of the returns on share of HBL was the lowest one. On the basic of CV, the share of BOK had the lowest risk per unit of return, the highest being with the share of NABIL. It was also observed that the systematic risk was negative with the share of NABIL was due to company specific characteristics rather than market pervasive. Returns on the entire share expected NABIL had positive correlation with the returns on market.
Most of the share appeared to be defensive as beta coefficient is less than one. Only the return on share of BOK had beta coefficient of greater than one,

indicating that the share was more risky than the market. This study concluded "the share of commercial banks in Nepal is heavily traded in the stock market and there for these share play a key role in the determination of stock exchange indicators. The entire share produce higher rate of return than the return on market portfolio. How ever the risk return characteristics do not seem to be the same for all the shares reviewed " The study further concludes, "Most of the share fall under the category of defensive stocks, shares of banks of Kathamandu Limited. From the analysis, it appears that none of the shares are correctly priced"

Thapa (2004)

A thesis entitled "Analysis of Risk and Return on Common Stock Investment of Insurance Companies" was under taken by Neelam Thapa. The relevant objective of the study was to analysis risk and return and other relevant variable that help in making decisions. The study based on secondary data of five insurance companies covering five years data commencing from 2053/054 to 2057/058. the major finding of the study were as.

1. Because of the higher expected return associated with the common stock, Nepalese investors are attracted towards it.
2. The standard deviation which measures the risk of an assets shows that most of the companies are risky. As higher risk must be associated with higher return, it is so only in case of Everest Insurance Companies and Himalayan General Insurance Companies where as united insurance companies are premier insurance company are providing higher return at lower risk.
3. The beta coefficient, which is the measure of systematic risk, reveals that Nepal Insurance Company has higher beta and premier Insurance Company has least beta.

Poudel (2005)

Poudela has submitted a research about "Risk and Return Analysis of Common stock of listed companies in Nepal". The study is based on secondary data and

necessary data was taken from securities Board Nepal and NEPSE covering 3 year period 2055/056 to 2059/060. Poudel has made this research with ten companies.
The main objective of the poudel,s are given below.

To measure and analysis the risk and return associated with the common stock of list companies.

1. To examine the movement of market prices.
2. To determine the effect of portfolio on risk and return.

The study used market prices per share, dividend per share as well as statistical tools to analysis the data in this research work. This study found the various finding but there are some important findings are given below.

1. The commercial banking industry has the highest value of market share while other industry has the lower value of market share.
2. Expected return of common stocks of banking and finance sector was higher than other sector.
3. The commercial banking industries expected rate of return on portfolio is maximum and finance insurance companies have higher expected return on portfolio and remaining other manufacturing and processing has positive expected return of portfolio.

Panthi (2006)

Panthi has conducted a resented about "Analysis of Risk and Return on Common stock Investment of Commercial Banks of Nepal". This study has taken five commercial banks with covering 3 year period 2053/054 to 2057/058. This study was based on secondary data which are taken from NEPSE.
The main objectives of Panthi, s study are given below.

1. To evaluate common stock of listed commercial banks in terms of risk and return.
2. To examine diversification reduce the risk.

Panthi use market price per share, dividend per share as well as statistical tools to analysis the data in this study, the major finding of Panthi,s study are given below.

1. Diversification of fund by marking portfolio can reduce unsystematic risk of the individual security.
2. The stock has high return with respect to the amount of the systematic risk during the study period.

Acharaya (2006)

Acahraya has submitted a thesis "Risk and Return Analysis in common stock investment of some listed companies of Nepal." The study period of three year period is 2055/056 to2059/060. This study used primary based on secondary source with 8 companies. The main objectives of Acharaya' s is given below.

1. To asses the relationship between risk and return.
2. To identify factors responsible for risk and return.

The study used market prices per share, dividend per share and other statistical tools to analysis the data. Acharaya has pointed out various finding based on the data and information, which are in given below.

1. On the basic of industry wise comparison commercial banking industry's expected rate of return is maximum while other industry's expected return is lowest among the industries.
2. The beta coefficient in this section of market sensitivity analysis which measure the on the different assets. Beta coefficient of these eight sample companies showed mixed results. Five companies are defensive.

Gyawali (2007)

Gyawali has conducted a research about "Risk and return Analysis on common stock". Gyawali used secondary data analysis with five commercials banks covering 3 year period from 2056/057 to 2060/061. The major objectives are given below.

1. To describe the risk, return and other relevant factors that directly affect the investment in common stock.
2. To evaluate the common stock of the listed commercial banks in terms of risk and return to perform sector wise comparison on the basic of market capitalization.

This study used market prices of stock and dividend per share as well as
Statistical tools to analysis the data. The major findings of the Gyawali study are given below.

1. Among five commercial banks Standard Chartered Bank and Himalayan Bank is the continuous dividend payer.
2. Among sample banks Nepal Bangladesh Bank ltd has lowest expected return.
3. Bangladesh bank is high risky and Standard Bank is low risky.

Mr. Sapkota(2007)

Bahadur has conducted a research about "Risk and return analysis in common stock investment "is a very closely related to this study. In this study he has included eight commercial banks.

Mr. Sapkota in this study has concluded that " Commercial banks stock is the most risky security and life blood of stock market because of the higher expected rate of return, CS attracts more investors, private CS holder are the passive owner of the company. But the private investor plays vital roles in economic development of the nation by mobilizing the dispersed capital remained in different form in the society. As overall economic Nepal stock market is in emerging state its development is accelerating since the political change in 1990 in effect of openness and liberalization in national economic. But lack of information and poor knowledge, Nepalese private investors cannot analyze the securities as well as market properly."

Concluding Remarks

The overall theme of the review of literature has been concluded in given paragraph. A major purpose of investment is to get or return or income on the fund invested. Each asset expected return, risk along with the expected return and risk for other assets and their interrelationship, are important inputs in portfolio selection. In order to construct efficient portfolios the investors must be able to quantity the portfolio expected return and risk. Nepalese context, many Nepalese private investors placed their entire wealth in a single investment. It is because of proper awareness about portfolio. The main objective of portfolio analysis is to develop a portfolio that has the maximum return at specified degree of risk. Diversification is the one important means that control portfolio risk. Therefore analyzing risk and return and diversification context is necessary. Harry M. Markowitz (1952) found investor wants to take higher expected return with lower risk .William F. Sharpe (1964) found there is positive relation between assets systematic risk and their expected rate of return. William F. Sharpe (1966) index of portfolio performance measure the risk premium per unit of systematic risk. Michael C. Jensen's (19969) study found higher the realized rate of return then require rate of return better portfolio performance measure. Wagner and Lau's (1971) study found diversification reduce the unsystematic risk. According to Bawa, vijaya S. Edwin J. Elton and Martin J. Gruber (1979) realized rate of return are very poor measure of expected return and that information surprise highly influence a number of factors in assets pricing model. Edward J. khan and Stephen A Busters (1979) study concludes diversification reduce the variance of share holders portfolio return. Michale koehn and M. sentomero Anthony (1980) found the relationship between the risk of bank portfolio, the amount of bank capital held and chance of bankruptcy must, therefore, be obtained to evaluate the result of bank capital regulation. According to Sunity Shrestha (1993) Investment planning and operation of commercial banks of Nepal has not been found satisfactory in terms of profitability. Gopal Bhatta (1995) found some correlation negative and some has positive one. Negative correlation between securities return in preferred for diversification of risk. Sunity Shrestha (1996) study found spread of Nepalese

bank. Breman and Henrys (1997) found domestic investor found take enough benefit by portfolio by than foreign investor. Shiba Raj Shrstha (1998) study suggests portfolio management is the best alternative in investing joint venture banks. J. B. Sapkota (1999) study found finance and insurance sector has highest expected rate of return. Pratima Pandey (2000) study concludes that among all securities common stock is known to be the most risky securities. Dipesh Joshi (2001) study concludes due of lack of opportunity no of broker and many other reasons are barrier in selecting optimal portfolio. Narayan Prasad Poudel (2002) found most of the shares fall under category on defensive stocks, expected the shares of banks of kathamandu limited and it appears that none of the share are correctly priced. Jagadish Basnets (2002) study suggests SCBL is the best and EBL is least performer among sample joint venture banks. Roopak joshi (2002) study index of many brokers are barrier on Nepalese investor because they are not willing to provide information to them. Dipesh Bhatta (2003) study found corporate invetors dependent of fundamental analysis then technical analysis for portfolio securities selection. Kalpana khania (2003) study concludes there is negative correlation between portfolio return of five joints venture banks in Nepal. Peter R. Crabb's (2003) study found that there is positive correlation between beta and return on stock. Keshab chhetry (2003) study found portfolio risk of fifteen financial institutions were diversified. Shekh Gulab Mustafa's (2003) study found EBL has higher return with higher risk among four sample banks. Nelam Thapa (2003) study index of due to higher expected return investors are attracted towards common stock. Tej Prasad Paudal (2004) study concludes that the commercial banking and finance sectors has maximum expected rate of return than other sectors. Ramu Panthi (2004) study found the stock has higher return with the respect to among of the systematic risk. Nabaraj Acharaya (2004) study suggests banking sectors has higher expected rate of return than other sector. Anuradha shrestha (2004) study index of construction of each diversified the risk. Hari shrestha (2004) study concludes that the major problem of investors in Nepal is awareness of risk and return in portfolio risk. Rama Gywali (2005) study found SCBL, and HBL are regular dividend payer. Here are various researchers already

conducted on risk and return management, which show the risk and return analysis of commercial banks as well as other financial sectors identified by the review on literature has justified the need of study. Many change taken place in Nepal and outside Nepal after completion of previous studies. Considering the above mentioned studies in the context in Nepal, now be come necessary to find out whether their findings are still valid or not. Thus the study "Risk and Return Analysis of Financial Institution of Nepal "has taken for the study.

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CHAPTER -3

RESEARCH METHODOLOGY

Research methodology describes the method and process applied in the entire subject of the study. Research methodology refers to the various sequential steps (along with rationale of each step) to be adopted by researcher in studying problem with certain objected/ objects in view (Kothari; 1994, 98). Research methodology describes the methods, process, tools, and techniques used in the analysis of data and preparation of the report. Research methodology is way to systematically solve the research problem. It is careful investigation especially through search for new fact in any branch of knowledge the appropriate research methodology. It is followed to achieve the basic objective and goals of this research. To achieve the objective of the study the following methodology has been adopted, which includes research design, population and sample, nature and source of data, methods of analysis tools and so on.

3.1 Research Design

Research design is the plan and structure and strategy on investigation conceived so as to obtain answer to the question and to collect variance (kerlinger; 1986, 275). The research design serves as a frame work for the study guiding the collection and analysis of the data (wolf and plant; 2003, 74). More specify research design describe the general plan for collecting, analyzing and evaluating data after identifying.

- What the research want to know?
- What has to be dealt with in order to obtain the required information?

In order to conduct any types of research a well set research design is necessary, which fulfill the objective of the study. The research design of this study is descriptive as well as analytical for the purpose of descriptive analysis, to profitability ratio such as return on assets (ROA) and return on equity (ROE) where calculated and arrange in the tubular form. The standard deviation and coefficient of variation has also be computed to check. Whether the risk can be

diversified. For the analytical purpose, the annual report and financial statement of relative financial institution were colleted from the year 2001/2002 to 2005/2006.

3.2 Nature and Source of data

The research will be mainly based on application of portfolio theory in financial institution of Nepal. To attain the objective of the study secondary data have been used the necessary data will be collected from the various source covering a period 2001/2002 to 2005/2006. The data collections sources will be as follows,

- Website on Nepal stock exchange Ltd.
- The profit and loss account and balance sheet of the banks.
- Annual report of Securities Boards of Nepal Ltd.
- Other sources of data are financial reports annual reports, periodicals and other information provided by the institutions as well as business news and magazines.
- Other related books and booklets.

3.3 Population and Sample

There are 127 Nepalese enterprises listed in the website www.nepal stock com in various sectors, such as banking, finance, insurance, hotel, manufacturing, processing, trading and others. All of them do not provided scope for the study. On the other hand most of them are newly listed and some of them are just begin their operation and some listed financial institutions do not submit there financial performance of Nepal Stock Exchange Ltd. Leading to the absence of data, lists of financial institution from various sectors which are most value are selected as a sample among them. It is not possible to study all of them regarding the study topic there for 13 financial institutions are selected. Out of them 5 from banking sector, five form financial company sector,3 from insurance sector. Mainly these samples are related up to five year transaction period (i.e. 2001/2002 to 2005/2006)

Number of observation on financial institutions selected for the study

S.N.	Name of financial institutions	Study period	Observation
1. Banks			
a.	Himalayan Bank Limited	2001/2002 to 2005/2006	5
b.	SBI Bank Limited	2001/2002 to 2005/2006	5
c.	Nabil Bank Limited	2001/2002 to 2005/2006	5
d.	Standard Chartered Bank Limited	2001/2002 to 2005/2006	5
e.	Nepal Investment Bank Limited	2001/2002 to 2005/2006	5
2. Finance company			
a.	Annapurna Finance Company	2001/2002 to 2005/2006	5
b.	Pashimachal Finance Company	2001/2002 to 2005/2006	5
c.	Ace Finance Company	2001/2002 to 2005/2006	5
d.	Kathamandu Finance Company	2001/2002 to 2005/2006	5
e.	National Finance Company	2001/2002 to 2005/2006	5
3. Insurance Company			
a.	Himalayan General insurance com.	2001/2002 to 2005/2006	5
b.	United insurance company Ltd	2001/2002 to 2005/2006	5
c.	Premier insurance company Ltd.	2001/2002 to 2005/2006	5
		Total observation	**65**

Source; web page of NEPSE Ltd. http;/www.nepalstock.com

3.4 Methods of Analysis

Presentation and analysis of data is the core of the research work. The analysis of the financial institution data will be conducted according to pattern of data available. The collected data will be first presented in the systematic manner in tabular forms and then will be analyzed by applying different ratio analysis and statistic tools to achieve. There after the result will be compared with each other to interpret. for the purpose of analysis the following Ratio analysis and statistical tools were used.

Ratio Analysis

A number of profitability ratios have been used to measure the returns of the sampled companies in the following ways.

a) Return on Assets (ROA)

This ratio is useful in measures the profitability of all financial resources invested in the firm's assets, the returns on assets ratio is calculated by dividing the amount of net profit after tax by the amount of total assets.

$$\text{Returnson Assets} = \frac{\text{Net Profit After Tax}}{\text{Total Assets}}$$

(b) Return on Equity (ROE)

This ratio measures a relationship between net profit after tax and share holders found (Net Worth). It shows the efficiency of employing fund supplied by shareholders. It can be measured by dividing the net profit after tax by net worth multiplied by 100.

$$\text{Return on equity} = \frac{\text{Net Profit After Tax}}{\text{Net Worth}}$$

Statistical Tools

The statistical tools used in this study are arithmetic mean, standard deviation, coefficient of variation.

