CHAPTER-1

INTRODUCTION

1.1 General Background

Nepal is a developing country struggling with current state of Nepalese economy. The economy is characterized by unutilized natural resources mass economy, illiteracy, miserable agriculture, deficit trade, and so on. Although agriculture is the main livelihood, scientific method of agriculture has not yet been implemented. Although it is one of the richest countries in the world in terms of natural resources, it should not utilize effectively. Its economy is unbecoming not because of lack of resources but inefficient utilization of resources, therefore, the proper plan and strategy should be developed for the efficient utilization of resources to enhance the growth of economy. The natural resources available here have remained unutilized due to various reasons. The living standard of people is very low poverty; misery and conflict are existed all around. While the country has been moving towards a market oriented economy since early 1990's frequent changes in government have hampered the realization of policy reform and delayed the implementation of development projects. It not only depends on availability of fund to fulfill the need of government and businesses but also of individuals. The private domestic investment is very essential for the economic growth as well as for employment generation for the developing country. The healthy economy can be made only through resource mobilization which is possible by the efficient collection of the scattered capital of the people and transfer of these capitals to the firms and individual who are in need to make investment on productive sector. Resource mobilization won't be fruitful only by collecting the scattered resources and making investment. For this, proper investment should be made for its productivity. Here investment management plays significant role.

In today's market consumers are treated as king and consumers are now quality oriented and they prefer qualities goods. Technological changes has made easier to give many new and surprising materials to the market. Organizations that do not have new Technology cannot compete in the market. But technologies are very costly, so on organization should

raise enough money to get the new technologies. Business institution if it is sole generally does not dare to get the funds finances because it is very risky for a single person to bear unlimited liability; single person rarely has enough money to invest also. So business organizations are generally limited companies with many shareholders or sometime partnership firm. Partnership firms also many times can't manage funds so in modern business, public limited companies are one and only one the alternate for investing huge amounts, advent of security market has successfully served the pubic limited companies to raise funds and then invest on the business. Every shareholder has limited liability up to his ownership amount only or the amount of shares he holds. Rest of the financing may be from financial institutions line Banks, Finance Companies etc.

Investment is differentiated with gambling, as it is the systematic and scientific way of using the excess fund to get the maximum return at minimum level of risk. Present investment is contribution to the future return. Investment if systematic and scientific way of using excess fund from income to gain expected return bearing lower level of risk. Common definition says that contribution of present value for future value if investment or it is search of certainty within the uncertainty. An investment is a commitment of money that expects to generate additional money. Every investment entails some degree of risk. It requires a present sacrifice for a future uncertain benefit. What motivates a person or an organization to buy securities, rather than spending their money immediately? The most common answer is saving. Another motivating issue is desire to increase wealth, i.e. make money grew. Sometimes, the desire to become wealthy can make you willing to take big risks. The simplest meaning of the investment is to employ available fund to generate more money in future. When investors make an investment, they expect the positive returns for bearing the certain level of risk. No one can get return without bearing risk. The investors said to be rational only when they earn maximum return at minimum risk. So risk and returns are the key factors to be considered while making investment. In order to minimize the risk at the given rate of return, rational investors invest in collection of investment securities called portfolio. Investors should have sound knowledge of portfolio management. Investment made in securities with different risk and return characteristics

helps to diversify the risk by compensating loss occurred in one security by the return in another security. Portfolio is a financial tool of diversifying the risk.

A portfolio usually defined as a combination of assets or a collection of securities. Portfolio means the list of holdings in securities owned by an investor or institution (oxford dictionary-new edition 1997). "A portfolio simply represents the practice among the investors of having their fund in more than one asset. The combination of investment assets is called portfolio. A portfolio is a collection of investment securities, portfolio theory deals with the selection of optimal portfolios, that is, portfolios that provides the highest possible return for any specified degree of risk or the lowest possible risk for any specified rate o return" *(Western and Copeland; 1992:4).*

1.1.1 Finance Companies in Nepal:

The Nepalese economy is based on agriculture, which accounts about 40 percent of the total GDP. About 80 percent of the total population is primarily engaged in agricultural sector. It still remains as one of the least developed countries with per capita GNP of US $ 210 (1998) *(Upreti; 2000:2).*

"An improved financial system fosters the efficient mobilization of domestic Savings and allocated resources to their optimum use. The financial institutions help to mobilize savings by issuing instruments as desired by the savers. Financial deepening, in its narrow sense; is the creation of more instruments, institutions and markets" (*Rimal; 1996:101).*

"In Nepal, the concept of financial institution was introduced when the first financial institution, Industrial Development Center was established in 1957. Later it was converted in Nepal Industrial Development Corporation in 1959 by special charter. Then after three financial institutions are established in 1992 under the company act 1964. They are NIDC Capital Market Ltd., Nepal Finance and Saving Co. Ld. And National Finance Co. Ltd. Subsequently various financial institutions are established after then. And the people's participation in security investment and stock trading is increasing unexpectedly. Even

though the investor does not have enough knowledge to invest in security" *(Upreti; 2000:4).*

As in case of other countries, the Nepalese financial system can be divided into two parts-banking and non-banking financial systems. The banking system comprises of central bank. Commercial banks and Development banks. The non-bank financial system comprises of Finance companies, cooperatives, Non Governmental Organizations are licensed to carry out financial business by the central bank. Beside these institutions, contractual saving institutions (Employees' Provident Fund, Insurance companies and Citizen Investment Trust), Credit Guarantee Corporation, Nepal Stock Exchange and Postal Saving System are also the activate participants in the Financial System *(Nepal Rastra Bank, Bank and Financial Institution Regulation Department).*

Economic status of our country is growing very slowly and Nepal is known as a very poor country all over the world. Development of financial institutions as mentioned above is essential for the rapid economic development of the country. Although, being an agricultural dependent country, the non-agricultural sectors should be given priority. This will help not only to solve the problems of employment but also in the economic development of the nation. Only the establishment of industry is not sufficient but successful operation is also necessary. For successful operation, every industry and organization needs finance. The success and failure of business and industry widely depends on the crucial decisions made by the top management relating to the management of fund. Capital structure decision is one of the most crucial complex areas of financial decision making area relating to the management of fund, due to its interrelationship with other financial decision variables.

A financial institution collects the funds in term of deposits and extends loan and advances to various sectors. The main sources of funds besides equities are saving and time deposit collection and issuance of debentures. The collected funds or sources are invested in those areas, which are generally ignored by the commercial banks (i.e. housing finance,

consumption loans etc). Therefore, finance company can be considered as complimentary to commercial banks.

In the Nepalese context, non-banking financial institutions include all the financial institutions except commercial banks and development banks. They include finance companies, insurance companies and other similar institutions directly or indirectly involved in mobilizing financial resources. This study will try to confine discussing, particularly, on non-banking finance companies, operating in Nepal and will not approach to discuss other form of such institutions.

Simply, Finance Company means an institution dealing with non-banking activities. It is established with the objective of collecting the scattered capital in purchase of consumer's durables. They specialize in consumer lending to individuals and secured lending to business. The power is called consumer finance and the latter called commercial finance companies. They also include other types of lending-financing for example leasing finance, home equity loans for hire purchase, etc.

In Nepal, non-banking sector has noticed market growth in recent years in terms of their numbers and deposit base due to the competitive and dynamic financial system. Considering the lending importance of finance companies and being the part of financial system, NRB has framed suitable policies for their establishment.

Especially after economic liberalization in the country increment in financial services as an essential part of the financial system and accordingly it focus its attention to ensure that: Finance companies on their business in conformity with overall framework of monetary and credit policy.

They function on second, solvent and healthy ways in order to be at the position to meet their liabilities to the depositors and there creditors as when the claims occurred. In past, there were few banks like NBL, RBB and NRB as the major bank of Nepal, so there was lack of practice in a banking field so HMG introduced the concept of finance company

just half of decade ago. Within this short period of time, there has been number of finance companies established for the economic development of country. HMG brought 'Bitta Company A in 2042' and first finance Company "Nepal Finance and Saving Company Limited" established in the year 2049 *(www.nrb.gov.np).*

At present nearly 78 numbers of the finance companies are operating in Nepal. Most of them are engaged in the hire purchase finance either for vehicle or for consumer appliances. These companies lend money to people who promise to repay the loan with interest over a specified period of time. Burrowers are required to offer some guarantee against the loan they get such as loan on their salary or personal possession. Besides lending money, they also accept deposits from the general public. Certain rate of interest is provided to the customer for the deposit made in the company. These deposits are invested. They lend same money in higher interest and paying lower interest so that they manage to make some profit to distribute divided to the shareholders.

Finance company is specialized financial institution that supplies credit for the purchase of consumer goods and services by purchasing the time-sales contracts of merchants by granting small loans directly to consumers. The finance companies also play crucial role as a broker of the loan able funds. The act as the intermediaries between the ultimate savers and ultimate investors. These institutions have a number of economics of specialization and scale in mobilization of saving ad making investments.

1.1.2 Major Activities Performed by Finance Companies are:

Fund Based Activities

- Leasing and hire purchase
- Bill discounting
- Loans
- Floating mutual funds

Non-Funds Based Activities

Investment management, portfolio management, services for individuals and corporation, insure management, underwriting, trust receipt, arranging trading market for buying and selling securities, private placement of shares and Debentures, etc.

In practice, most of the finance companies are funds based. Finance companies are also important player in 'Nepali Capital Market' investing over 10% of their funds in shares and government bonds.

Under the present regulatory regime, the NRB's non-banking operating unit supervises the finance companies in perspective of their activities are deposit taken and lender. The finance companies have to be registered with the security bond and Nepal Stock Exchange. They have to provide related financial information to central bank regularly.

The main activity of finance company is to approve deposit and invest same amount as loan. However, it has also been investing in the following activities.

- Government securities
- Share and debentures of company
- Stock in trade

To eliminate the risk and enjoy the return the investor should follow the systematic investment process. "The investment process describes how an investor makes decisions about what securities to invest in, how extensive these investment should be, and when they should be made. A five-step procedure for making the decision forms the basis of the investment process" (*Sharpe, et al; 1995:177).*

The first step of the investment process is to set the investment policy. It involves determining the investor's objectives and the amount of his or her invest able wealth. Investor's objectives should be stated in terms of both risk and return. The second step of the investment process is to perform security analysis. It involves examining a number of individual securities (or groups of securities) within the broad categories of financial

assets. The purpose for conducting such examinations is to identify those securities that currently appear to be misplaced. The third step of the investment process is construction of portfolio. Construction of portfolio involves identification of specific securities in which to invest, along with the proportion of investible wealth to be put into each security. The fourth step of the investment process is portfolio revision, which involves both realizing that the currently held portfolio performance evaluation. It 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.

The behavior of stock price and the relationship between risk and return in financial market has long been of interest to researchers. Many interesting exemplary researchers have been carried out to this regard in the developed capital market. In recent year finance companies with new financial instruments and innovation are highly needed on the county. This will provide investment opportunities to the small and medium savers. Financial sector is the dynamic part of economy that collects unused funds and mobilizes it in needed areas. It is very important for trade industry and commerce. One of the leading sectors, stock market has become a global phenomenon even in the least develop country like Nepal that plays vital role in the development of national economy. In the capitalistic market, Stock market is not only for the justification for encouragement on the ideological background but also required for the natural expansion and/or progress of the development of financial sector of a nation.

The role of finance companies has been instrumental in the overall economic development of the country. They help to pool utilize resources, reduce costs and risks, expand and diversify opportunities, increase the allocate efficiency of resources; promote the productivity and economic growth. These are the main part of economy of the nation.

1.2 Focus of the Study

Risk and return of common stock is the major factors, which helps in making decisions about investment on securities of the companies. So the study is based on the risk and return of common stock investment: special reference to finance companies in Nepal.

There are 50 listed finance companies in Nepal. But it is not possible to cover all the finance companies. So, two finance companies have been chosen. The study is focused on the risk and return of common stock followed by five chosen companies, which will represent all the finance companies of Nepal.

1.3 Statement of the Problem

Recent trend shows that the general people are interested to invest their small money on the common stock of financial institutions like commercial banks and financial companies. But due to lack of proper information about market status and situation and poor knowledge, market intermediaries take advantage in investors. Sometimes they think that investing in common stock is intolerably hazardous. Due to this, many investors afraid to invest into stocks. This is the main problem that does not allow gearing up the capital market of the nation. The main problems for the individual investors are lack of proper information about market, whereas the problem for financial sector is to enhance the goodwill among to utilize public funds properly. The investors are responsible to make rational investment decision. For this rational analytical knowledge is essential. The investor's attitude and perception also plays a vital role in making decision regarding whether the investment should be made or not.

In Nepal collapses of some of the finance companies due to improper mobilization of public funds create real investor hesitation while investing in common stock.

Previous research shows that most of investors invest their funds in a single security rather they can be benefited by investing in portfolio of securities and achieving diversification of risk. The main problem is that the general public cannot perfectly analyze the risk and return analysis of common stock of financial companies. Common stock does not guarantee for annual nor does it ensure forth return of price of stock thus is considerably risky. Hence it needs courage and at the same time faith of invest in common stock. In most of the time which can be generated through proper evaluation with giving view to the prevailing market atmosphere. The present study seeks to explore the answers to the following questions

- How far the extent of the volatility of the mean return of the common stock and the relationship among the market price of share, DPS and EPS is maintained.

- How the investment decisions are to be taken?

- To what extent there is systematic risk in relation to total risk?

- What are the criteria for evaluation that the stock they are holding will give them a favorable return?

- Does the risk and return of common stock investment of financial companies vary significantly?

- Would portfolio construction within the finance companies be profitable?

- How can investors diversify the risk within the financial companies?

These are the burning issues that has influenced researcher to carry out this study. Investment on common stock is the main sources of fund for the companies. The investors are the sources of revenue as a customer for the stock stockbrokers and financial institutions and ultimately they are the backbone of economic development of the nation. So every policy and plan of financial institutions and government also have to encourage them to invest on common stock. For this there is great need of such institutions, which can give valuable information that accelerated the stock investment and market efficiency.

1.4 Objectives of the Study

The main objective of the study is to analyze the risk, return and other relevant variables of common stock investment of Nepalese Finance Companies that help in making decisions about investment on securities of the companies. The specified objectives of the study areas follow:

- The examine the movement of market price of common stock in terms of risk and return on the basis of market capitalization.

- To analysis of inter industry companies in Nepal.

- To calculate risk and return on common stock market.

- To provide appropriate suggestions and recommendation.

1.5 Significance of the Study

Opened economic policy of the government encouraged the established of the finance companies. As result the people's participation in security investment and stock trading is a increasing unexpectedly. The recent trend and people's attitude towards common stock investment shows that there is a high potentiality in stock investment, which result an increase in economic activity. It is important to increase financial and economic activities of the nation.