(a) Arithmetic Mean ($\bar{x}$)

Arithmetic mean is the most popular and widely used measure of representing the entire data by one value called average. Arithmetic mean has been used to compute the company wise average rate of return in terms of return on assets and return on equity. Its value can be obtained by adding together all the items and by the number of items symbolically.

$$\text{Arithmetic Mean}(X) = \frac{X_1 + X_2 + X_3 + ...X_n}{N}$$

Or, $$\bar{X} = \frac{\sum X}{N}$$

Where, $\bar{X}$ = Arithmetic Mean, X_1, X_2, X_3, = Values of Variables , $\sum$ X = Sum of the values of variables ,N = Total number of observations.

b) Standard Deviation (σ)

The standard deviation measure the absolute value of risk that is variability of the returns from the mean returns from the mean return. It is a squire root of the sum of the squire different between each return and the Arithmetic mean, divided by total number of period symbolically.

$$\text{Standard deviation}(\sigma = \sqrt{\frac{\sum(X - \overline{X})^2}{N}}$$

c) Coefficient of variation

As noted above the standard deviation is the absolute measure of risk in the case of the companies having different mean returns, it's mislead the decision. Hence to overcome on such problem, standard per unit of risk can be used to measure the risk which is called coefficient of variation. It indicates risk per unit average return. Variability of returns (i.e. the risk) has been measure by making uses of coefficient of variation. Like average return, coefficient of variation has been compute to show the company wise variability or return (risk) in respected of ROA and ROE ratios; it can be compute by dividing the standard deviation by average rate of return. Symbolically.

$$\text{Coefficient of variation}(C.V.) = \frac{\sigma}{\overline{X}}$$

Where, = Standard deviation of the rate, $\overline{X}$ = Mean rate of return

d) Karl Pearson's Correlation Coefficient

When the relationship is at a quantitative nature the appropriate statistical tools for discovering and measuring the relationship and expressing it in brief formula is known as correlation. Thus. Correlation is a statistical device which helps to analyze the co variation of two or more variable. There are several method of calculating correlation between two variable such as scatter diagram, graphic method, Karl Pearson's correlation of coefficient and so on. Among them Karl Pearson's correlation coefficient is must widely used in practice, the correlation

coefficient between tow variable X and Y usually denoted by r(X, y) or simply r is the number of linear relationship between them and defined

$$r = \frac{Cov(X,Y)}{\sigma_x \times \sigma_y}$$ Where, Cov (X, Y) = covariance between X and Y.

$$Cov(X,Y) = \frac{\sum(X - \bar{X})(Y - \bar{Y})}{N}$$

The value of the correlation coefficient of obtained by the above formula shall always lie between ± 1 when r = + 1 it means there is perfect positive correlation between the variables (i.e. returns of company) when r$^{=}$ -1, it means there is perfect negative correlation between the variables however in practice such values of r as+1,-1 and 0 are rate. They normally (i.e. between the two extreme point ±1). The relationship of the return concerned companies has been analyzed by making use the above proposition.

Bar Diagram

Bar diagram represent the data by means of bars or rectangles of equal width. The length of bars represents the given data and the width may be of any size. The bar diagram and multiple bar diagrams.

a) Simple Bar Diagrams

it is one of the simplest and most popular diagrams in using one set of related data. Here in this study it is used to measure portfolio risk through diversification.

b) Multiple Bar Diagrams

it is used to present to or more sets of related data. In this study it is used to measure risk, return, portfolio risk, average risk, portfolio return and average return of financial institution under return on assets and return on equity.

3.5 Limitation of the Study

Since the study is very challenging it must have to be completed and find the optimum solution regarding the study area. In the context of Nepal, data problem

is major problem for the study. Every works have restriction and limitation, which out limitation of work is not done sweet and taste. This study has been made by using certain methodology and based on available data which is related of this study. The sample for the study has selected from the listed companies in Nepal stock exchange which are taken for the study may not present the whole population, only secondary data will be analyzed to interpret result emerging from decision consequently the result depend on the reliability of the secondary data. The data used in this study are covered the past fiscal year from 2001/2002 to 2005/2006

CAPTER-4

PRESENTATON AN D ANALYSIS OF DATA

The main objective of the study as mentioned in introduction is to analyze risk and return analysis of financial institution of Nepal. In order to fulfill this objective the course of research methodology has been attempted to follow which is explained in the chapter four. Now this study has tried to analyze portfolio management and also tried to compare sector wise.

This chapter concerned with the presentation analysis and interpretation of collected data. The study analyze descriptive as well as analytical. Under these part deals with financial performance of Nepalese financial institutions that shows mean, standard deviation and coefficient of variation under return on assets and return on equity. And third part deal with diversification of risk which shows risk can be reduce through diversification.

4.1 Financial Performance of Nepalese Financial Institutions

This part presents ratio analysis which is very important tools to financial analysis. It is the process of establishing the significant relationship between the items of financial statement to performance and financial position of firm. In this part only mean, standard deviation and coefficient of variation are calculate under return on assets and analyze the financial performance of Nepalese Financial Institutions.

Return on Total Assets Ratio

The ratio is determined by dividing net profit after tax by total assets. This ratio measures the profitability with respected to the total assets invested in financial institution. The higher ratio usually indicates efficiency is utilizing its overall resource and vice versa. This part shows risk and return analysis of sample firms under different institution chosen for the study such as banks, finance and

insurance with respect to return on assets. The return is measure by arithmetic mean ($\overline{X}$), standard deviation (σ) is measure total risk and coefficient of variation is calculate for risk per unit which are presented under this topic.

The given table 4.1 shows risk and return on the basic of return on asset under commercial banks like Himalayan Bank Limited, SBI Bank Limited, Nabil Bank Limited, Standard Chartered Bank Limited and Nepal Investment Bank Limited.

Table 4.1

Risk and Return on the basic of Return on Assets (%) of Commercial Banks

Year	HBL	SBI	NBL	SCBL	NIBL
2001/02	1.26	0.98	2.14	2.33	1.91
2002/03	1.43	0.17	1.54	2.33	1.10
2003/04	1.14	0.58	1.54	2.60	1.15
2004/2005	0.91	0.64	2.51	2.41	1.30
2005/06	1.06	0.72	2.71	2.27	1.15
Mean	1.16	0.62	2.09	2.39	1.32
S.D.	0.18	0.26	0.48	0.12	0.30
C.V.	0.15	0.42	0.23	0.05	0.23

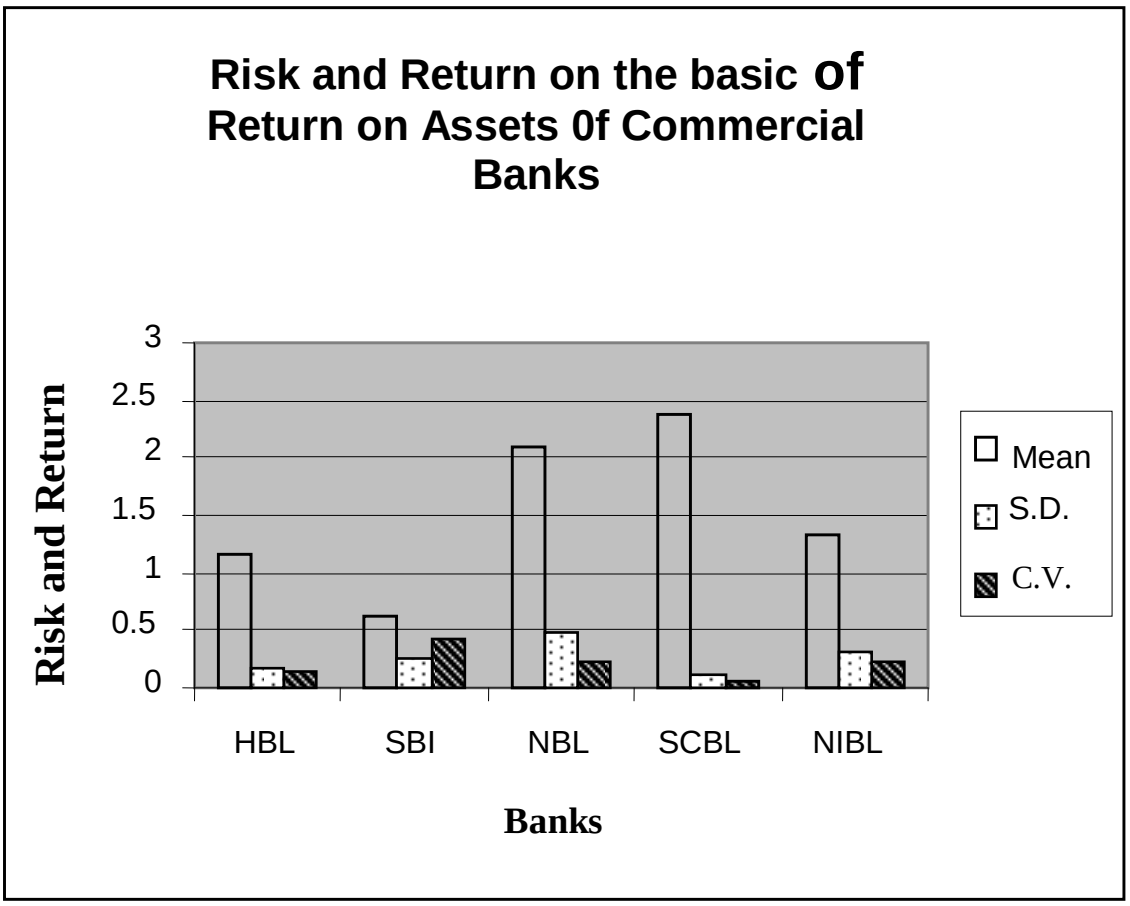
Source; - Annex 'A'

Table 4.1 shows that there is inverse relationship between their mean return and coefficient of variation of SCBL and SBI. The mean return of SCBL is 2.39 percent which is the highest return than others while coefficient of variance and standard deviation 0.05 percentage and 0.12 percent respectively which are lower than others. This shows SCBL has better financial performance on the better financial on the basic of return on assets ratio. The mean return of SBI is 0.62 which is below than other where coefficient of variation and standard deviation of SBI, 0.42 percent and 0.26 percent both are higher than others. So SBI is poor financial performance. The mean return of HBL, NBL and NIBL are 1.16, 2.09, 1.32 percent 0.18, 0.48, 0.30 percentage

standard deviation and coefficient of variation 0.15, 0.23, and 0.23 percent respectively. That shows the proportion of lower the return lower the risk higher the return higher the risk is justified.

Risk and return of the basic of return on assets under different commercial banks like Himalayan Bank Limited, SBI Banks Limited, Nabil Banks Limited, Standard Chartered Bank Limited and Nepal Investment Bank Limited are presented in figure 4.1

Figure – 4.1



Source; - Table 4.1

Figure 4.1 clears that the mean return of SBI is 0.62 which is below than others where coefficient of variance and standard deviation of SBI is 0.42 risks per

unit and 0.26 percent both are higher than others. This represents SBI has lower financial performance on the basic of return on assets. The mean return of SCBL is 2.39 percent which is the higher return than others. While coefficient of variation and standard deviation 0.05 risk per unit and 0.12 percent respectively which are lower than other. So SCBL has better financial performance on the basic of return on assets among sample banks. Which shows that there is inverse relationship between there mean return and coefficient of variation of SCBL and SBI. The mean return of HBL, NBL, and NIBL are 1.16, 2.09 and 1.32 percent respectively. Show the figure 4.1 shows higher the risk higher the return and d lower the risk lower the return.

The given table 4.2 presents risk and return on the basic of return on assets under different financial companies like Annapurna Finance Company, Paschimanchal Finance Company, Ace Financial Company and National Financial Company.

Table 4.2

Risk and Return on the basic of Return on Assets (%) of Finance Companies

Year	AFC	PFC	ACFC	KFC	NFC
2001/02	2.82	2.53	3.39	3.23	2.55
2002/03	3.93	2.44	4.25	2.96	2.46
2003/04	3.35	1.08	0.63	2.47	2.30
2004/05	2.46	3.74	2.53	2.08	1.60
2005/06	2.75	1.76	2.63	0.24	2.26
Mean	3.06	2.31	2.69	2.20	2.23
S.D.	0.52	0.89	1.20	1.06	0.33
C.V.	0.17	0.38	0.45	0.48	0.16

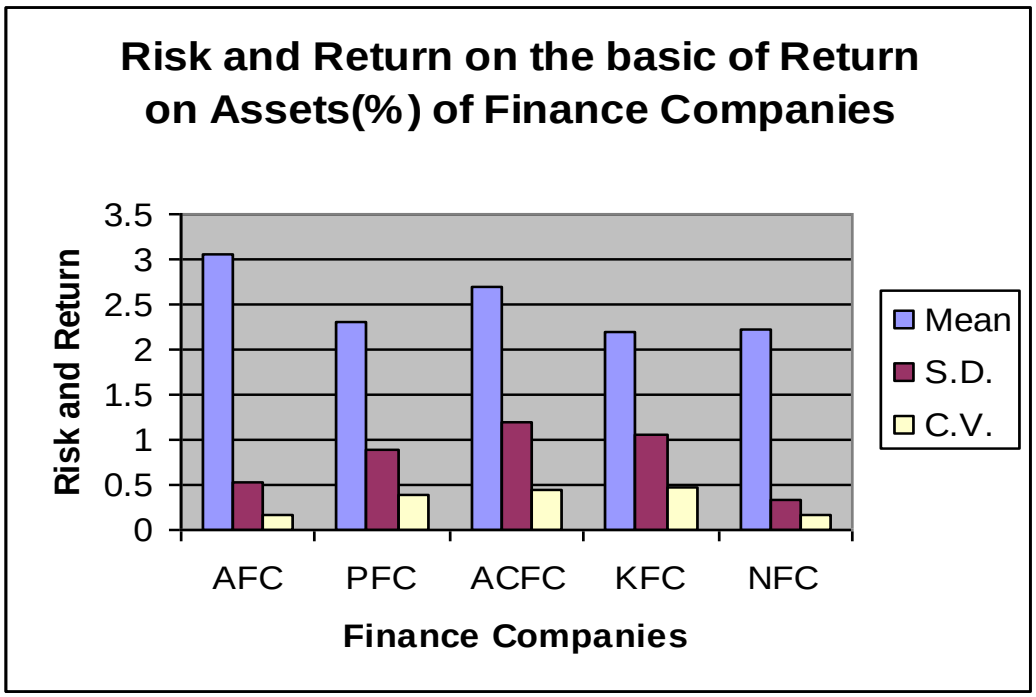
Source; - Annex ‘A’

From the value presented in Table 4.2 clearly depicts that AFC has the higher mean return 3.06 percent and KFC has the lowest mean return 2.20 percent. Similarly NFC has lowest standard deviation and coefficient of variation 0.33, 0.16 percent respectively. The standard deviation 1.20 percentage of ACFC is

higher but coefficient of variation 0.48 percent of KFC is highest than shows KFC has lower financial performance similarly the mean return of PFC, ACFC, and NFC are 2.31, 2.69 and 2.23 percent 0.52, 0.89, 1.06 and 0.33 percent standard deviation of AFC, PFC, KFC and NFC and coefficient of variation of AFC, PFC and ACFC are 0.17, 0.38, 0.45 percent. AFC has not more coefficient of variation with high mean return. So it has better financial position and other finance companies have mode rate financial position.