The analysis of risk and return is a significant managerial decision fro the View point of investors. It influences the shareholders risk and return.

Consequently, the risk and return analysis influences the market price of the stock, by making it at an appropriate level. Thus this study has tried to fulfill the need in this aspect. The study may also help for interested researchers in the area of investment on common stock and risk and return management. Apart from above, this study will be a matter of interest for a academicians, students and practitioners.

1.6 Limitations of the Study

This study is basically based on secondary data. Similarly this study covers a period of twelve years i.e. from 2005/06 to 2009/10. Therefore, there are some limitations of this study, which are as follows:

- In this study NEPSE is taken as basic sources of data.
- The study is based on the performance of fiancé companies for the period of twelve years started from fiscal year 2005/06 to fiscal year 2009/010.
- Financial and time constraints: this study will be fully based on the Student financial resources and is to be completed within the limited time.
- The research result is based upon the secondary data only.

1.7 Organization of the Study

The report will be presented in five chapters, introduction, review of literature, research methodology, data presentation and analysis, summary, conclusion and recommendation:

Chapter -I Introduction

The first introduction chapter deals with subject matter of the study. This chapter consists of introduction, statement of the problem, focus of the study, objective of the study, significance of the study, statement of hypothesis, limitation of the study, organization of the study itself.

Chapter -II Review of related literature

The chapter consist concept of investment, common stock (return and risk), relationship between risk and return, statistical measure of risk, diversification, portfolio analysis (portfolio risk & return), systematic and unsystematic risk, capital assets pricing model, validity and role of capital assets pricing model and review of thesis and article.

Chapter -III Research Methodology

Methodology used for the purpose of study in this chapter explains research design, source of data, population and sample, sources of data, data collection techniques, financial and statistical tools used.

Chapter -IV Data Presentation and Analysis

This chapter analyses the risk and return of each selected company's common stock and their comparison are also made with industry risk and return. Five assess portfolio are also constructed to see the impact of portfolio.

Chapter – V Summary, Conclusion and Recommendations

The final and last chapter consists of the summary of the whole study. Conclusions of the study have been presented and at last suitable and concrete measures are suggested in the form of recommendation. This chapter is followed by bibliography and appendixes.

CHAPTER-II
REVIEW OF LITERATURE

This chapter provides some glimpses on the literature that is available in the topic. The chapter review of literature includes the review of concept and finding of previous research on the some field. Books, journals and unpublished thesis are reviewed for this purpose. In this regard, basic academic course book on finance, recently published books specially related to this topic, some of the major research based journals and the related studies are reviewed.

There is no any special book and research work about the topic Risk and Return analysis of common stock, and we do not have sufficient required journals and relevant books. Some master degree thesis is available in Tribhuvan University, which are related to this topic to some extent. These theses are also reviewed to the extent they found related. In addition, independent studies carried out by well-known Nepalese financial experts are also taken into consideration.

To develop the concepts and ideas about the selected topic, the review of relevant materials is very important and crucial. In fact, review of literature begins with a search for a suitable topic and continuous throughout the duration of the research, either a dissertation or a thesis. Review of literature means reviewing research studies or other relevant propositions in the related area of the study so that all the past studies, their conclusions and deficiencies may be known and further search can be conducted. It is an integral and mandatory process in research works. It deals with a literature survey of existing volumes of similar or related subjects and a careful check should be made that the proposed study has not carried out previously. Completely new and original problems are very rare, however a previous study should not exactly replicate unless the techniques used facilitate to trace out the doubtful conclusions or some new sources of information identified.

The main reason for a full review of research in the past is to know the outcomes of those investigations in areas where similar concepts are methodologies had been used successfully. In this connection, a review of previous related research, articles reports, findings, books will help the researcher to formulate a satisfactory structure for the study.

Mainly it helps:

- It gives the basis for the future researchers.
- It avoids needless duplication of costly research effort.
- To explains the results in simple and lucid manner.

2.1 Conceptual Framework

A book by Dr. R. S. Pradhan's is very valuable for the purpose of analyzing the capital market in Nepal. In his book, he writes about the Stock Market behavior in Nepal that "A number of studies have been conducted on the stock market behavior in developed and big capital markets but their relevance is yet to be seen in the context of smaller and underdeveloped capital markets"(Pradhan, 1994: 42-43).

As per the book, the stock market behavior in smaller and underdeveloped capital markets is thus one of the important areas of the study in finance. Information on stock market behavior in such smaller and underdeveloped capital market would help development of realistic theoretical models and formulation of relevant hypotheses for empirical testing in finance. Thus, it if felt necessary to study stock market behavior in the context of smaller and underdeveloped capital markets, and this chapter prepared with reference to Nepal is a small attempt towards that end.

"In Nepal, the listing of shares in Stock Exchange Centre (SEC) and their trading in the stock market is a recent phenomenon. The Nepalese stock market is characterized by low trading volume, absence of professional brokers, early stage of growth, limited movement of share prices and limited information available to investors. A number of researchers are available on government owned public enterprises but researches on enterprises whose stocks are listed in SEC and traded in stock market are yet to come up in Nepal.

Viewed in this way, this chapter is expected to provide at least some insights into stock market behavior in Nepal. This chapter can be considered important, as Nepal has already started the process of privatization of public or government owned enterprises"(Gautam, 2005:98).

In the book, "Shareholder's Democracy and AGM feedback" Prof. Manohar Kumar Shrestha has focused various issues related to protection of shareholder's expectation. Success of companies directly depends on the protection of their owners. But how can this be accomplished is the main question. Thus it is necessary to develop a possible guidance for enhancing the efficiency for public limited companies to contribute directly in the growth of national economy on one hand and ensuring handsome return to the shareholders on the other hand to make their investment meaningful and worthwhile. At present, the overall shareholders' democracy in terms of protection their interest is basically focused on the payment of satisfactory dividend and maximization of shareholders' wealth by appreciating the value of shares they sold (Shrestha, 1999:25).

"Investors were enlightened and they stated inquiring about company's financial health and future prospect before buying or selling shares. People turned to price-earnings multiples: NEPSE indexes informed trading became sort of a norm when stock market entered 1995. Many who could not cope with the system of intelligent speculation left the ground. As a result, the numbers of buyers gradually came down and so did the prices" (The Kathmandu Post, May 18, 1996:6).

Panta, Rekha analyzed in her, "Current status of share market in Nepal", the trend of Nepalese stock market and present state of primary and secondary market was found satisfactory. According to her study, the development of stock market primarily depends on program and implementation in Nepal. The overall policy environment has not been conducted to the development of stock market. Therefore, it is difficult to develop more efficient secondary market. Treading system for both equity and debt securities.

Capital market is concerned with long-term finance; widely consists of series of channels which the saving of the community is made available for industrial and commercial enterprises and authorities. It is concerned with that private saving; individual as well as corporate that is turned into investment through the new capital issue and also new public loan floated by government and semi government bodies.

Capital market means anybody or individuals, whether incorporated or not, constituted for the purpose of regulating or controlling the business of buying selling or dealing in securities (Bhalla, 1995:21).

The history of capital market in Nepal is not so old. The capital market was developed after the establishment of Security Exchange center on 2033 B.S. The number of listed companies and their trading was very negligible until the government of Nepal has made economic reforms along with broad financial policy in the process of economic liberalization. The privatization of public entities have been started various finance and insurance companies in the private sector are being established with local and foreign investments. Those companies have to issue some of their share of the general public, (Vaidya, 2057:70).

Capital market consists of securities market and non-securities market. Securities markets imply mobilization of the funds through issuance of the securities like shares, bonds and debentures by corporate sector and bond, bills and debentures by government. These securities traded in the secondary market are generally negotiable and hence can be traded in the secondary markets. Non-securities market refers to the mobilization of the financial resources by the financial institutions in the form of deposits and loans.

Primary and secondary markets are the two wings of the capital market. Primary market concerns with the issue of new companies stock whereas the secondary market deals with the previously issued shares. The majority of all capital market transactions occur in the secondary market. The proceeds from the sale of securities in this market do not go the

original issuer, which means that it does not create new additional capital. In other words, securities are traded among the individual as well as institutional investors.

There are two theories of stock price behavior i.e. classical approach and efficient market theory approach. Classical or conventional approach includes Fundamental Analysis and Technical Analysis Theory. Under efficient market theories, there are three forms of efficient market hypothesis. Classical approach assumes market as inefficient whereas the efficient market theory argues that the market is efficient. Prior to the development of the efficient market theory, investors were generally divided into two groups, fundamentalists and technicians.

2.1.1 Classical Approach

The classical approach includes fundamental analysis and technical analysis theories. One of the major divisions in the ranks of financial analysis is between those using fundamental analysis (known as fundamental analysis or fundamentalists) and those using technical analysis (known as technical analyst or technicians). Fundamental approach forecast stock price on the basis of earnings and dividends of the company whereas technical analysis forecast stock prices on the basis of past price behavior of the company.

2.1.1.1 Fundamental Analysis

Fundamental analysis begins with the assertion that the true value of any financial asset equals the present value of all cash flows the owner of the assets expects to forecast the timing and the size of these cash flows and then converts the cash flows to their equivalent present value using an appropriate discount rate (Gordon, 2000: 12).

Fundamental analysis approach involves working to analyze various factors like economic influences, industry factors, firm's financial statement and pertinent company information such as product demand, earnings, dividends and management in order to calculate an intrinsic value for the firm's securities. The theory assumes that knowledge about the future companies is not perfect, some stocks are under priced and others are overpriced. The investor's task is to study certain fundamental factors that may enable

them to select undervalued stock for purchase and sell overvalued stocks. After extensive analysis, the investor derives an estimate of the 'intrinsic' value of the security, which is then compared to its market price. If the value exceeds the market price, the security should be acquired and vice versa (Reily, 1986:347).

The objective of the fundamental analysis is to appraise the intrinsic value of the security. The intrinsic value is the true economic work of the financial assets. Therefore, fundamental analysts work to find new information before other investors, so they can get into the position of profit form the price changes they anticipate. Fundamental analyst use different models like Top-Down versus Bottom-up forecasting, probabilistic forecasting, econometric models, financial statements analysis etc. to estimate the value of security in an appropriate manner for making investment decision.

- **Some demerits of the approaches are as follows:**

The approach, though sound and based on basic financial figures does not suffer from the drawbacks and to make this approach work effectively, one must be aware of them. The fundamental approach is based on rational scientific analysis of data, but the market is rarely rational.

- **The information and analysis may itself be incorrect.**

Many companies with the help of creative and innovative accounting and accounting cosmetic disguise the real earnings.

The fundamentalist's estimate of intrinsic value may be incorrect. This is not only possible but also probable that he often forecast growth, profit and other factors without grasping all the facts.

The fundamentalists may not fully understand the economy or the industry, as there are several external factors.

Therefore, fundamental analysis is a never ending process because values change overtime. Ideally, revision in analysis should occur whenever new information affecting the future benefits to security holders become available.

2.1.1.2 Technical Analysis:

Technical analysis is based on the widely accepted premise that security prices are determined by the supply of and the demand for securities. The tools of technical analysis are therefore designed to measure certain aspects of supply and demand (Francis, 1991: 521-522).

Technical analysis can be defined as the use of published market data for the analysis of both the aggregate stock market and individual stocks. It sometimes called market or internal analysis. (Charles, 1988: 396) technical analysis is based on some assumption that the past information of prices and trading of stock provides some pictures of the future price of stocks. Technicians seek to forecast security prices rather than security value especially trends in the price changes. Price and volume are the primary tools of the technical analyst. Technicians believe that the forces of supply and demand show up in patterns of price and volume. Volume data are used to gauge the general condition in the market and to help assess its trend. The evidence seems to suggest that rising (falling) stock prices are usually associated with rising (falling) volume. If the stock prices but volume activity does not keep pace, technical analyst would be skeptical about the upward trend. A downside movement forms some pattern or holding point, accomplished by heavy volume, would be taken as a bearish sign (Charles, 1988: 396).

Typically, technical analyst records historical, financial data on charts, study these charts in search of patterns that they find meaningful and endeavor to use the patterns to predict future prices. Some charts are used to predict movements of market index and still others are use to predict the action of both individual asset and the market (Francis, 1991:521-522).

Technical analysis however may be useful in timing a buy or sell order that may be implied by the forecasts of return and risk. For example, the technical analysis may reveal that a drop in price is warranted. Postponement of purchase, then, if the technical analysis is correct, will raise the forecast holding period yield (HPY). Conversely, a sale order might be postponed because the charts reveal a raise in the price of the security in question (Fischer, 1995: 510).

2.1.2 Technical analysis has some assumption:

Market value is determined by interaction of supply and demands. Supply and demand is governed by numerous factors, both rational and irrational. Security prices tend to move in trends that persist for an appreciable length of time, despite minor fluctuations in the market. Changes in trend are caused by the shifts in supply and demand. Shifts in supply and demand, no matter why they occur, can be detected sooner or later in charts of market transactions. Some chart patterns tend to repeat themselves. (Francis, 1958: 86) Thus the technical analyst believe in the changes in the pattern or trend of security price take place on account of changes in the demand and supply of the securities, and that crucial insights into these patterns can be obtained by keeping track of price chart. The technical analyst can tell whether the price of a share is on upswing or on the downswing in future. Technical analysis involves the examination of past market data, such as prices and the volume of trading, which lead to an estimate of future piece trends and therefore, an investments decision. Whereas fundamental analysts use economic data that are usually separate from the stock or bond market, the technical analyst believes that using data from the market itself is a good idea because ' market is its own best predictor'. Technical analysts base trading decisions on examination of prior price and volume data to determine past market trends from which they predict future behavior for the market as a whole and for individual security.

Technical Tools:

Dow Theory

This tool is originated by Charles Dow, the founder of the Dow Jones Company, one of the oldest and famous technical methods of analyzing security prices. The objective of

the Dow Theory is to identify long-term trends in stock market prices. "According to this theory, it is believed that the market is always considered as having three movements, all going at the same time. The first is narrow movement from day to day. The second is the short swing, running from two weeks to a month or more; third is the main movement covering at least four years duration" (Francis, 1900: Dec 19).

So we can say that there are three forces simultaneously affecting the stock prices, basically called the primary or major trend, secondary or intermediate trend and finally tertiary or bullish trends. The primary price movements are held to constitute the bearish or bullish trends, whereas the secondary movements are regarded as passing phases. Tertiary price movements are daily price fluctuations, which to Dow attribute to no significance or ignore the role of this trend. The Dow Theory employs two indicators called Dow Jones Industrial Average (DIJA) and Dow Jones Transportation Average (DJTA). The DJIA is a key indicator of underlying trends while DJTA usually serves as a check to inform or reject that signal (Bodie, 2002:344).