Risk and return on the basic of return on assets under different financial companies like Annapurna Finance Company, Paschimanchal Financial Company, Ace Finance Company, Kathamandu Finance Company are presented in

Figure 4.2



Source; - Table 4.2

Figure 4.2 indicates NFC has lowest mean return 2.23 percent with lowest standard deviation 0.33 percent and lowest coefficient of variation 0.16 risks per unit AFC has the highest mean return 3.06 percent with lower standard deviation 0.52 percent and coefficient of variation 0.17 risks per unit. So AFC has better financial. The coefficient of variation KFC has highest but the standard deviation

of ACFC is highest. The mean return of PFC, ACFC and NFC are 2.31, 2.69 and 2.23. The standard deviation is 0.89, 1.20 and 0.33 and the coefficient of variation 0.38, 0.45 and 0.16 risk per unit respectively. This represents AFC has better financial performance and other finance companies are mode rate financial performance.

The given table 4.3 clears risk and return on the basic of return on assets under different insurance companies such as Himalayan General Insurance Company, United Insurance Company and Premier Insurance Company.

Table 4.3

Risk and Return on the basis of Return on Assets (%) of Insurance Companies

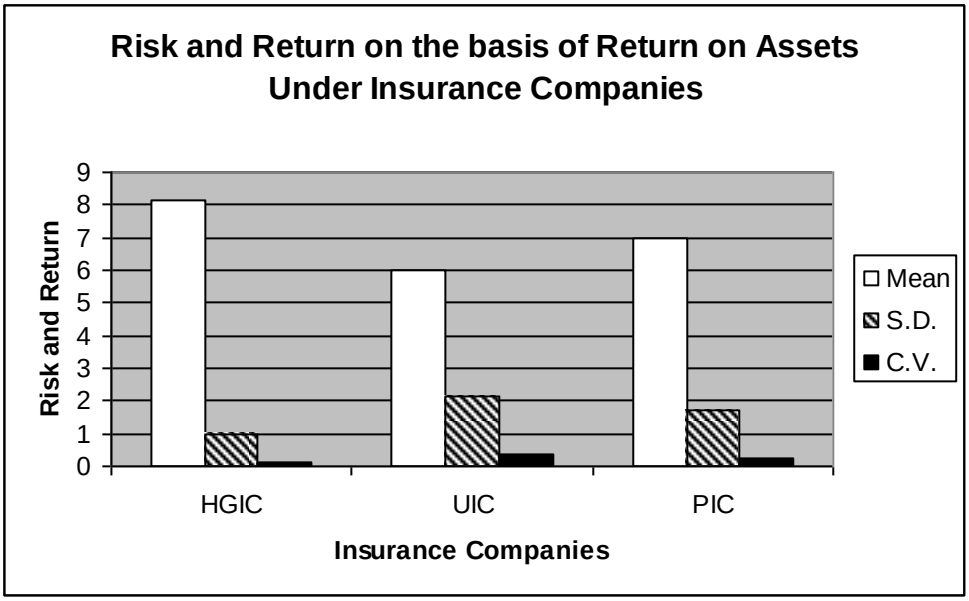
Year	**HGIC**	**UIC**	**PIC**
2001/2002	9.49	8.78	7.88
2002/2003	7.15	7.08	9.16
2003/2004	6.95	7.03	7.96
2004/2005	8.86	2.60	4.97
2005/2006	8.16	4.59	4.98
Mean	8.12	6.02	6.99
S.D.	0.97	2.17	1.71
C.V.	0.12	0.36	0.24

Source; - Annex ‘A’

The table 4.3 indicates that there is inverse relationship between mean return and coefficient of variation HGIC. The mean return and coefficient of variation of HGIC are 8.12 and 0.12 percent which is highest return with lowest risk per unit. So HGIC shows the better financial performance the mean return of UIC and PIC are 6.02 and 6.99 percent 2.17, 7.71 percent standard deviation and coefficient of variation 0.36 and 0.24 percent. That refers UIC and PIC has lower financial performance among sample insurance companies. The given figure 4.3 represents risk and return on the basis of different insurance companies such as Himalayan

General Insurance Company, United Insurance Company and Premier Insurance Company

Figure 4.3



Source; - Table 4.3

According to figure 4.3, the mean return and coefficient of variation of HGIC are 8.12 percent and 0.12 risk per unit which is highest return with risk per unit. So HGIC has better financial performance. The mean return of UIC and PIC are 6.02 and 6.99 percent standard deviation 2.17, 1.71 percent and coefficient of variation 0.36, 0.24 risks per unit respectively. This show UIC and PIC has lower financial performance.

Risk and return on the basic of return of assets under sample financial institutions are presented in the table 4.4 such as HBL, SBI, NBL, SCBL, NIBL, AFC, PFC, ACFC, KFC, NFC, HGIC, UIC and PIC

Table 4.4

Risk and return of financial institutions on the basis of return on assets

Financial institutions	2001/02	2002/03	2003/04	2004/05	2005/06	Mean	S.D.	C.V.
HBL	1.26	1.43	1.14	0.91	1.06	1.16	0.18	0.15
SBI	0.98	0.17	0.58	0.64	0.72	0.62	0.26	0.42
NBL	2.14	1.54	1.54	2.51	2.71	2.09	0.48	0.23
SCBL	2.33	2.33	2.60	2.41	2.27	2.39	0.12	0.05
NIBL	1.91	1.10	1.15	1.30	1.15	1.32	0.30	0.23
AFC	2.82	3.93	3.35	2.46	2.75	3.06	0.52	0.17
PFC	2.53	2.44	1.08	3.74	1.76	2.31	0.89	0.38
ACFC	3.39	4.25	0.63	2.53	2.63	2.69	1.20	0.45
KFC	3.23	2.96	2.47	2.08	0.24	2.20	1.06	0.48
NFC	2.55	2.46	2.30	1.60	2.26	2.23	0.33	0.16
HGIC	9.49	7.15	6.95	8.86	8.16	8.12	0.97	0.12
UIC	8.78	7.08	7.03	2.60	4.59	6.02	2.17	0.36
PIC	7.88	9.16	7.96	4.97	4.98	6.99	1.71	0.24

Source; - Annex ‘A’

Table 4.4 clears among sample financial institution HGIC has the highest mean return 8.12 percent with lower coefficient of variation 0.12 per unit which shows HGIC has better financial performance. SBI has lowest mean return 0.62 percent with higher coefficient of variation 0.42 per unit which presents lower financial performance on the basis of return on assets the mean return of HBL, SBI, NBL, SCBL, NIBL, AFC, KFC, and NFC are 1.16, 0.62, 2.09, 1.32, 3.06, 2.31, 2.69, 2.20, 2.23 present respectively which are below 4 percent and the mean return of HGIC, UIC, PIC are 8.12, 6.02, 6.99 percent respectively which are above 4 percent. The standard deviation of HBL, SBI, NBL, SCBL, NIBL, AFC, PFC, NFC, HGIC are 0.18, 0.26, 0.30, 0.52, 0.89, 0.33, 0.97 percent respectively which are below one percent and the standard deviation of ACFC, KFC, UIC, PIC are 1.20, 1.06, 2.17, 1.71 percent respectively which are above 1 percent the coefficient of variation of HBL, NBL, SCBL, NIBL, AFC, NFC, HGIC, PIC are

0.15, 0.23, 0.05, 0.23, 0.17, 0.16, 0.12, 0.24 risk per unit respectively which are below 0.25 risk per unit.

b) Return on Equity Ratio

The ratio is calculated by dividing net profit available to share holder's equity (Net worth). This is one of the important ratios to judge whether the firm has earned satisfactory return for its equity holder or not. This ratio reveals how well the firm has used the resource of the owners to earn profit. So the higher the ratio the more favorable for stock holders, which represent the sound management efficient mobilization of the owners to equity. Under this part risk and return analysis of the sample firms under different institution chosen for the study are presented with to their return on equity.

Risk and return on the basis of return on equity of commercial banks such as Himalayan Bank Limited, SBI Banks Limited, Nabil Banks Limited, Standard Chartered Bank Limited and Nepal investment Banks Limited are present in table 4.5

Table 4.5

Risk and Return on the basis of Returns on Equity (%) of Commercial Banks

Year	HBL	SBL	NBL	SCBL	NIBL
2001/02	37.90	22.26	33.44	38.68	17.71
2002/03	38.95	5.24	27.41	38.74	12.02
2003/04	27.38	7.29	23.69	38.79	10.91
2004/05	19.95	8.55.	31.67	37.03	18.30
2005/06	19.87	9.71	30.73	35.95	20.94
Mean	28.81	10.61	29.39	37.83	15.97
S. D.	8.32	6.01	3.46	1.15	3.86
C.V.	0.29	0.57	0.12	0.03	0.24

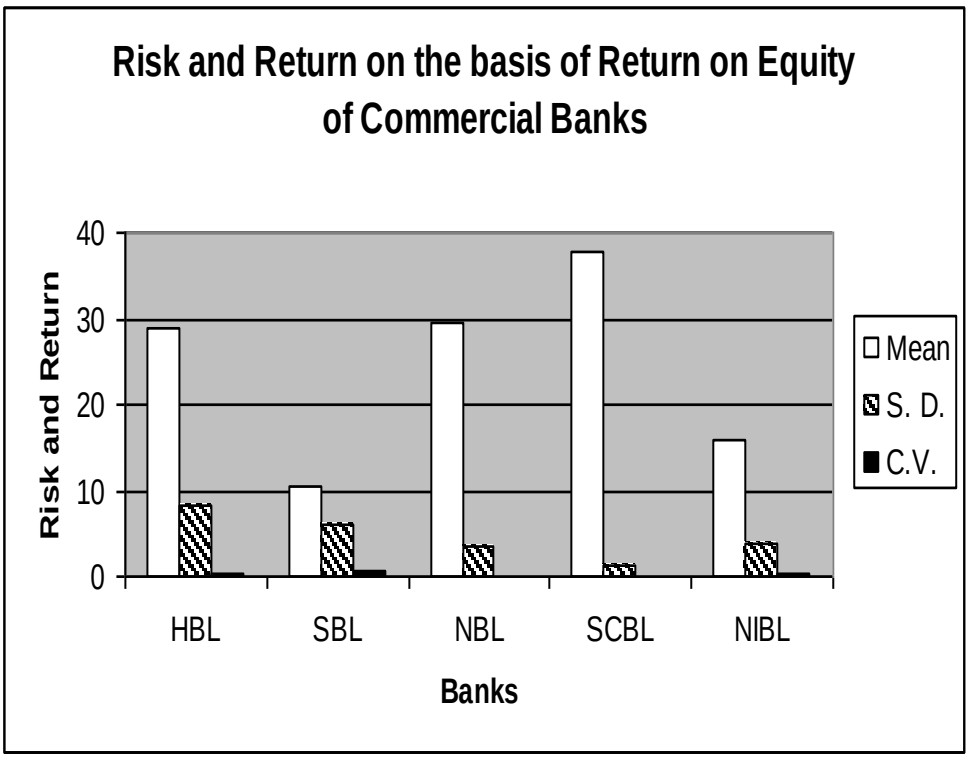
Source: - Annex 'B'

From the table 4.5 it has been seen that SCBL has better financial performance because it has highest mean return 37.83 percent with lowest standard deviation and coefficient of variation 1.15, 0.03 percent respectively and SBI has lowest

mean return 10.61 percent which highest coefficient of variation 0.57 risk per unit which reveals lower financial performance of SBI . That present SBI and SCBL has inverse relationship between mean return and coefficient of variation. In case of other firms HBL, NBL and NIBL have 28.81, 29.39 and 15.97 percent mean return 0.29, 0.12, 0.24 per unit risk coefficient of variation respectively. Among them NBL and HBL are better and NIBL has lower financial performance because there is not return in proportion of risk.

Figure 4.4 reveals risk and rerun on the basis of return on equity of different banks such as Himalayan Bank Limited, SBI Banks Limited, Nabil Banks Limited, Standard Chartered Bank Limited and Nepal Investment Banks Limited.

Figure 4.4



Source; Table 4.5

According to the figure 4.4 SCBL has higher mean return 37.83 percent with lowest standard deviation 1.15 percent and 0.03 percent respectively and SBI has highest coefficient of variation 0.57 risk per unit and lowest mean return 10.61 percent. This shows SBI has lower financial performance and SCBL has better

financial performance, which reveals SBI and SCBL has inverse relationship between mean return and coefficient of variation. The mean return of HBL, NBL and NIBL has 28.81, 29.39 and 15.97 percent standard deviation 8.32, 3.46 and 3.86 percent and coefficient of variation 0.29, 0.12 and 0.24 risk per unit respectively.

The given table 4.6 reveals risk and return on the basis of return on equity of finance company such as Annapurna Finance Company, Paschimanchal Finance Company, Ace Finance Company, Kathamandu Finance Company and National Finance Company.