The Dow Theory is built upon the assertion that stock prices tend to move together. If the DJIA is rising then the DJTA should also be rising. Such a simultaneous price movements suggests a strong bull market. Conversely, a decline in both the averages suggests a strong bear market. However, if the averages are moving in opposite direction, then the stock market is uncertain regarding to direction of future stock prices. The forecasting of Dow Theory is less accurate. It might work only when a long, wide, upward or downward, movement is registered in the market. It is mostly unsuitable as a market predictor when the market trend frequently reserves itself in the short or the intermediate term. This theory fails to explain a consistent pattern of the short price movements.

Barron's Confidence Index
In the literal sense, the confidence index is defined as the ratio of high-grade bond yields divided by low-grade bond yields. The ratio is supposed to reveal how willing investors are to take investment risks. Barron's confidence index is constructed by using Barron's

index of yields on the high-grade bonds to low grade bonds. The confidence index is usually, but not always, a leading indication. Like most of other technical indicators, the confidence index may sometimes issue erroneous signals and should therefore not be used without confirming evidence from other indicator (Francis, 1991:531).

Odd Lot Theory

This theory concerns the purchase and sales of securities by small investors. These investors do transactions of less than 100 shares. Some technicians take the ratio of these odd lot purchases to odd lot sales as an indicator of the direction of the future prices. An increase in the index suggests relatively more buying, a decrease indicates relatively more selling. During most of the market cycle, odd lots are selling the advances and buying the declines. Odd lotters try to do the right thing most of the time; that is, they tend to buy the stocks as the market retreats and sells stocks as the market advances. However, technicians feel that odd lotters are inclined to so the wrong thing at critical turns in the market (Fischer, 1995:515).

b. Efficient Market Theory

Theory describing the behavior of an assumed "Perfect market in which (1)Securities are typically equilibrium,(2)Securities prices fully reflect all public information available and react swiftly to new information, and(3)because stocks are fully and fairly priced, investors need not to waste time looking for mispriced securities"(Gitman 2011, 290).

An efficient capital market, current market prices fully reflect available information. (Eugene, 1196:133). Therefore, if the market is efficient, it uses all the available information to it setting price. When security prices at all times rationally reflect all available, relevant information, the market in which they traded is said to be efficient. This implies that any new information coming to light, which bears on a particular firm, will be incorporated into the market price of the security. An efficient capital market is one in which security prices adjust rapidly to the arrival of new information and therefore the current prices of securities reflect all information about the security.

There are several concepts of market efficiency and there are many degrees of efficiency, depending on the market. Markets in general are efficient when Prices adjust rapidly to new information. There is a continuous market, in which each successive trade is made at a price close to the previous price (the faster that the price responds to new information and the smaller the difference in price changes, the more efficient the market. The market absorb large amount of securities without destabilizing the prices (Stanley, 1998:420).

In an efficient market, a security's price would correctly reflect the important variables for that security and would represent and unbiased estimate of its investment value (Mosses, 1992:746). The efficient hypothesis suggests that investors cannot expect to outperform the market consistently on a risk-adjusted basis over an extended period of time. This hypothesis is based on the premise that security prices reflect all available information concerning a firm and that security prices changes rapidly in response to new information. Market efficiency also implies that as new information becomes available, the market quickly analyses it, and any necessary price adjustment occur rapidly.

There are three forms of efficient market hypothesis based on type of information used in making market decisions. They are weak form efficiency Semi-strong form efficiency Strong-form efficiency. The difference between these forms relates to what extent information is reflected in the stock prices. Under the weak form, stock prices are assumed to reflect any information that may be contained in the past history of the stock price itself (Haugen, 2001:575).

This hypothesis holds that no investor can earn excess returns by developing trading rules based in historical prices or return information. Weak form efficiency, suggests that, at a minimum, the current price of a stock reflects the stocks own prices. In other words, studying past prices in an attempt to identify misplaced securities is futile if market is weak form efficient. Although this form of inefficiency might seem rather mild, it implies that searching for patterns in historical prices that will be useful in identifying mispriced stocks will not work. (Ross, 2003: 407).

Under semi strong form, all publicly available information is pre assumed to reflect in securities' prices. This includes information in the stock price series as well as information in the firm's accounting reports, the reports of competing firms announced information relating to the state of the economy and any other publicly available information relevant to the valuation of the firm. (Haugen, 2002:575).

This form of efficiency is most controversial. The reason this form is controversial is that if implies that a security analysts who try to identify mispriced using, for example, financial statement information is wasting time because that information is already reflected in the current price (Ross, 2003:407).

The strong form takes the notion of market efficiency to the ultimate extreme. This form includes private of inside information as well as that which is publicly available. Under this form, those who acquire inside information act on it, buying or selling the stock. Their action affect the price of the stock and the price quickly adjusts to reflect the inside information (Haugen, 2001:575).

One obvious way to check the validity of the strongly efficient market hypothesis is to examine the profitability of traders in securities made by insiders to see if the insider's access to valuable information allows them to earn statistically significant trading profits (Francis, 1991:5).

Thus the strong from of the efficient market correctly prices securities adjusting quickly to new information either public or private.

2.2 Security Market

A security market can be defined as a mechanism for bringing together buyers and sellers of financial assets in order to facilitate trading. Security market exists in order to bring together buyers and sellers of securities. It means the market where the securities are treated. One of the main functions is "Price discovery" i.e. to cause prices to reflect currently available information. Security market can be distinguished into
• Primary and secondary Market
• Money and Capital Market

Primary Market

Security offered for the first time to the general public through the primary securities markets. The issuer may be a brand new company or one that has been in business for many years. It is also known as New Issue Market (NIM).

Secondary Market

"The secondary market is not keeping pace with the growth of the primary market. This is mainly due to lack of the needed efforts on the concerned authority to devise suitable package of measure to encourage the growth of broker networks in the country's growing stock exchange" *(Shrestha, 1992:18).*

Money Market

Money market is also called short term financial market which is the set of supplying short-term debt or working capital needed for industries, business or incorporated etc. The instruments of money market are government securities, inter-bank deposits, banker's acceptance, certificate of deposit and commercial papers issued by non-financial institutions.

Capital Market

Capital Market is the market where the transaction of long-0term finance is made. The funds collected in this market are raised and traded by long-term financial Instrument such as equities and bonds. From the capital market, the maturity preference of lender and borrower is adjusted. The lender can immediately get cash in case of need and borrower also receives long-term credit.

2.2.1 Securities Market in Nepal

The history of securities market began with the floatation of shares by Biratnagar Jute Mills Ltd. and Nepal Saving. in 1937. Introduction of the Company Act in 1964, the first issuance of Government Bond in 1964 and the establishment of Securities Exchange Centre Ltd. in 1976 were other significant development relating to capital markets. Securities Exchange Centre was established with an objective of facilitating and

promoting the growth of capital markets. Before conversion into stock exchange it was the only capital markets institution undertaking the job of brokering, underwriting, managing public issue, market making for government bonds and other financial services. Nepal government, under a program initiated to reform capital markets converted Securities Exchange Centre into Nepal Stock Exchange in 1993. Nepal Stock Exchange, in short NEPSE, is a non-profit organization, operating under Securities Exchange Act, 1983.

The basic objective of NEPSE is to impart free marketability and liquidity to the government and corporate securities by facilitating transactions in its trading floor through member, market intermediaries, such as broker, market makers etc. NEPSE opened its trading floor on 13th January 1994. Nepal government, Nepal Rastra Bank, Nepal Industrial Development Corporation and members are the shareholders of the NEPSE

a. Trading System

NEPSE has adopted an "Open out -Cry" system. It means transactions of securities are conducted on the open auction principle on the trading floor. The buying broker with the highest bid will post the price and his code number on the buying column, while the selling broker with the lowest offer will post the price and code number on the selling column on the quotation board. The market makers quote their bid and offer price on their own board before the floor starts. Once the bid and offer price match, contracts between the buying and selling brokers or between the brokers and market makers are concluded on the floor.

2.2.2 Securities Board of Nepal

Securities Board, Nepal (SEBON) was established as an apex regulator of the securities markets in Nepal by Government of Nepal on June 7, 1993 under the Securities Exchange Act, 1983 (first amendment). The main objective of SEBON is to regulate and promote the securities market and protect investors' interests. As per the Securities Exchange Act and regulation, following are the major functions of SEBON. Develop and

implement policies and programs for the development of securities market and advice Nepal government in this regard. Register securities and grant issue approval. Provide license to corporate bodies to operate stock exchange business. Provide license to operate securities businesses. Supervise and monitor stock exchange and securities businesspersons. Conduct research, study and awareness programs regarding securities market.

The Governing Board of SEBON is composed of seven members including one full time chairman appointed by Government of Nepal for tenure of four years. Other members of the Board include representatives one each from Ministry of Finance, Ministry of Law, Justice and Parliamentary Affairs, Ministry of Industries, Commerce and Supplies, Nepal Rastra Bank (the central bank), Federation of Nepalese Chambers of Commerce and Industries and Association of Chartered Accountants of Nepal.

There are two departments, six divisions and ten sections in the organization of SEBON. Under the Corporate Finance and Administration Department, there are three divisions namely Corporate Finance and Reports Review Division, Accounts and Administration Division and HRD and Education Division. There are also three divisions under the Securities Market Regulation Department, which are Legal, and Enforcement Division, Market Regulation and Compliance Division and Market Analysis and Planning Development Division.

The major source of financing of SEBON is basically the government grant. Other financing sources include registration of corporate securities, registration and renewal of stock exchange and market intermediaries and the income from mobilization of its revolving fund.

2.3 Market Price of the Share

Market price of Shares as the output of the demand and supply interaction is the most influencing factor in determining the price of the stock." In relation to the interacting forces of demand and supply i.e. Market Price is determined at given time and the prices and volumes f its past transaction are meaningful indication of probable relationship of

future supply and demand pressure. And such relationship is the most important element in determining the probable direction of the price movements. If the demand exceeds the supply, the price will rise and if the supple exceeds the demand the price will fall.

2.4 Profit Maximization or Wealth Maximization

"In the past, profit maximization was regarded as the only objective of business firms but in modern time, a firm has multiple objectives though some objectives may receive priority over other objectives. It is a rational behavior of the firm to maximize the profit. The financial manager should select the alternative having maximum monetary return. Profit maximization objective is short run objective where as wealth maximization objective is long run objective of the firm. When the time period is short and uncertainty is not much, profit maximization and wealth maximization are almost same. The wealth of the shareholders is measured by the share price of the stock. The share price depends on the timing of returns, cash flow and risk. Generally the value or wealth can be expressed more explicitly in following ways". *(Pandey; 1991:56)*

$$W = \frac{A1}{(1+K)^1} + \frac{A2}{(1+K)^2} + \frac{A3}{(1+K)^3} + \cdots \frac{An}{(1+K)^n}$$

$$\sum_{t=1}^{n} \frac{A1}{(1+K)^n} - C$$

Where,

A$_1$, A$_2$ A$_3$ An = Stream of benefit expected to occur a cours of action is adopted.

C = Cash outlay or cost of action

K = Discount rate

W= Value or worth

But the value of the company does not increase itself; there re a number of factors that may contribute to increase the value. The value is represented by the market price of the company's common stock, which in turn reflects the firm's investment strategy, and dividend decisions. So, to maximize of the stock, the financial manger should consider following factors.

• Project earning per share

• Timing of the earning stream

• Use of debt

• Divided policy

Hence, the wealth maximization principal implies that the fundamental objective of a firm should be to maximize the market value of its shares.

2.5 Stock Exchange

The stock exchange is an institution where quoted securities are exchanged between buyers and sellers. The stock exchange provides market a wide range of traded securities, generally of medium to long-term maturities, issued by companies, government and public organization (Winfield, 1985:22).

Most are the investors are attracted to the equity shares because of its marketability and liquidity. One may like to buy more shares or selling existing shares from time to time when he is in need of money or when he wants to shuffle his portfolio. Since the stock exchange is a place where a large number of buyers and sellers congregate, once can, by and large, easily find his counterpart for sale or purchase of shares. The investor can convert his shares into cash at the prevailing market prices readily. The existence of stock exchange facilitates all these functions without which it is almost impossible to do so.

The key function of securities exchange is to create a continuous market for securities at a price that is not very different from the price at which they were previously sold. The continuity of securities market provides the liquidity necessary to attract investor's funds. Without exchanges, investors might have to hold debt securities to maturity and equity securities indefinitely. It is doubtful that many people would be willing to invest under such conditions. A continuous market also reduces the volatility of securities prices further enhancing liquidity (Gitman, 1992:458).

The securities exchanges help us to allocate scare fund to the best uses. That is by disclosing the price behavior of securities and requiring the disclosure of certain

corporate financial data; they allow investors to access the securities risk and return and to move their fund into the promising investments. An efficient market is one that allocates fund to the most productive uses. Along with this, there is lot of functions of security exchange such as ready market and continuous market, evaluation of securities, safety of transactions, and canalization of savings and widening the share ownership etc. however, besides these functions, there are three things a security exchange must do:

- Determine a fair price for the securities it trades or price discovery function.
- Minimization of transaction cost.
- Enable transaction to be made at this price quickly and easily or provision for liquidity.

2.6 Review of Relevant Studies

2.6.1 Review of Articles

As stock market is in infancy stage in Nepalese context, there are limited books, journals and research studies concerning stock market and its pricing behavior. So, the available articles, books, previous research works, which are related to stock market are consulted and reviewed.

In the journal of Financial Economics, summer 2006, entitled *"Commonality in the Determinants of Expected Stock Returns"* by Robert A. Haugen and Nardin L. Baker, they presented with evidence that the determinants of the cross section of expected stock return were stable in their identify and influence from period to period and from country. The determinants were related to risk, liquidity, price level, growth potential and stock price history. Out of sample predications of expected returns, using moving average values for the pay-offs to these firm characteristics were strongly and consistently accurate. Two findings, however, distinguished their paper form others in the contemporary literature. First, the stock with higher expected and realized rate of return was unambiguously of lower risk than the stocks with lower returns. Second, they found that the important determinants of expected stock returns were strikingly common to the major equity markets of the world. Given the nature of the texts, it was highly unlikely

that those results may be attributed to bias or data snooping. Consequently, the result seems to reveal a major failure in the efficient market hypothesis.

Dangol (2009)′ *"A survey of stock market reaction to public information"* (PYC Journal of Management 2009 vol. II)

According to his survey, he got following major findings.

- Shares of commercial Finance company, developments Finance company and finance companies were more popular among the Nepalese investors.
- Capital appreciation is the main important motive behind investing in the common stock.
- Based on the flow of new information most of the respondents have been found to have strong belief on impact of new information of Price movements.