Table 4.6

Risk and Return on the basis of return on Equity (%) of Finance Companies

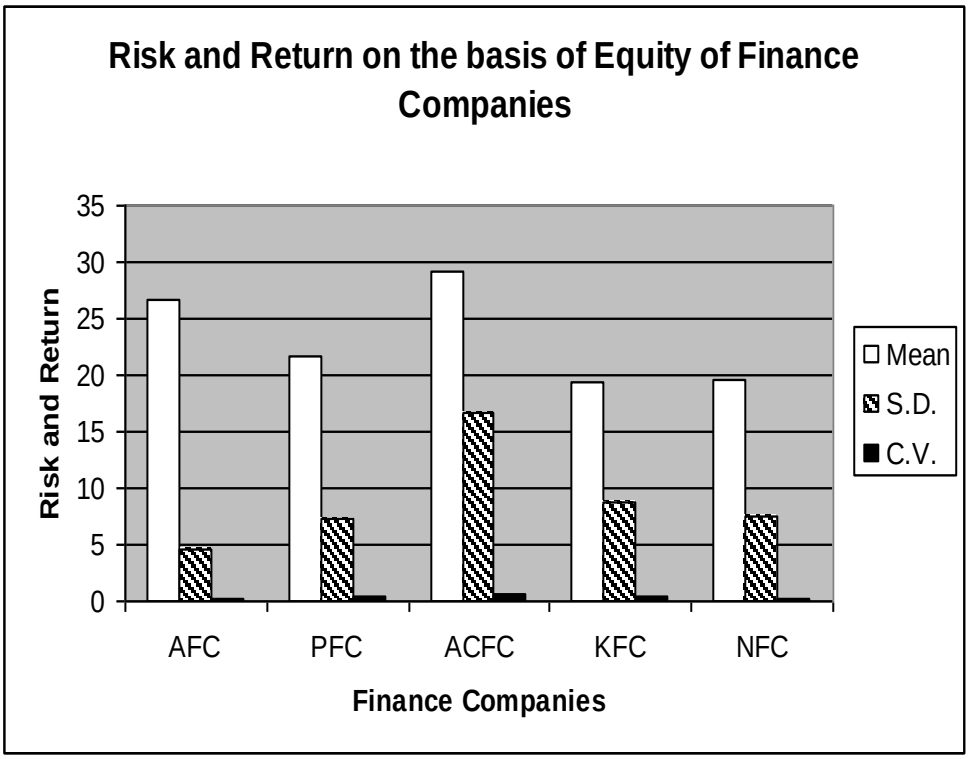
Year	**AFC**	**PFC**	**ACFC**	**KFC**	**NFC**
2001/02	29.12	21.66	42.70	24.40	26.23
2002/03	33.93	22.78	52.92	26.34	24.22
2003/04	27.13	10.79	5.47	21.83	19.09
2004/05	21.44	33.63	22.54	21.85	11.62
2005/06	22.16	19.01	21.94	2.02	16.67
Mean	26.76	21.57	29.11	19.29	19.56
S.D.	4.62	7.34	16.76	8.80	7.42
C.V.	0.17	0.34	0.58	0.45	0.27

Source; - Annex 'B'

According to table 4.6 ACFC has highest mean return, standard deviation and coefficient of variation 29.11, 16.76 and 0.58 percent respectively which are lower financial performance among sample financial companies. AFC has medium level of return 26.76 percent with lower standard deviation and coefficient of variation 4.62 and 0.17 risk per unit. So AFC is better among sample five finance companies. The mean return of PFC, KFC and NFC are 21.57, 19.29 and 19.56 percent 7.34, 8.80 and 7.42 percent standard deviation and coefficient of variation

0.34, 0.45 and 0.27 respectively. That refers KFC has lower financial performance because it has high risk and risk per unit in comparison of return. And other are moderate financial performance. Risk and return on the basis of return on equity of financial company like Annapurna Financial Company, Paschimanchal Finance Company, Ace Finance Company, Katramados Finance Company and National Finance Company are presented in figure 4.5

Figure 4.5



Source; - Table 4.6

From the figure 4.5 it has been seen that ACFC has medium level financial performance among simple finance companies because it has highest mean return, standard deviation and coefficient of variation 29.11 percent, 16.76 percent and 0.58 risk per unit respectively. AFC has 26.76 percent returns with lower level standard deviation 4.62 percent and 0.17 risk per unit. This shows AFC has better financial performance. KFC has lower return 19.29 percent with high level standard deviation 8.80 percent and coefficient of variation 0.45 risk per unit. The mean return of PFC and NFC are 21.57 and 19.56 percent the standard deviation

7.34 and 7.42 percent and coefficient of variation 0.34 and 0.27 risk per unit respectively. So PFC and NFC are moderate financial performance. The given table 4.7 displays risk and return on the basis of return on equity of different insurance companies such as Himalayan insurance company, united insurance company, and Premier insurance company.

Figure 4.5

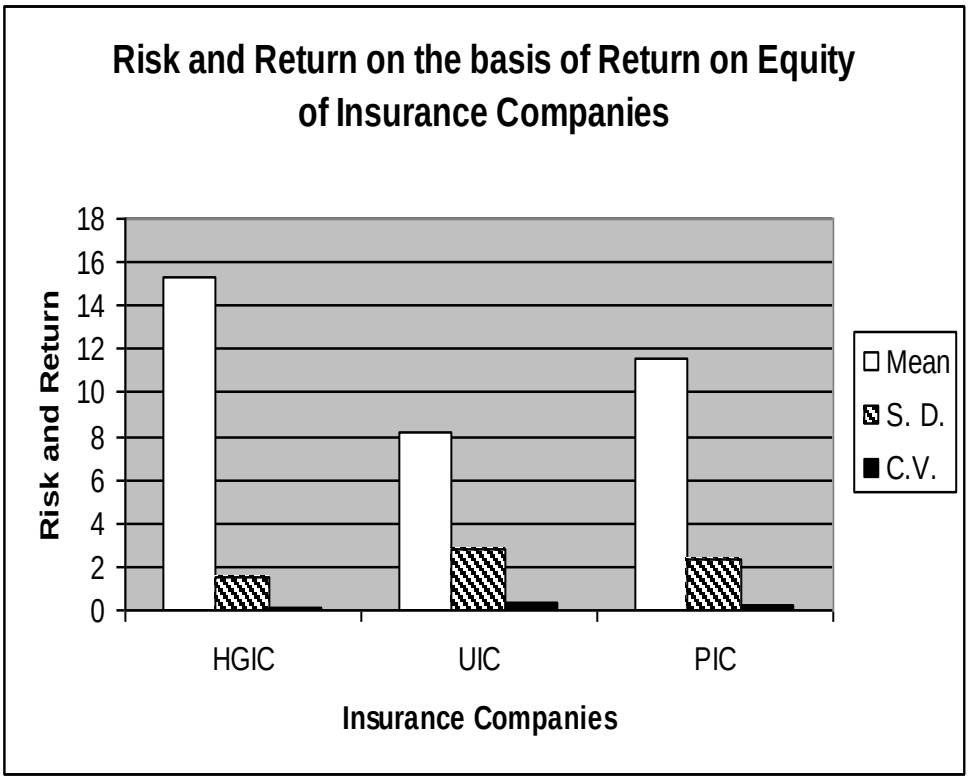
Risk and return on the basis of Return on Equity (%) of Insurance Companies

Year	HGIC	UIC	PIC
2001/02	16.47	12.20	12.06
2002/03	15.32	8.92	14.66
2003/04	12.64	8.55	13.44
2004/05	15.33	3.68	8.60
2005/06	16.97	7.37	9.38
Mean	15.35	8.14	11.62
S. D.	1.50	2.75	2.32
C.V.	0.10	0.34	0.20

Source; - Annex's'

Table 4.7 presents HGIC has better financial performance among three sample insurance companies because it has highest mean return 15.35 percent with lowest standard deviation and coefficient of variation 1.50, 0.10 percent respectively. In case of other UIC and PIC has 8.14 and 11.62 percent of mean return, standard deviation 2.75, 2.32 percent and 0.34 and 0.20 percent of coefficient of variation which suggests UIC has lower and PIC has moderate in financial performance. Risk and return on the basis on return on equity of different companies such as Himalayan Insurance Company, United Insurance Company, and Premier Insurance Company are presented in figure 4.6

Figure 4.6



Source; - Table 4.7

Figure 4.6 reveals HGIC has highest mean return 15.35 percent with lowest standard deviation 1.50 percent and coefficient of variation 0.10 risks per unit. So HGIC has better financial performance among three sample insurance companies. UIC has lower financial performance because it has lowest mean return 8.14 percent highest standard deviation 2.75 percent, and highest coefficient of variation 0.34 risk per unit respectively. PIC has moderate level of financial performance because it has moderate level of mean return 11.62 percent, standard deviation 2.32 percent and coefficient of variation 0.20 risk per unit. Risk and the return on the basis of return on equity under different financial institution such as HBL, SBI, NBL, SCBL, NIBL, AFC, PFC, ACFC, KFC, HGIC, NFC, HGIC, UIC and PIC are presented in the Table 4.8

Figure 4.8

Risk and Return under Financial institution on the basis of Return on equity

Financial institutions	2001/02	2002/03	2003/04	2004/05	2005/06	Mean	S.D.	C.V.
HBL	37.90	38.95	27.38	19.95	19.87	28.81	8.32	0.29
SBI	22.26	5.24	7.29	8.55	9.71	10.61	6.01	0.57
NBL	33.44	27.41	23.69	31.67	30.73	29.39	3.46	0.12
SCBL	38.68	38.74	38.79	37.03	35.95	37.83	1.15	0.03
NIBL	17.71	12.02	10.91	18.30	20.94	15.97	3.86	0.24
AFC	29.12	33.93	27.13	21.44	22.16	26.76	4.62	0.17
PFC	21.66	22.78	10.79	33.63	19.01	21.57	7.34	0.34
ACFC	42.70	52.92	5.47	22.54	21.94	29.11	16.76	0.58
KFC	24.40	26.34	21.83	21.85	2.02	19.29	8.80	0.45
NFC	26.23	24.22	19.09	11.62	16.67	19.56	7.42	0.27
HGIC	16.47	15.32	12.64	15.33	16.97	15.35	1.50	0.10
UIC	12.20	8.92	8.55	3.68	7.37	8.14	2.75	0.34
PIC	12.06	14.66	13.44	8.60	9.38	11.62	2.32	0.20

Source; - Annex 'B'

According to Table 4.8 SCBL have highest mean return 37.83 percent and lowest standard deviation and coefficient of variation 1.15 percent and 0.03 risk per unit which shows better financial performance. And UIC has lowest mean return 8.14 percent with 0.34 risk per unit coefficient of variation which is highest level of risk per unit. This present UIC has lower financial performance on the basis of return on equity. The mean return of SBI and PIC has 10.61 and 11.62 percent respectively which are below 15 percent. The mean return of HBL, NBL, NIBL, AFC, PFC, ACFC, KFC, NFC and HGIC has 28.81, 29.39, 15.97, 26.76, 21.57, 29.11, 19.29, 19.56, and 15.35 percent. The standard deviation of NBL, NIBL, AFC, HGIC, and PIC has 3.46, 3.86, 4.62 and 2.32 percent respectively which are below 5 percent. The standard deviation of HBL, PFC, ACFC, KFC and NFC has 8.32, 7.34, 16.76, 8.80 and 7.42 percent respectively which are above 5 percent. The coefficient of variation of HBL, NBL, NIBL, AFC, NFC, HGIC, PIC has 0.29, 0.12, 0.24, 0.17, 0.34, 0.27, 0.10, 0.20 risk per unit respectively which are below 0.40 risk per unit. This shows HBL, NBL and AFC has better ACFC, KFC has lower other has moderate in financial position.

4.2 Portfolio Analysis

Portfolio analysis includes portfolio risk comparison with weighted average risk and portfolio return it also includes correlation between the firms. In this topic correlation, respectively weighted portfolio standard deviation and portfolio mean return on the basis of return on asset and return on equity calculated under different institution chose for the study.

a) Portfolio Risk and Return on the basis of Return on Assets

This part present four tables among them three table shows portfolio risk and return in different financial institution. And one table shows in agree gate financial institution. The given Table 4.9 represents portfolio risk and return on the basis of return on assets under sample commercial banks.

Table 4.5

Portfolio Risk and Return on the basis of Return on Assets of Commercial Banks

Combination of firms	Corre lation	Respective Weight (%)	Average Return (%)	Portfolio Return (%)	Average Risk (%)	Portfolio Risk (%)
HBLand SBI	-0.43	62.57,37.43	0.88	0.95	0.22	0.11
HBLand NBL	-0.64	76.58,23.42	1.62	1.37	0.33	0.10
HBLandSCBL	-0.19	30.59,69.41	1.77	2.01	0.14	0.08
HBLand NIBL	-0.03	72.79,27.20	1.24	1.20	0.24	0.15
SBI and NBI	0.54	107,-7	1.35	0.60	0.37	0.25
SBI and SCBL	0.09	17.54,82.86	1.50	2.07	0.18	0.09
SBI and NIBL	0.26	34.57,65.43	0.97	1.02	0.28	0.17
NBL and SCBL	-0.54	14.15,85.84	2.23	2.34	0.29	0.07
NBL and NIBL	0.17	24.04,75.96	1.70	1.50	0.39	0.27
SCBL and NIBL	-0.21	83.20,16.79	1.85	2.21	0.20	0.09

Source; - Annex ‘A’

The portfolio result present in Table 4.9 indicate the combination of firms such as HBLand SBL, HBL and NBL, HBL and SCBL, HBL and NIBL, NBL and SCBL, SCBL and NIBL and show negative correlation -0.43, -0.64, -0.19, 0.03, -0.54 and -0.21 respectively where as other combination SBI and NBL, SBI and NBL, SBI and NIBL, and NBL and NIBL so positive correlation 0.54, 0.09, 0.26 and 0.17 respectively in terms of on assets.

The portfolio return increase than average return in the combination of firms such as HBL and SBI, HBL and SCBL, SBI and SCBL, SBI and NIBL, NBL and SCBL and SCBL and NIBL. And other combinations of firms such as HBL and NBL, HBL and NIBL, SBI and NBL, and NBL and NIBL have decreased portfolio return than average return. The portfolio risk of all combination of firms is less than average risk. In case of portfolio risk diversified, portfolio risk is highly diversified in strongly negative correlated firms in comparison of positively correlated firms. Thus portfolio risk can be diversified by investing in those assets which have strong negative correlated. Portfolio risk and return on the basis of return on assets under different sample finance companies clearly shows in table.