Joshi (2008) *"Impact of Dividend and Retained earnings on share price."* (PYC Journal of Management 2008 vol. I To explain relationship between Dividend, Retained Earnings and Share prices**.** Both dividend and retained earnings have significant impact on the variation of price no matter whether they are financial sector or non-financial sector. The relationship of dividend and share price is positive in almost all cases but in some cases there is negative relationship between retained earnings and share prices.

Gautam (2008) *"How to Start in Stock Market"* Nowadays people are interested in buying shares form the secondary market (Nepal Stock Exchange) as they are searching for good investment avenues when the interest rates offered by the commercial Finance company on the deposits have fallen to record low. Here is some advice to buyers who are new to it, are not investing a huge amount and whose motive is to make some monetary gains out of the shares only (as dividend and capital gain) rather than holding in influential stake in the company. In this issue the advice is for decisions while buying stock.

Making a decision before buying a share without proper knowledge about the particular company is like plunging head on into an unknown pond. Before diving into a pond, one

should have sufficient information about its depth, the contents at the bottom and some other related matter. Similarly, a person wanting to buy shares of any company must have sufficient knowledge about different aspects of that company and among those, the financial aspects is most important. If a decision is made without proper knowledge of various facts affecting the market value and profitability of the stock concerned, it may result in heavy loss.

These advices are especially for those buyers who do not intend to hold the shares for long period or buy shares in huge quantity with motive of influencing future decisions of that company. The main interest of such people is to maximize their profits in a reasonably short period. Such interest may be to take advantage from rising market price, to add the stock of shares on holds incurring minimum extra cost, to gain maximum in terms of dividend and so on. Similarly, minimizing the probable financial loss from the stock purchased should always be given top priority. For this, the financial statements, especially annual report submitted in the annual general meeting of the company, should be studied and analyzed seriously. Apart from this report, the future programs of the management and the history of the company should also be studied. If possible the buyers should develop the habit of studying the quarterly financial reports too and compare such reports of one company with that of another similar company. Finance companies or Finance company publish their financial reports very three or six months in the national dailies. Such reports can also be obtained from the company's corporate office.

Looking at the trend of our share market, it is recommended that new investors choose shares only form the banking or finance sectors initially because such shares can be more easily sold and involve less risk compared to shares from manufacturing or other sectors. When one has gained some experience in buying and selling such shares and does a lot of homework, he/she can gain sufficient knack for future transactions. If possible, it is advisable to record the homework before deciding to choose a particular stock, such as why it was chosen, what was the estimated profit from that choice and what was the logic used to estimate that profit. This estimation should be compared with the actual result periodically. If the estimate is nearer to the actual result, congratulate yourself, and if it

very far from the actual result, try to find out what may have been the cause behind it. In this way, one will gradually gain experience, and will not be easily fooled in future.

Generally it is safe to purchase shares when the price is going up gradually. But one should be very careful as no one knows when this trend stops. Furthermore, there are always some players who try to mislead the general public and manipulate the price of shares for their personal benefit. One should be careful about such possibilities and try to find out if this is the case with the stock in which the market price is steadily increasing or decreasing. Choosing a bank or finance company to invest is however a tough job, it demands a lot of homework and an analysis of various facts affecting the profitability and market price of the share concerned. For this, the interested person should be quite familiar with some frequently used terminology in financial reports and the way to analyze them properly and to interpret what the results indicate and where those reports are found.

2.6.2 Review of Previous Research Works

There are many masters Degree theses prepared by various researchers. Among them some thesis are reviewed here for analysis of literature.

Mishra (2005) analyzed "*Risk and Return on Common Stock Investment of Commercial Banks in Nepal*" with special reference to five listed commercial Banks.

His Main Objectives

- To promote and protect the interest of the investor by regulating the issuance sales and distribution of securities and purchase, sale or exchange of securities.
- To supervise and monitor the activities of the stock exchange of other related firms carrying on securities business.
- To render contribution to the development of capital market by making securities transactions fair health, efficient and responsible.

His Major Finding

- It was noticed that there is a positive correlation between risk and return character of the company. Nepalese capital market being inefficient, the price index itself is not sufficient to give the information about the prevailing market. Situation and the company proper regulation should be introduced so that there is more transparency in issuance, sales and distribution of the securities.

- Investors do not have any idea about the procedures of the securities issuance. Neither company nor the stock brokers transmit any information to the investors about the current market situation and hence it becomes different for common investors to investor in the securities.

- Both government authorities and the stock exchange regulator body should try to promote healthy practices so that the stock brokers don not give false information to the investors for their personal benefit which is a common practice in Nepal.

- Investors should get regular information about the systematic risk (Beta), return on equity and P/E ratio of various listed in Nepal stock exchange. Security exchange board of Nepal should make this mandates that it is easier for the investors to calculate risk and risk return of portfolio and transparent is increased.

Panthi (2006) has conducted the research about *"Analysis of risk and return of commercial Bank in nepal "*. This study has taken five commercial banks covering five years period (2001-2005). This study was based on secondary data taken form NEPSE.

His Main Objectives
- To evaluate the terms of risk and return of listed commercial banks
- To examine diversification reduce the risk

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

Acharya (2007), 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 2002 to 2006. This study used primary based on secondary source with 8 companies.

His Main Objectives

- To assess the relationship between risk and return.
- 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.

His Major Finding

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

Manandher (2008), the study performed by "A *Study on Risk and Return Analysis on Common Stock of Listed Commercial Bank in Nepal".* The main objective of the study is to analyze the risk return and other relevant variables that help in making decisions about investment on securities of the listed commercial banks. The other specific objectives of this study are as follows:

His Main Objectives

- To evaluate common stock of listed commercial bank in terms of risk and return and to perform sector wise comparison on the basis of market capitalization.
- To identity whether the share of commercial banks are overpriced, under priced or at equilibrium price.

- To identify the correlation between returns of commercial banks.
- To construct optimum portfolio from listed common stock.
- To make relevant suggestion and practical idea and materialize recommendations based on findings.

His Major Finding

- Among all the securities common stock is known to be must risky security.
- Higher the risk higher will be the return.
- Most of investors attached to common stock securities because of its higher expected returns.
- As for the investors it is important to analyze each investment, company to pentagonal returns with the risk and average the potential returns form an investment should compensate for the level of risk undertaken.

Gyawali (2009), has conducted a research about *"Risk and return on common stock".* Gyawali used secondary data analysis with five commercials banks covering 5 years period from 2004 to 2008.

His Main Objectives

- To determine the risk, return and other relevant factors that directly affect the investment in common stock.
- 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.

His Major Finding

- Among five commercial banks standard chartered bank and Himalayan bank is the continuous dividend payer.
- Among sample banks Nepal Bangladesh bank ltd its has lowest expected return.
- Bangladesh bank is high risky and standard bank is low risky.

Shrestha (2010) has conducted research on *"Stock Price Behavior in Nepal".* This study aims to examine the efficiency of stock market in Nepal. The objective of the study was:

His Main Objectives:
- To examine the serial correlation of successive daily price changes of the individual stocks.
- To determine whether the sequence of price changes is consistent with changes of the series of random numbers expected under the independent Bernoulli process.
- To determine the efficiency of the stock market through the theoretical model of efficient market hypothesis in Nepalese stock market.
- To provide feedback policy towards institutional development of efficient market.