Table 4.10

Portfolio Risk and Return on the basis of Return on Assets of Finance Companies

Combination Firms	Correlation	Respective Weight (%)	Average Return (%)	Portfolio Return (%)	Average Risk (%)	Portfolio Risk (%)
AFC and PFC	-0.42	67.91,32.09	2.68	2.82	0.70	0.34
AFC and ACFC	0.22	90,96,9.04	2.87	3.02	0.86	0.68
AFC and KFC	0.42	84.92,15.08	2.62	2.93	0.79	0.52
AFC and NFC	0.58	5.12,94.88	2.64	2.27	0.42	0.33
PFC and ACFC	0.50	78.07,21.93	2.49	2.39	1.04	0.85
PFC and KFC	0.19	61.54,38.46	2.25	2.46	0.97	0.74
PFC and NFC	-0.06	13.74,86.26	2.27	2.24	0.61	0.30
ACFC and KFC	0.23	41.96,58.05	2.44	2.40	1.13	0.88
ACFC and NFC	0.16	3.08,96.92	2.46	2.24	0.76	0.33
KFC and NFC	0.22	3.06,96.94	2.23	2.23	0.69	0.33

Source; - Annex ‘A’

Table 4.10 reveals the combination of firms such as AFC and PFC, PFC and NFC present negative correlation -0.42, -0.06 respectively where as other combination

AFC and ACFC, AFC and KFC, ACF and NFC, PFC and ACFC, PCF and KFC, ACFC and KFC, ACFC and NFC and KFC and NFC show positive correlation 0.22, 0.42, 0.58, 0.50, 0.19, 0.23, 0.16 and 0.22 respectively under return on asset. The portfolio return of five combination of firms increase than average return such as AFC and PFC, AFC and ACFC, AFC and KFC, PCF and KFC, KFC and NFC. The portfolio return of five combinations of firms decreased than average return such as AFC and NFC, PFC and ACFC, PFC and NFC, ACFC and KFC, ACFC and NFC. The portfolio risk of all combination of firms is less than average risk. Portfolio risk is more diversified in strongly negatively correlation in comparison of positive correlation of firms. Thus portfolio investment in finance companies is satisfactory. The given table 4.11 indicates portfolio risk and return on the basis of return on assets under insurance companies.

Table 4.11

Portfolio Risk and Return on the basis of Return on Assets of Insurance Company

Combination of Firms	Correlation	Respective Weight (%)	Average Return (%)	Portfolio Return (%)	Average Risk (%)	Portfolio Risk (%)
HGIC and UIC	-0.09	93.57,6.43	7.06	8.02	1.57	0.90
HGIC and PIC	-0.43	90.63,9.37	7.55	8.01	1.33	0.96
UIC and PIC	0.83	-13.66,113.66	6.50	7.12	1.93	0.65

Source; - Annex ‘A’

Based on the table 4.11 the combination of firms such as HGIC and UIC, HGIC and PIC have correlation -0.09 and -0.43 has positive correlation 0.83. The portfolio returns of all combination of insurance companies have higher return in terms of portfolio return on assets. The portfolio risk of all combination of firms reduces the average risk on assets. HGIC and UIC, HGIC and PIC are highly negatively correlated therefore risk also highly reduce than positively correlated combination of firms such as UIC and PIC. This represent risk can be diversified by investing those types of assets which are highly negatively correlated. Portfolio

risk and return under each financial institution on the basis of return on assets clearly reveals in Table 4.12

Table 4.12

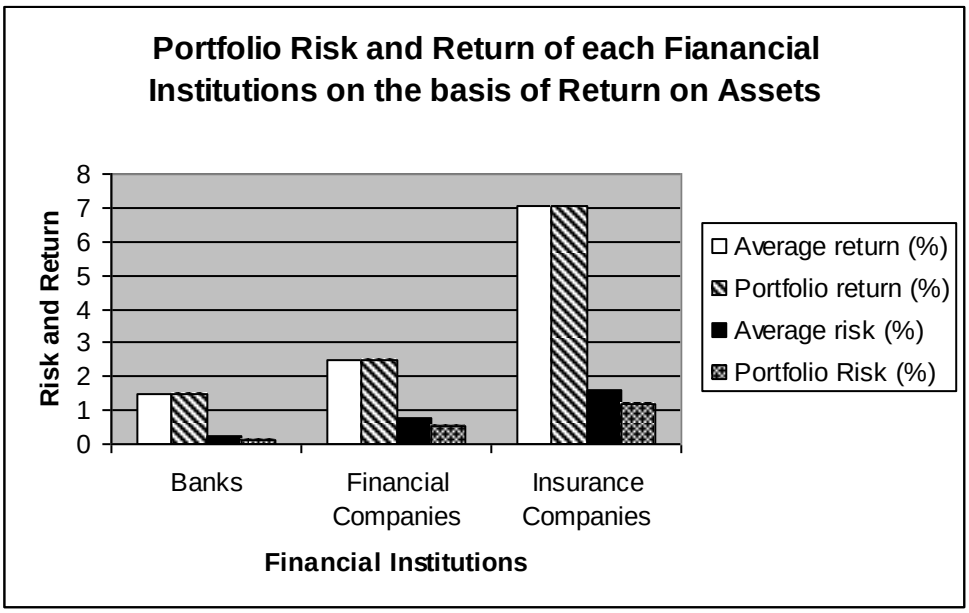
Portfolio risk and Return under each Financial Institution on the basis of Return on Assets

Financial Institutions	Average return (%)	Portfolio return (%)	Average risk (%)	Portfolio Risk (%)
Banks	1.51	1.51	0.26	0.12
Financial Companies	2.49	2.49	0.80	0.51
Insurance Companies	7.04	7.04	1.61	1.18

Source; - Annex 'A'

It is clear from the table 4.12 the portfolio return and average return are same if equal investment of portfolio. But portfolio risk is reduced than average risk. The risk is diversified more in the banking sector; similarly the portfolio risk is reduced in the finances companies and insurance company respectively. This shows portfolio risk can be diversified by investing in portfolio of financial institutions. The given figure 4.7 present portfolio risks can return under financial institutions on the basis of return on asset.

Figure 4.7



Source; - Table 4.12

Figure 4.1 displays risk is diversified more in banking sector than after finance company respectively and portfolio risk is reduce more than average risk. The average return and portfolio return are equal because of equal investing in portfolio. The graph shows higher the return higher the risk lower the return lowers the risk in Nepalese financial institutions.

b) Portfolio Risk and Return on the basis of Return on Equity

This part shows four tables related with portfolio risk and return on the basis of return on equity. Three tables show different financial institution such as bank finance company and insurance company wise portfolio risk and return. And one table shows in aggregate financial institution wise portfolio risk and return.

Portfolio risk and return on the basis of return on equity under commercial banks clearly shows in Table 4.13

Table 4.13

Portfolio Risk and Return on the basis of Return on Equity of Commercial Banks

Combination of firms	Corre lation	Respect Weight	Average Return (%)	Portfolio Return (%)	Average Risk (%)	Portfolio Risk (%)
HBL and SBI	0.50	20.04, 79.96	19.71	14.26	7.16	5.82
HBL and NBL	0.45	-2.26,102.26	20.10	29.40	5.89	3.44
HBL and SCBL	0.61	-7.86,107.86	33.32	38.55	4.73	0.32
HBL and NIBL	-0.10	20.12,79.88	22.39	18.55	6.09	3.34
SBI and NBL	0.59	101.7,-1.7	20	10.29	4.73	3.36
SBI and SCBL	0.14	0.82,99.18	24.22	37.61	3.58	1.14
SBI and NIBL	0.42	16.23,83.77	13.29	15.78	4.93	3.75
NBL and SCBL	-0.41	17.86,82.14	33.61	36.32	2.30	0.88
NBL and NIBL	0.83	81.60,18.40	22.68	26.92	3.66	3.43
SCBLand NIBL	-0.87	78.29,21.71	26.9	33.13	2.50	0.43

Source; - Annex'B

Based on the Table 4.13 three combinations of firms are negative correlation such as HBL and NIBL, NBL and SCBL, SCBL and NIBL -0.10, -0.41, -0.87 respectively. And other combination of firms are positive correlation such as HBL and SBI, HBL and NBL, SBI and SCBL, SBI and NIBL and NBL and NIBL, 0.50, 0.45, 0.60, 0.59, 0.14, 0.42, 0.83 respectively. The portfolio return of HBL and NBL, HBL and SCBL, SBI and SCBL, SBI and NIBL, NBL and SCBL, NBL and NIBL, SCBL and NIBL are increased than average return and HBL and SBI, HBL

and NIBL, SBI and NBL are decreased than average return. The portfolio risk of all combination of firms decreased than average risk. The combination of firms which has negative correlation the risk, highly diversified such as HBL and NIBL, NBL, and SCBL and SCBL and NIBL. This present portfolio investment on equity under bank is portfolio by diversified risk. The given table 4.14 presents portfolio risk and return on the basis of return on equity under financial companies.

Table 4.14
Portfolio Risk and Return on the basis of Return on Equity under finance

Combination of firms	Correlation	Respective weight	Average Return (%)	Portfolio Return (%)	Average Risk (%)	Portfolio Risk (%)
AFC PFC	-0.28	67.28,32.72	24.16	25.12	5.98	3.34
AFC ACFC	0.68	115.7,-15.7	27.94	26.39	10.69	1.40
AFC KFC	0.64	109.6,-9.6	23.02	27.47	6.67	3.81
AFC NFC	0.61	98.98,1.02	23.16	26.68	6.02	4.61
PFC ACFC	0.36	96.27,3.73	25.34	21.84	12.05	7.30
PFC KFC	0.18	60.81,39.19	20.43	20.67	8.03	6.08
PFC NFC	-0.28	50.14,49.59	20.57	20.57	7.38	4.42
ACFC NFC	0.61	-7.33,107.33	18.57	18.57	12.74	4.48
ACFC NFC	0.46	-0.93,100.93	19.47	19.47	12.09	7.41
KFC NFC	0.29	38.15,61.85	19.46	19.46	8.07	6.41

Source;- Annex ‘B’

Table 4.14 indicates negative correlation in two combinations of firms such as AFC and PFC, PFC and NFC -0.28 and -0.28 respectively other all remaining combinations of firms has positive correlation. In comparison of positive correlation negative correlation can diversify more risk than positive correlation.

The portfolio return of AFC and PFC, AFC and KFC, AFC and NFC, PFC and KFC, PFC and NFC, and KFC and NFC has higher portfolio return than average return. in spite of lower return it is able to reduce more risk in proportion if return. The portfolio risk of all combination of firms reduces than average risk. This reveals portfolio investment of equity under finance company is satisfactory.

Portfolio risk and return on the basis of return on equity of insurance companies clearly shows in table 4.15

Table 4.15

Portfolio Risk and Return on the basis of Return on Equity of Insurance Companies

Combination of firms	Corre lation	Respective Weight (%)	Average Return (%)	Portfolio Return (%)	Average Risk (%)	Portfolio Risk (%)
HGIC and UIC	0.23	83.67,16.33	11.75	14.17	2.12	1.42
HGIC and PIC	-0.46	64.59,35.40	13.48	14.03	1.91	0.92
UIC and PIC	0.16	27.78,72.22	9.88	10.65	2.53	2.24

Source; - Annex 'B'

In table 4.15 all the combination of firms has positive correlation except HGIC and PIC which has -0.40. Other combination HGIC and UIC, and UIC and PIC has 2.23 and 0.16 respectively. The portfolio risk is diversified more in the combination HGIC and PIC because it has negative correlation. The portfolio risk of all combination of firms is decreased than average return. It refers the good financial performance of insurance company. The given table 4.16 reveals Portfolio risk and return under each financial institution on the basis of return on equity.

Table 4.16

Portfolio Risk and Return under each Financial Institution on the basis of Return

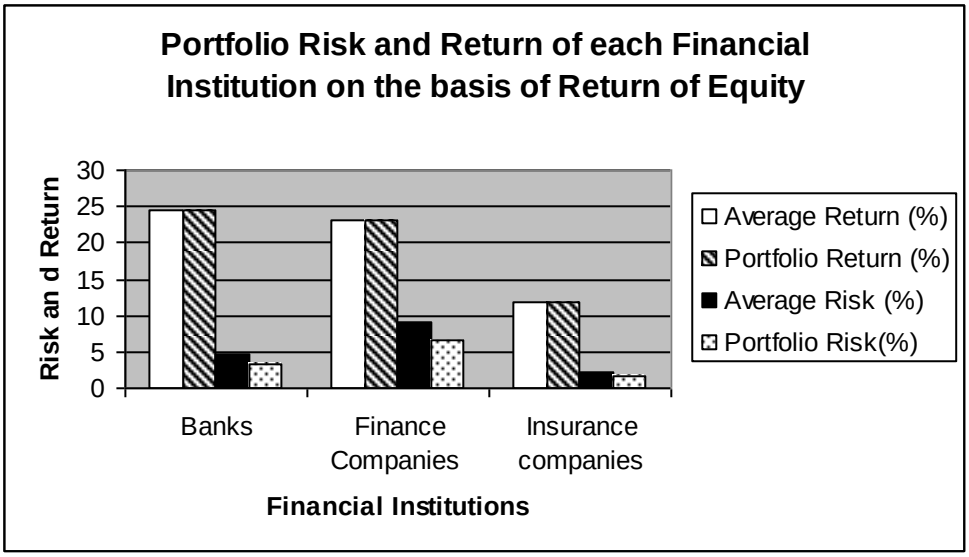
Financial Institutions	Average Return (%)	Portfolio Return (%)	Average Risk (%)	Portfolio Risk (%)
Banks	24.52	24.52	4.55	3.30
Finance Companies	23.25	23.25	8.98	6.58
Insurance Companies	11.70	11.70	2.18	1.54

Source; - Annex 'B'

The table 4.16 represent that portfolio return and average return same by equal investing in portfolio. The portfolio risk is diversified more in insurance companies, banks and finance companies respectively. The portfolio risk of all financial institutions decreased than average risk. This shows good response

towards investing in portfolio under return in equity of sample financial institutions. The figure 4.8 represents portfolio risk and return under each financial institutions on the basis of return on equity.

Figure 4.8



Source; - Table 4.16

The figure 4.2 reveals that portfolio risk and return of financial institutions under return on equity, portfolio risk of insurance company is diversified more under return on equity than after bank and finance company respectively. Bank has more return with medium risk. Insurance company has less return with less risk but in comparison of risk it is high return. Finance company has medium return with medium risk.

4.3 Diversification of Risk

The topic diversification of risk includes that risk can be diversified by investing in portfolio of assets. This part consisting of two sections is fully devoted to analysis diversification of risk under different financial institution on the basis of return on assets and section B on the basis of return on equity.

a) Diversification of Risk on the basis of Return on Assets

This section has four tables of diversification of risk on the basis of return on assets. Three tables Presents different financial institutions diversification of risk and one table shows that as the number of securities in portfolio increased the standard deviation (risk) on the portfolio return diversifies.

Diversification of risk on the basis of return on assets of the commercial banks clearly reveals of table 4.17

Table 4.17

Diversification of Risk on the basis of Return on Assets of the Commercial banks

Combination of firms	Average Risk (%)	Portfolio Risk (%)	Percentage Reduction in Portfolio Risk
HBL and SBI	0.22	0.11	50
HBL and NBL	0.33	0.10	69.69
HBL and SCBL	0.14	0.08	42.85
HBL and NIBL	0.24	0.15	37.5
SBI and NBL	0.37	0.25	32.43
SBI and SCBL	0.18	0.09	50
SBI and NIBL	0.28	0.17	39.28
NBL and SCBL	0.29	0.07	75.86
NBL and NIBL	0.29	0.27	30.76
SCBL and NIBL	0.20	0.09	55

Source; - Annex'A'

It is clear from the Table 4.17 half of the combination of firms such as HBL and SBI, HBL and NBL, SBI and SCBL, NBL and SCBL, and SCBL and NIBL are able to reduce 50 percent or more than 50 percent portfolio risk. And other combination of are below 50 percent portfolio risk. It indicates risk can be diversified by investing in portfolio. The table 4.18 reveals diversification of risk on the basis of return on assets of financial companies.

Table 4.18

Diversification of Risk on the basis of Return on Assets of finance Companies

Combination of firms	Average Risk (%)	Portfolio Risk (%)	Percentage Reduction in Portfolio Risk
ACF and PFC	0.70	0.34	51.42
ACF and ACFC	0.86	0.68	20.93
ACF and KFC	0.79	0.52	34.17
ACF and NFC	0.42	0.33	21.42
PFC and ACFC	1.04	0.85	18.26
PFC and KFC	0.97	0.74	23.71
PFC and NFC	0.61	0.30	50.81
ACFC and KFC	1.13	0.88	22.12
ACFC and NFC	0.76	0.33	56.17
KFC and NFC	0.69	0.33	52.17

Source; - Annex'A'

Table 4.18 clearly depicts by investing in portfolio. Risk can be decline of the firms under finance companies. Forty percent the combination of firms have been decrease 50 percent and more than 50 percentage of portfolio of risk than average risk such as AFC and PFC, PFC and NFC, ACFC and NFC and KFC and NFC. Other remaining combinations of firms are below 50 percent. Diversification of risk on the basis of return on assets of the insurance companies clearly show in table 4.19

Table 4.19

Diversification of Risk on the basis of Return on Assets of insurance companies

Combination of the firms	Average Risk (%)	Portfolio Risk (%)	Percentage Reduction in portfolio Risk
HGIC and UIC	1.57	0.90	42.67
HGIC and PIC	1.33	0.96	23.56
UIC and PIC	1.93	1.65	14.50

Source; - Annex 'A'

According to the Table 4.19, percentage reduction in portfolio risk is higher in the combination of firms. HGIC and UIC i.e. 42.67 percent and HGIC and PIC, UIC and PIC 23.56 percent and 14.50 percent respectively. It clears HGIC and UIC is able to reduce higher risk among three combinations. The given table 4.20 clears reduction in portfolio risk through diversification on the basis of return on assets.

Table 4.20

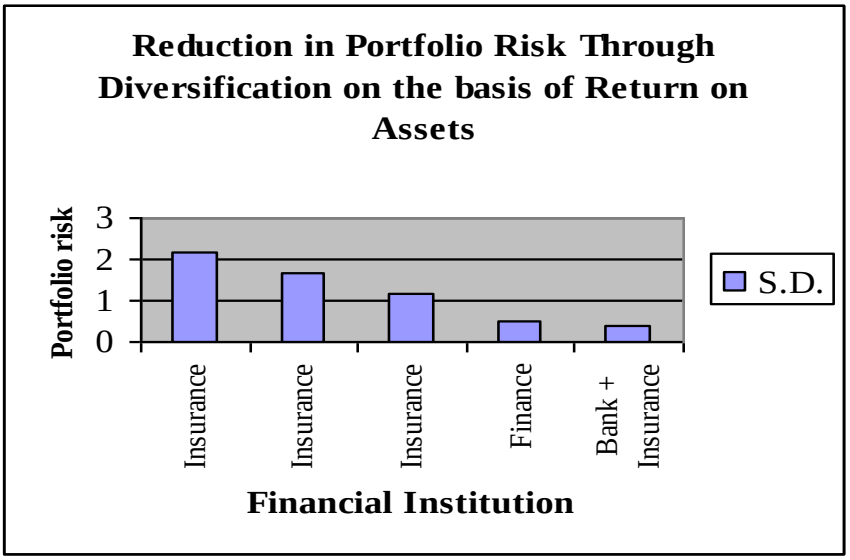
Reduction on portfolio Risk through Diversification on the basis of Return on Assets

Financial instructions	Number of securities In portfolio	Standard deviation in portfolio
Insurance	1	2.17
Insurance	2	1.65
Insurance	3	1.18
Finance	5	0.51
Bank + Insurance	8	0.40

Source;- Annex 'A'

Table 4.20 summarizes some effects of diversification. As the number of securities in portfolio increase, the standard deviation of portfolio decrease that mean risk is being small. In first, second and third only insurance standard deviation are taken for sample in Table 4.20 which are decreasing as the number of securities of portfolio increasing. In forth only finance company is taken for sample. And lastly fifth Bank with Insurance Company is taken. It has also reduce standard deviation(risk) in portfolio. Reduction on portfolio risk through diversification on the basis of return on assets clearly reveals in figure 4.9

Figure 4.9



Source; - Table 4.20

Figure 4.3 displays standard deviation of portfolio decrease when the number of securities increase but in decrease way. Investing in one securities of Insurance company, the standard deviation is 2.17 percent. Standard deviation on portfolio is 1.65 percent while investing in two security of insurance company. Investing in three securities of insurance company the standard deviation on portfolio is 1.18 percent. Standard deviation on portfolio of five securities of finance company is 0.51 percent investing in eight securities of banks and insurance company standard deviation on portfolio is 0.40 percent. These shows investing in one, two and three security highly reduced in portfolio risk but in five securities reduce in declining way.

b) Diversification of Risk on the basis of Return on Equity

This part is devoted four tables of diversification of risk under return on equity. The diversification result present in three tables. And one table shows the portfolio standard deviation decrease if the numbers of securities increased. The given table 4.21 clearly reveals diversification of risk on the basis of return on equity under commercial bank.

Table 4.21

Diversification of Risk on the basis of Return on Equity of Commercial Banks

Combination Of firms	Average risk (%)	Portfolio of risk (%)	Percentage reduction in portfolio risk
HBL and SBI	7.16	5.82	18.71
HBL and NBL	5.89	3.44	41.59
HBL and SCBL	4.73	0.32	93.23
HBL and NIBL	6.09	3.34	45.15
SBI and NBL	4.73	3.36	28.96
SBI and NIBL	3.58	1.14	68.15
SBI and SCBL	4.93	3.75	23.93
NBL and SCBL	2.30	0.88	61.73
NBL and NIBL	3.66	3.43	6.28
SCBL and NIBL	2.50	0.43	82.80

Source; - Annex'B'

The given Table 4.20 forty percentage combination of firms are able to decrease more than 60 percentage their risk such as HBL and SCBL, SBI and SCBL, NBL and SCBL and SCBL and NIBL, have 93.23, 68.15, 61.73 and 82.80 percent respectively. In spite of other combination below 60 percent, it is clear risk can be diversified in Nepalese sector by investing in portfolio. Diversification of risk on the basis of return on equity under financial companies presented in Table 4.22

Table 4.22

Diversification of Risk on the basis of Return on Equity of Financial Companies

Combination of firms	**Average risk (%)**	**Portfolio risk (%)**	**Reduction in Portfolio risk**
AFC and PFC	5.98	3.34	44.14
AFC and ACFC	10.69	1.40	86.90
AFC and KFC	6.67	3.81	42.87
AFC and NFC	6.02	4.61	23.42
PFC and ACFC	12.05	7.30	39.41
PFC and KFC	8.03	6.08	24.28
PFC and NFC	7.38	4.42	40.10
ACFC and KFC	12.74	8.48	33.43
ACFC and NFC	12.09	7.41	38.70
KFC and NFC	8.07	6.41	20.57

Source; - Annex'B'

Table 4.22 represents only one combination of firms AFC and ACFC has above 80 percent i.e. 86.90 percent. Other all combination of firms has below 50 percent portfolio risk such as AFC and PFC, AFC and KFC, AFC and NFC, PCF and ACFC, PFC and KFC, PFC and NFC, ACFC and KFC, ACFC and NFC, and KFC and NFC 44.14, 42.87. the table clearly presents diversification of risk on the basis of return on equity under insurance companies.

Table 4.2

Diversification of Risk on the basis of Return on Equity under Insurance Companies

Combination of firms	Average risk (%)	Portfolio risk (%)	Percentage reduction In portfolio risk
HGIC and UIC	2.12	1.42	33.01
HGIC and PIC	1.91	0.92	51.83
UIC and PIC	2.53	2.24	11.46

Source; - Annex'B'

The Table 4.23 clear risk can reduce by investing in portfolio under insurance companies. Only one of the combination HGIC and PIC has reduce more than 50 percent i.e. 51.83 percent other both combination HGIC and UIC, UIC and PIC have decrease 33.01, 11.46 percent portfolio risk.

Reduction on portfolio risk through diversification on the basis of return on equity presented on Table 4.24

Table 4.24

Reduction in Portfolio risk through Diversification on the basis of Return on Equity

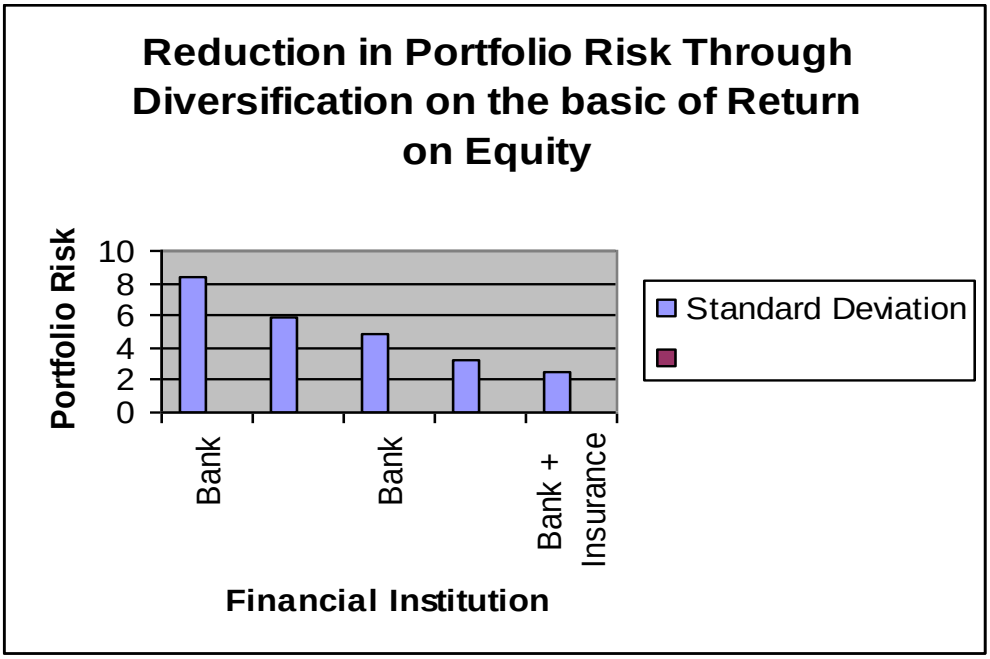
Financial institution	Number of securities in Portfolio	Standard deviation in portfolio
Bank	1	8.32
Bank	2	5.82
Bank	3	4.87
Bank	5	3.30
Bank + insurance	8	2.43

Source; - Annex'B'

Table 4.24 demonstrates the effect of diversification. The portfolio risk has become smaller as the number of securities increase. In first, second, third and fourth only bank standard deviation are taken for the sample in Table 4.22 which are reducing as the number of securities of portfolio increasing. In fifth bank which insurance company is taken for the study. It is also reduce but in decreasing way.

The given Figure 4.10 clearly displays reduction in portfolio risk through diversification on the basis of return on equity.

Figure 4.10



Source; - Table 4.24

Figure 4.5 including the portfolio risk decrease as the number of securities increase but in decreasing way. Investing in one security of bank standard deviation is 8.32 percent. Standard deviation on portfolio is 5.82 percent while investing in two securities of banks. Investing in three securities of banks standard deviation of portfolio is 4.87 percent. Standard deviation on portfolio is 3.30 percent while investing in five securities of bank. Investing in eight securities of bank and insurance, the standard deviation on portfolio is 2.43 percent respectively. This shows investing in one security highly reduces in declining way.

4.4 Major Finding of the Study

The major findings of the study are as follows.

a) On the basis of Return on Assets

1. SCBL has highest mean return and SBI has lowest mean return, SCBL has lowest risk and SBI has highest risk. This shows SCBL has better financial performance on the basis of return on assets among selected banks.
2. AFC has better financial performance among selected financial companies because it has highest mean return on assets with lowest risk.

3. HGIC has the highest mean return and UIC has lower mean return. HGIC has lower risk and UIC has highest has lowest risk and UIC has highest risk. This presents HGIC is better financial performance among selected insurance company.
4. Among sample all financial institutions HGIC has highest mean return with lower coefficient of variation which presents HGIC has better financial performance.
5. The portfolio risk was diversified in all combination of firms under banks. But portfolio return increased in six combinations of firms than average rate of return. four combination of firms decreased which are HBL and NBL, HBL and NIBL, SBI and NBL, and NBL and NIBL. Among them the combination of NBL and SCBL is better for investing in portfolio because it has highest return with lowest portfolio risk.
6. PFC and NFC is better for investing in portfolio with lower level of risk and medium level of return. The portfolio of risk decreased in all combination of the firms except the combination of the firms AFC and NFC, PFC and ACFC, PFC and NFC, and ACFC and NFC.
7. The portfolio risk is diversified with higher return in all combination of assets under insurance companies. Among them the combination of HGIC and UIC is better for investing with highest return and lowest risk.
8. Banking sector has diversified more risk than other sector than finance company and insurance company.
9. The combination of HBL and NBL has diversified more risk i.e. 69.69 percent among all combination of the firms under banks.
10. Under finance companies ACFC and NFC has reduced more risk i.e. 56.57 percent than all combination of the firms.
11. HGIC and UIC have decreased high risk i.e. 42.67 percent than other combination of firms under insurance companies.
12. The standard deviation decreased as the number of securities increases.

b) On the basis of Return on Equity

1. SCBL has better financial performance among sample banks because it has highest mean return with lowest risk.
2. ACFC has highest return with highest risk and AFC has second highest return with lowest risk, so AFC is better finance company.
3. Among the insurance companies HGIC is better performer because it has highest return with lowest risk.
4. SCBL has highest mean return with lowest standard deviation and coefficient of variation which shows better financial performance among selected financial institutions.
5. The portfolio risk reduced all the combination of firms and portfolio return increased in all combination of firms except HBL and SBI, HBL and NIBL, and SBI and NBL. Among them the combination of SBI and SCBL, NBL and SCBL, and SCBL and NIBL are better for investing in portfolio with lower risk and higher return.
6. The combination of AFC and ACFC is better for investing in portfolio with lower level risk and medium level return. The portfolio risk diversified in all combination of firms. And portfolio return increased in six combinations of firms under finance companies.
7. Under insurance company the portfolio risk diversified and portfolio return increased in all combination of the firms. HGIC and PIC is better for investing in portfolio with lower level of risk and medium level of return.
8. The portfolio risk diversified more in finance companies, banks and insurance companies respectively.
9. HBL and SCBL have diversified more risk i.e. 93.23 percent than other combination of firms under bank.
10. Under finance company AFC and ACFC has decreased more risk i.e. 86.90 percent among all the combination.
11. HGIC and PIC has diversified more risk i.e. 51.83 percent than other combination of firms under insurance companies.
12. As the number of securities increased the standard deviation or risk decreased.

CHAPTER -5

SUMMARY CONCLUSION AND RECOMMENDATIONS

5.1 Summary and Conclusions

The investment decision is one of the important part of financial management, it concerns with the determination of optimal investment project to maximize share holder wealth. Determination of optimal portfolio of assets with rational evaluation of each alternatives they involve risk and return. Investor always wants to secure a higher level of return with lower level of risk. Portfolio theory states that risk can be diversified by investing in different assets. The risk derives from the total investment by investing in portfolio of assets is less than the risk derives from the total investing in single assets. Investor want to secure a higher return should also assume a high risk and assuming lower risk they should remain satisfied with lower return. This depicts that there is positive relationship between risk and return. On the basis of this assumption that is the risk can be diversified by investing in portfolio of assets and there is positive relationship between risk and return some models such as portfolio selection model, capital assets pricing model have emerged but still there is a lack of knowledge about the diversified of portfolio risk and the relationship between risk and return with reference 13 Nepalese financial companies randomly selected from there sector i.e. bank, finance company and insurance company. The study was conducted to analysis the risk and return in Nepalese financial institutions. And sub objective are as follows

1. To exam the risk and return of Nepalese Financial Institutions.
2. To examine risk can be diversified by investing in portfolio.

This study has used both ratio analysis and statistical tools. In ratio analysis returns on assets (ROA) and return on equity (ROE) where compute to present profitability ratios in statistical tools arithmetic mean, standard deviation, coefficient of variation. To calculate the profitability ratio and other measures

published financial statement on the sample companies where obtained from Nepal stock exchange through internet website www.nepal stock. Com and securities board of Nepal. The financial statement of the year 2000/01 to 2004/05 was used in the present study. Although this study is descriptive as well as analytical under this assumption this study involves portfolio risk and return of different financial institutions, risk and return of different financial institution, diversification of risk. Risk and return on different financial institutions present single asset risk and return by arithmetic mean, standard deviation and coefficient of variation. Portfolio risk and return presents two or more than two assets portfolio risk and return by investing in portfolio. Diversification of risk present as the number of securities increased the portfolio risk decreases.

Major Findings

Based on the analysis and interpretations made of chapter 4, the following finding have been drawn which are summarize below.

a) On the basis of Return on Assets

1. Among selected banks SCBL has higher return with lowest risk per unit. While SBI has lowest return which highest risk per unit. It means SCBL has better financial performance on the basis of return on assets. It is similar to Mustafa (2003) study.
2. AFC has highest mean return with lowest risk per unit where as PFC has lowest mean return with highest risk per unit among the sample finance companies during the sample period. AFC is better finance company who desires highest return with lowest risk. This finding is consistent with portfolio theory.
3. The return of HGIC is highest and UIC is lowest. The risk per unit of HGIC is lowest and UIC is highest during the sample period. It presents investing in HGIC is better who prefer highest return with lowest risk per unit. This finding is similar to Markowitz (1952) study.

4. HGIC has better financial performance among all financial institutions because it has highest return with lowest risk per unit. It is same as Thapa (2003) study.
5. Investing in the combination of firms NBL and SCBL is better for investing in portfolio because it provides highest portfolio return. Invests in UIC and PIC is the best who are risk seeker. This finding is consistent with portfolio theory.
6. Those people who wants to invest in portfolio, banking sector is the best because it has diversified more risk than other sector which is related to Acharaya (2004) study.
7. Among sample banks the combination of HBL and NBL has reduced more risk than other combination of the firms.
8. ACFC and NFC have diversified more risk than other combination of the firms under finance companies.
9. The combination of firms under insurance companies HGIC and UIC has diversified more risk than other.
10. There is negative correlation between standard deviation and number of securities. This is similar to Wagner and Lau's (1971) study.
11. The portfolio risk of finance institutions is less than average risk of financial institution which is similar to Chhetry (2003) study.

b) On the basis of Return on Equity

1. The risk of SBI is highest and SCBL is lowest. The return of SBI is lowest and SCBL is highest during the sample period in sample banks. It shows SCBL is better among sample banks. This is similar to Basnet (2002) study.
2. ACFC is better finance company to them who are risk seeker because it has highest return with highest risk among sample finance companies. It is same as Chhetry (2003) study.
3. To invest in insurance companies HGIC is the best among sample companies because it provides highest mean return which lowest risk. This finding is related with portfolio theory.

4. SCBL has better financial performance among selected financial institution which has highest return with lowest risk. It is similar to Upadhyay (2001) study.
5. The combination of firms SBI and SCBL, NBL and SCBL, and SCBL and NIBL are better for investing in portfolio under banks because they have higher return with lower risk. It is also consistent with Markowitz portfolio selection model.
6. The portfolio risk of the combination AFC and ACFC is better for those people who are risk averter because it has level of risk with medium level of return among the combination of sample finance companies.
7. The combination of firms HGIC and UIC has moderate risk with highest return. HGIC and PIC has lowest risk with moderate return. And UIC and PIC has lowest return with highest return. Those people who prefer natural risk HGIC and UIC is better investing in portfolio.
8. The portfolio risk is more diversified in finance companies than other finance companies institutions therefore those people who desire to diversified risk it is better to invest in finance companies. It is similar to Poudel (2004) study.
9. AFC and ACFC have diversified high risk than other combination of banks. It is also consistent which portfolio theory.
10. HGIC and PIC has decreased more risk than other combination of firms under insurance companies.
11. In case of number of securities increased the standard deviation decreased or diversification of fund by making portfolio can reduce the risk of individual security which is similar to Pants (2004) study.

Conclusions

The result of risk and return analysis lead to four important conclusions, first the risk of the five banks is found to be diversified. The portfolio risk is less than the

average risk of five banks based on return on assets and return on equity. Second, in case of finance companies too the portfolio theory is application. Here, the portfolio risks of combined five banks are less than the average risk derived from return on assets and return on equity. In other words four finance companies also the portfolio risk can be diversified. Third, among insurance companies also the portfolio theory is also applicable. It presents the portfolio of risk is diversified under returns on assets and return on equity. Finally, the correlation of coefficient of risk and return of the firms under banks, finance companies and insurance companies is negatively correlated each in two portfolio ratio return on asset and return on equity.

From the above result of portfolio analysis, it can be observed that the portfolio management is case of randomly selected firms under banks, finance companies, insurance companies are positive. In other words in case of Nepalese finance institutions too, the portfolio risk can be diversified. It is one of the positive factors in case of Nepal's capital market. Through the capital market of Nepal is not so development, the portfolio risk is diversified.

5.2 Recommendations

Based on the analysis of data major finding and conclusions of the study the followings suggestions and recommendations are prescribed to improve the present financial portfolio position of Nepalese financial institutions.

1. The return on assets ratio of SBI is lowest among the five sample banks. So SBI is recommended increase to net profit to get best performance.
2. KFC, PFC and NFC under finance companies shows the least return on assets. To increase the ratio KFC, PFC and NFC should manage its assets and the same time net profit should be increased by reducing operating as well as none operating expenses.

3. Under insurance companies UIC has the lowest return on assets. So it is suggested to increase its return on assets, the assets management and cost management should be primarily improved.
4. The return on equity ratio of SBL and NIBL is lowest among the sample banks. So SBL and NIBL is recommended to manage share capital, share holders reserve and increase net profit to achieve best financial performance.
5. In terms of finance company KFC and NFC has lower return on equity. To improve its return on equity net profit should be increased by reducing operating and non operating expenses.
6. UIC has lowest return on equity among sample insurance companies it is suggested to increase net profit to improve its financial position.
7. To the various financial institutions one of the major weakness are inefficient management system, low productive, lack of transparency and slow decision making because of that cased low return with high risk. Hence such types of financial institutions are recommended to change their policy and strategy to make quick decision.
8. This study suggests constructing an efficient portfolio to minimize risk and get sustainable future expected returns. Investors have to choose those assets which have higher returns, minimum proportions of systematic risk, negative correlation to make efficient portfolio among the securities in the market.
9. 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. But portfolio construction is a dynamic job because efficient portfolio depends on market movement or socio portfolio change. For the portfolio construction selected the firms that have higher return with negative correlative firm.

5.3 Future Guidelines

After presenting the summary and conclusions, major finding and recommendations, it is essential to provide some suggestions for future research. Although this study is concern with risk and return analysis it may be appropriate to provide a package of suggestions, which will be more helpful to improve existing condition, which are as follows.

1. In case of additional of more years, more data, the result will be better.
2. To get greater inside into the effect of portfolio management no of companies should be increase.
3. Laws, regulations, and advanced technology should be followed for better financial performance.
4. With the use of different method of analysis more satisfactory result will be get.
5. Study of international companies would be better.

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Annex 'A'

List of variable used in portfolio analysis of 13 institutions with 65 observations relating to net income, net worth and total assets of the period of

2001/2002 to 2005/2006

S.N.	Es.	year	Net income	Net worth	Total assets
1	HBL	2001/2002	235.02	858.11	20672.43
2	HBL	2002/2003	212.13	1063.13	23279.34
3	HBL	2003/2004	263.05	1324.17	1324.17
4	HBL	2004/2005	308	239.59	27418.16
5	HBL	2005/2006	457	228.72	29460.39
6	SBI	2001/2002	50.07	224.94	5164.52
7	SBI	2002/2003	12.49	238.57	7385.28
8	SBI	2003/2004	40.84	560.34	7021.14
9	SBI	2004/2005	48.75	569.58	7566.33
10	SBI	2005/2006	60.85	626.64	8440.41
11	NBL	2001/2002	271.64	1146.42	17629.25
12	NBL	2002/2003	416.24	1314.18	16562.62
13	NBL	2003/2004	455.32	1481.68	16745.49
14	NBL	2004/2005	520	1658	171863.31
15	NBL	2005/2006	635.3	1875	22329.97
16	SCBL	2001/2002	479.21	1235.48	18443.11
17	SCBL	2002/2003	506.93	1368.91	21000.50
18	SCBL	2003/2004	537.80	1495.70	23642.06
19	SCBL	2004/2005	502.50	1582	287816.79
20	SCBL	2005/2006	539.51	1754	257763.32
21	NIB	2001/2002	57.11	523.46	4973.89
22	NIB	2002/2003	116.82	636.54	9014.25
23	NIB	2003/2004	152.67	729.04	13255.50
24	NIB	2004/2005	232	1179.46	16063.54
25	NIB	2005/2006	351	1417.33	21330.14
26	AFC	2001/2002	8.87	30.45	314.08
27	AFC	2002/2003	14.13	41.65	359.54
28	AFC	2003/2004	14	51.61	418.39
29	AFC	2004/2005	13.43	62.64	546.07
30	AFC	2005/2006	21.11	95.28	766.74

31	PFC	2001/2002	10.48	48.38	414.04
32	PFC	2002/2003	11.84	51.96	485.18
33	PFC	2003/2004	5.75	53.27	533.66
34	PFC	2004/2005	21.27	63.24	567.84
35	PFC	2005/2006	12.06	63.45	685.97
36	ACFC	2001/2002	24.47	57.30	722.03
37	ACFC	2002/2003	31.53	59.58	742.68
38	ACFC	2003/2004	5.76	105.29	918.22
39	ACFC	2004/2005	25.96	115.15	1025.09
40	ACFC	2005/2006	26.50	120.76	1009.02
41	KFC	2001/2002	6.25	25.61	193
42	KFC	2002/2003	7.51	28.51	253.87
43	KFC	2003/2004	7.41	33.93	300.21
44	KFC	2004/2005	6.77	30.98	325.75
45	KFC	2005/2006	0.83	41	346.14
46	NFC	2001/2002	19.18	73.10	752.07
47	NFC	2002/2003	20.16	83.23	821.09
48	NFC	2003/2004	16.71	87.54	727.47
49	NFC	2004/2005	10.72	92.24	671.50
50	NFC	2005/2006	15.17	91.02	670.48
51	HGIC	2001/2002	7.99	48.52	84.18
52	HGIC	2002/2003	9.09	59.32	127.09
53	HGIC	2003/2004	7.65	60.53	110.14
54	HGIC	2004/2005	11.52	75.16	130.06
55	HGIC	2005/2006	11.96	70.47	146.51
56	UIC	2001/2002	11.17	91.57	127.28
57	UIC	2002/2003	8.86	99.37	125.22
58	UIC	2003/2004	8.88	103.81	126.40
59	UIC	2004/2005	3.38	91.95	129.88
60	UIC	2005/2006	7.01	95.14	152.75
61	PIC	2001/2002	5.91	49.01	74.98
62	PIC	2002/2003	8.21	55.99	89.66
63	PIC	2003/2004	8.62	64.13	108.32
64	PIC	2004/2005	5.97	69.37	120.18
65	PIC	2005/2006	7.54	80.37	151.34

Source;- Webpage on NEPSE Ltd. http://www.nepal stock.com

Annex- 'B'

Calculation of mean, standard deviation, coefficient of variation, correlation coefficients, optimal weight, portfolio risk and return under Return on assets

Return on assets of HBL in 2001/2002

$$(\text{ROA}_{\text{HBL in 2001/2002}}) = \frac{\text{Net incom}}{\text{Total Assets}}$$

$$(ROA_{HBL in 2001/2002}) = \frac{235.02}{20672.43}$$

$$(\text{ROA}_{\text{HBL in 2001/2002}}) = 0.01256 \text{ or } 1.26\% \text{ and so on.}$$

Arithmetic mean of HBL

$$(\bar{X}_{\text{HBL}}) = \frac{\sum x}{N}$$

$$(\bar{X}_{\text{HBL}}) = \frac{1.26+1.43+1.14+0.91+1.06}{5}$$

$$(\bar{X}_{\text{HBL}}) = 1.16\% \text{ and so on}$$

Standard deviation of HBL

$$(\sigma\text{HBL}) = \frac{\sum(x-\bar{x})^2}{N}$$

$$(\sigma\text{HBL}) = \frac{0.1558}{5}$$

$$(\sigma\text{HBL}) = 0.180 \text{ and so on}$$

Coefficient of variation of HBL

$$(\text{C.V.}_{\text{HBL}}) = \frac{\sigma}{\bar{X}}$$

$$(\text{C.V.}_{\text{HBL}}) = \frac{0.18}{1.16}$$

$$(\text{C.V.}_{\text{HBL}}) = 0.155 \text{ and so on}$$

Correlation Coefficient between HBL and SBI

$$(r_{\text{HBL,SBI}}) = \frac{\text{Cov(HBL,SBI)}}{\sigma\text{HBL}, \sigma\text{SBI}}$$

Covariance of HBL, and SBI

$$(\text{COV}_{\text{HBL,SBI}}) = \frac{\Sigma\left(X_{\text{HBL}} \times \bar{X}_{\text{HBI}}\right)\left(X_{\text{HBI}} \times \bar{X}_{\text{SBI}}\right)}{N}$$

$$(\text{Cov.}_{\text{HBL, SBI}}) = \frac{0.09974}{5}$$

$$(\text{Cov.}_{\text{HBL, SBI}}) = -0.20 \text{ and so on}$$

$$(r_{\text{HBL,SBI}}) = \frac{-0.019948}{0.1765 \times 0.2623}$$

$$(r_{\text{HBL,SBI}}) = -0.4309 \text{ and so on.}$$

Optimal weight of HBL

$$(W_{\text{HBL}}) = \frac{\sigma^2_{\text{SBI}} - \text{Cov}_{\text{HBLSBI}}}{\sigma^2_{\text{SBI}} - 2\text{Cov}_{\text{HBL,SBI}}}$$

$$(W_{\text{HBL}}) = \frac{0.26^2 - (-0.020)}{0.18^2 + 0.26^2 - 2(-0.020)}$$

$$(W_{\text{HBL}}) = 0.6257 \text{ or } 6\% \text{ and so on.}$$

Weight of SBI

$(W_{SBI}) = 1 - W_{HBL}$

$(W_{SBI}) = 1 - 0.6257$

$(W_{SBI}) = 0.3746$ or 37.43% and so on.

Return or portfolio of HBL and SBI

$r_p = W_{HBL} \times \bar{X}_{HBL} \times \bar{X}_{SBI}$

$r_P = 0.62 \times 1.16 + 0.37 \times 0.62$

$r_p = 0.948$ and so on.

Standard deviation of HBL and SBI on portfolio.

$$\sigma p = \sqrt{W_{\text{HBL}}{}^2 \sigma_{\text{SBI}}{}^2 + W_{\text{SBI}}{}^2 \sigma_{\text{SBI}}{}^2 + 2\text{Cov}_{\text{HBL,SBI}} \times W_{\text{HBL}} \times W_{\text{SBI}}}$$

$$\sigma p = \sqrt{0.62^2 \times 0.18^2 + 0.37^2 \times 0.26^2 + 2(-0.020) \times 0.6 \times 0.37}$$

$\sigma p = 0.1132$ and so on.

List of mean, standard deviation and coefficient of variation

S. N	Name of Financial institution	Return on Assets					Mean	S.D	C.V
		2001/02	2002/03	2003/04	2004/05	2005/2006			
1	HBL	1.26	1.43	1.14	0.91	1.06	1.16	0.18	0.15
2	SIB	0.98	0.17	0.58	0.64	0.72	0.62	0.26	0.42
3	NBL	2.14	1.54	1.54	2.51	2.71	2.09	0.48	0.23
4	SCBL	2.33	2.33	2.60	2.41	2.27	3.39	0.12	0.05
5	NIBL	1.91	1.10	1.15	1.30	1.15	1.32	0.30	0.23
6	AFC	2.82	3.93	3.35	2.46	2.75	3.06	0.52	0.17
7	PFC	2.53	2.44	1.08	3.74	1.76	2.31	0.89	0.38
8	ACFC	3.39	4.25	0.63	2.53	2.63	2.69	1.20	0.45
9	KFC	3.23	2.96	2.47	2.08	0.24	2.20	1.06	0.48
10	NFC	2.55	2.46	2.30	1.60	2.26	2.23	0.33	0.16
11	HGIC	9.49	7.15	6.95	8.86	8.16	8.12	0.97	0.12
12	UIC	8.78	7.08	7.03	2.60	4.59	6.02	2.17	0.36
13	PIC	7.88	9.16	7.96	4.97	4.98	6.99	1.71	0.24

List of variable used in portfolio analysis

Combination of firms	Correlation	Weight 1 (%)	Weight 2 (%)	Average return (%)	Portfolio Return (%)	Average Risk (%)	Portfolio Risk %)
HBL and SBI	-0.43	62.57	37.43	0.88	0.95	0.22	0.11
HBL and NBL	-0.64	76.78	23.42	1.62	1.37	0.33	0.10
HBL and SCBL	-0.19	30.59	69.41	1.77	2.01	0.14	0.08
HBL and NIBL	-0.03	72.79	27.20	1.24	1.20	0.24	0.15
SBI and NBL	0.54	107	-7	1.35	0.60	0.37	0.25
SBI and SCBL	0.09	17.54	82.96	1.50	2.07	0.18	0.09
SBI and NIBL	0.26	34.57	65.43	0.97	1.02	0.28	0.17
NBL and SCBL	-0.54	14.15	85.84	2.23	2.34	0.29	0.07
NBL and NIBL	0.17	24.04	75.96	1.70	1.50	0.39	0.27
SCBL and NIBL	-0.21	83.20	16.79	1.85	2.21	0.20	0.09
AFC and PFC	-0.42	67.91	32.09	2.68	2.82	0.70	0.34
AFC and ACFC	0.22	90.96	9.04	2.87	3.02	0.86	0.68
AFC and KFC	0.42	84.92	15.08	2.62	2.93	0.79	0.52
AFC and NFC	0.58	5.12	94.88	2.64	2.27	0.42	0.33
PFC and ACFC	0.50	78.07	21.93	2.49	2.39	1.04	0.85
PFC and KFC	0.19	61.54	38.46	2.25	2.46	0.97	0.74
PFC and NFC	-0.6	13.74	86.26	2.27	2.24	0.61	0.30
ACFC and KFC	0.23	41.96	58.05	2.44	2.40	1.13	0.88
ACFC and NFC	0.16	3.08	96.92	2.46	2.24	0.76	0.33
KFC and NFC	0.22	3.06	96.94	2.21	2.23	0.69	0.33
HGIC and UIC	-0.19	93.57	6.43	7.06	8.02	1.57	0.90
HGIC and PIC	-0.43	90.63	9.37	7.55	8.01	1.33	0.96
UIC and PIC	0.83	-13.66	113.66	6.50	7.12	1.93	1.65

Annex 'C'

Calculation of mean, standard deviation correlation coefficient, optimal weight, portfolio risk and return under Return on Equity.

Return on Equity of HBL in 2001/2002

$$(\text{ROE}_{\text{HBL in 2001/2002}}) = \frac{\text{Net income}}{\text{Net worth}}$$

$$(ROE_{HBL\text{ in }2001/2002}) = \frac{235.02}{858.02}$$

$(\text{ROF}_{\text{ HBI IN 2001/2002}})$ = 0.379 OR 37.90% and so on.

Arithmetic mean of HBL

$$\left(\overline{X}_{HBL}\right) = \frac{\sum X}{N}$$

$$\left(\overline{X}_{HBL}\right) = \frac{37.90 + 38.95 + 27.38 + 19.95 + 19.87}{5}$$

$\left(\overline{X}_{HBL}\right)$=28.81% and so on.

Standard deviation of HBL

$$(\sigma_{HBL}) = \frac{\sum\left(X - \overline{X}\right)^2}{N}$$

$$(\sigma_{HBL}) = \frac{345.91}{5}$$

(σ_{HBL}) = 8.32 and so on.

Coefficient of variation of HBL

$$\left(C.V._{HBL}\right) = \frac{\sigma_{HBL}}{\overline{X}_{HBL}}$$

$$\left(C.V._{HBL}\right) = \frac{8.32}{28.81}$$

$(C.V._{HBL})$ = 0.288 and so on.

Correlation coefficient between HBL and SBI

$$\left(r_{HBL}\right) = \frac{Cov.(HBI, SBI}{\sigma_{HBL} \times SBI}$$

$$r_{HBL} = \frac{25.04}{8.32 \times 6.01}$$

r_{HBI} = 0.50 and so on.

Covariance of HBL and SBI

$$\left(\text{Cov}_{\text{HBL,SBI}}\right) = \frac{\sum(X_{\text{HBL}} - \overline{X}_{\text{HBI}})(X_{\text{SBI}} - \overline{X}_{\text{SBI}}}{N}$$

$$\left(\text{Cov}_{\text{HBL,SBI}}\right) = \frac{125.21}{5}$$

$(\text{Cov.}_{\text{HBL, SBI}}) = 25.04$ and so on.

Optimal weight of HBL

$$(W_{\text{HBL}}) = \frac{\sigma^2_{\text{SBI}} - \text{Cov}_{\text{HBL,SBI}}}{\sigma^2_{\text{HBL}} + \sigma^2 - \text{Cov}_{\text{HBL,SBI}}}$$

$$(W_{\text{HBL}}) = \frac{6.01^2 - (25.04)}{8.32^2 + 6.01^2 - 2(25.04)}$$

$(W_{\text{HBL}}) = 0.2004$ and so on.

Optimal weight of SBI

$(W_{\text{SBI}}) = 1\text{-}W_{\text{HBL}}$

$(W_{\text{SBI}}) = 1.02004$

$(W_{\text{SBI}}) = 0.\ 7996$ and so on.

Return on portfolio of HBL and SBI

$r_p = W_{\text{HBL}} \times \overline{X}_{\text{HBL}} + W_{\text{SBI}} \times \overline{X}_{\text{SBI}}$

$r_P = 0.2004 \times 28.81 + 0.7996 \times 0.61$

$r_P = 14.256$ and so on.

Standard deviation on portfolio of HBL and SBI

$$\sigma p = \sqrt{W_{\text{HBL}}{}^2\, \sigma_{\text{SBI}}{}^2 + W_{\text{SBI}}{}^2 \sigma_{\text{SBI}}{}^2 + 2\text{Cov}_{\text{HBL,SBI}} \times W_{\text{HBL}} \times W_{\text{SBI}}}$$

$$\sigma p = \sqrt{8.32^2 \times 0.2005^2 + 6.01^2 \times 0.7996^2 + 2 \times 25.04 \times 0.2004 \times 0.7996}$$

$(\sigma_p) = 5.82166$ and so on.

List of mean standard deviation and coefficient of variation

S. N	Name of Financial institution	Return on Equity					Mean	S.D	C.V
		2001/02	2002/03	2003/04	2004/05	2005/06			
1	HBL	37.90	38.95	27.38	19.95	19.87	28.81	8.32	0.29
2	SIB	22.26	5.24	7.29	8.55	9.71	10.16	6.01	0.57
3	NBL	33.44	27.41	23.69	31.67	30.73	29.39	3.45	0.12
4	SCBL	38.68	38.74	38.79	37.03	35.95	37.83	1.15	0.03
5	NIBL	17.71	12.02	10.91	18.30	20.94	15.97	3.85	0.24
6	AFC	29.12	33.93	27.13	21.44	22.16	26.76	4.62	0.17
7	PFC	21.66	22.78	10.79	33.63	19.01	21.57	7.34	0.34
8	ACFC	42.70	52.92	5.47	22.54	21.94	29.11	16.76	0.57
9	KFC	24.40	26.34	21.83	21.85	2.02	19.29	8.08	0.45
10	NFC	26.23	24.22	19.09	11.62	16.67	19.56	7.42	0.27
11	HGIC	16.47	15.32	12.64	15.33	16.97	15.35	1.49	0.09
12	UIC	12.20	8.92	8.55	3.68	7.37	8.14	2.75	0.34
13	PIC	12.06	14.66	13.44	8.60	9.38	11.62	2.32	0.20

List of variable used in portfolio analysis

Combination of firms	Correl ation	Weight 1(%)	Weight 2 (%)	Average return (%)	Portfolio Return (%)	Average Risk (%)	Portfolio Risk %)
HBL and SBI	0.50	0.20	0.79	19.71	14.26	7.16	5.82
HBL and NBL	0.46	-0.02	1.02	29.09	29.40	5.89	3.44
HBL and SCBL	0.62	-0.08	1.08	33.32	38.55	4.73	0.32
HBL and NIBL	-0.10	0.20	0.79	22.39	18.55	6.09	3.34
SBI and NBL	0.59	1.08	-0.02	20	10.29	4.73	3.36
SBI and SCBL	0.15	0.01	0.99	24.22	37.61	6.09	1.14
SBI and NIBL	0.42	0.16	0.84	13.29	15.78	4.73	3.75
NBL and SCBL	-0.41	0.18	0.82	33.61	36.32	3.58	0.88
NBL and NIBL	0.83	0.82	0.18	22.68	26.92	4.93	3.43
SCBL and NIBL	-0.87	0.78	0.22	26.90	33.13	2.30	0.43
AFC and PFC	-0.28	0.67	0.33	24.16	25.12	3.66	3.34
AFC and ACFC	0.67	1.15	-0.15	27.94	26.39	2.50	1.39
AFC and KFC	0.64	1.09	-0.09	23.02	27.47	5.97	3.80
AFC and NFC	0.61	0.98	0.01	23.16	26.67	10.68	4.60
PFC and ACFC	0.36	0.96	0.04	25.34	21.84	6.66	7.29
PFC and KFC	0.17	0.61	0.39	20.43	20.67	6.02	6.08
PFC and NFC	-0.28	0.50	0.49	20.56	20.57	12.05	4.41
ACFC and KFC	0.61	-0.07	1.07	24.20	18.56	8.03	8.47
ACFC and NFC	0.46	-0.01	1.01	24.34	19.47	7.38	7.41
KFC and NFC	0.29	0.38	0.62	19.43	19.46	12.74	6.41
HGIC and UIC	0.23	0.84	0.16	11.75	14.17	12.09	1.42
HGIC and PIC	-0.47	0.65	0.35	13.48	14.03	8.07	0.92
UIC and PIC	0.16	0.28	0.72	9.88	10.65	2.12	2.23