His Major Findings:
- After applying the required models and methodologies he found average correlation coefficient of 0.2055, 0.0825, and 0.0704 for 1, 2 and 3 lag days respectively. And for lags 5 to 15 days were less than 0.07 in overall, large number of serial correlation coefficients of the log price changes of the 30 stocks for the sample periods are significantly departed from zero.
- Most of the above all studies conducted by various researchers, it seems that Nepalese stock market is still in developing stage and it is facing various challenges. Furthermore it also shows that there are few research works.
- Most of the above stated studies use technical methods and statistical methods like run test, correlation coefficient, NEPSE trend etc. for the analysis purpose. Only few of the studies use fundamental analysis tools for the research work. More than that of none of the studies uses fundamental analysis tools for the research work. More than that none of the studies are concerned about the financial indicators like EPS, DPS, and NWPS which are the most influencing factors for the MPS. So, this study tries to analyze the relationship of these factors with the pricing behavior of the stock of the selected companies as well as it also tries to show the influence of the important events happened in the country on market price of the stock.

2.7 Research Gap

There have been many national and international studies in the field of risk and return to date. All the concepts and practices of foreign author's model about risk and return practices not in used in our Nepalese risk and return analysis. The Nepalese capital market is in the early stage of development. The conclusion made by the international studies may not be relevant in the Nepalese context. So, it is recommended to devote some effort and think how to use those foreign model risk and return. The previous researchers have done investigation about the risk and return part of other different finance companies. The concerned finance companies taken as sample in this research is also the leading finance companies of the country having huge market share and their performance and activities significant impact on the national economy.

The study focuses on the performance of common stock of sample finance companies and overall Stock market. Not only this study analyses the return, risk and their required rate of return but also gives the comparative knowledge of their performance along with Stock market. This research will help the investors who want to know where and when to invest their hard-earned money in stock market. So, this study will fruitful those interested persons, parties, students, teachers and Government for academically as well as policy perspective.

CHAPTER-III
RESEARCH METHODOLOGY

The research methodology is the systematic way of solving research problems. Research methodology refers to the overall research processes, which a researcher conducts during his/her study. It includes all the procedures from theoretical foundation to the collection and analysis of data. As most of the data are quantitative the research is based on the scientific models. It is composed of both parts of technical aspect and logical aspect, on the basis of historical data. Research is systematic and organizational effort to investigate a specific problem that needs a solution. This process of investigation involves a series of well thought out activities gathering, recording and analyzing and interpreting the data with the purpose of finding answer to the problem.

Research can be conducted on the basis of secondary data. In this study all the data are secondary and those data are analyzed using appropriate financial as well as statistical tools Outcomes are presented in simply way. In this study, the research design, data collection procedure and analysis are described serially. Detail research methods are described in the following headings.

3.1 Study Design

This study covers quantitative methodology in a greater extent and also uses the descriptive part based on both technical aspect and logical aspect. This research tries to perform a well-designed quantitative research in a very clear and direct way using both financial and statistical tools are required by the study.

This research based on the secondary data. It covers the 5years period from 2005/06 to 2009/10. The study is focused on common stocks of financial companies on the basis on available information. This research is analytical based as well as descriptive.

3.2 Populations and Sample

The sampling data had been taken among the total population of finance Companies in Nepal, i.e. 50 in total, which were established in the base year 2005/06. So, the priority had been shifted to those finance companies, which had eleven year data including the data of base year. The name list of the sample companies selected for the study is presented in Table 3.1.

All of them have been assumed as the population of the study and among them following 2 finance companies is taken as a sample of the study on the basis of judgmental sampling. They are:

Number of finance companies traded in the mid-July 2011=79

Sample size of finance companies = 2

Table: 3.1

Selection of Sample Finance from the Population of the Listed Finance Companies

S. No.	Sample Finance Companies
1	Nepal Finance Savings Company Limited
2	NIDC Capital Market Limited

The Study Covers the Following:

This study is basically based on secondary data. Similarly this study covers a period of five years i.e. from 2005/06 to 2009/10. Therefore, the study covers calculation of expected rate of return, market capitalizations, risk and return of common stock market, mean, standard deviations and Coefficient of variation, of finance Sectors.

3.3 Source of Data

In this study, the main source of data is secondary data. The data has been taken with NEPSE index is collected from NEPSE on June 30, 2007, the main source of data in annual trading report published by NEPSE. Securities board and other concern finance company's annual report, journals and Nepal Rastra Bank's annual, quarterly publications and others.

3.4 Data Collection Technique

This study depends only upon the secondary sources of data. The secondary data had been collected from published material of different organizations such as NEPSE, Central Bureau of Statistics, Nepal Rastra Bank, related websites etc.

Most of the data were taken from trading reports of NEPSE and financial Statements of the companies under study. Some of these data are collected from NEPSE's web site 'www.nepalstock.com' as well as other related web sites. The review materials are mainly collected from central library of T.U, Kirtipur, Library of Central Department of Management T.U, Kritpur, and Library of Nepal Commerce Campus. New Baneshwor and other public libraries.

3.5 Tools for Data Analysis

Market Price of Stock

One of the major data of this study is market price of stock. As it is followed the market price of shares of companies, it can be obtained three types of prices high, low and closing. Among high, low and closing price, each year closing price has been taken as the market price of the stock which has specific time of span of one year and the study has focused in annual basis. To get the real average. Volume and price of each transaction in the stock and duration of tie of each transaction in the whole year are essential. Which is tedious and impossible too, considering the data availability and maintenance? Hence, the closing price is used as the market price of stock, which has a specific time span of one year and the study has focused in annual basis.

Dividend

Dividend is relevant during the computation of rate of return, which is a reward to the shareholders for their investment. If a company declares only the cash dividend, there are no problems to take the dividend amount. But if the company declares stock dividend (bonus share), it is difficult to obtain the amount that really shareholders has gained. In this case, they get extra numbers of shares as dividend and simultaneously price of the stock declines as a result of increased number of stocks. To get a real amount of dividend

there are no any model (formula). So the model has been developed considering practical as well as theoretical aspect.

The model is in case of stock dividend,

Total dividend amount = Cash dividend + Stock dividend % * next year's MPS

Where,

MPS = Market Price per share

Return on Common Stock Investment

The rate of return on each stock was calculated by dividing the increment or decrement on the market price per share by the value of previous market price of the same stock. The market rate of return is also calculated by dividing the increment or decrement of NEPSE index by the previous NEPSE index. In other words, return on stock j (R_j) is calculated as follows:

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

Where,

R_j = Realized rate of return on common stock j at time t.

D_t = Cash dividend received at time t.

P_t = Price of a stock at time t.

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

Expected Rate of Return of Common Stock

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

Symbolically,

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

Where,

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

n = Number of years that the return is taken.

R_j = Return on Stock J

Standard Deviation (σ_j)

It is the statistical measure of the variability of a distribution of return around its mean. It is the square root of the variance and measures the unsystematic risk on stock investment.

Symbolically,

$$\sigma_j = \frac{\sum(R_j - R_j)^2}{n-1}$$

Where, σ_j = Standard deviation of returns on stock j during the time period n.

Co-efficient of Variation (C.V)

"It is the ratio of standard deviation of returns to the mean of that distribution. It is a measure of relative risk." *(Van Horne, 1981:94)*

Symbolically,

$$C.V = \frac{\sigma_j}{R_j}$$

where,

R_j = Expected rate of return on stock j.

σ_j = Standard deviation of returns on stock j during the

Systematic Risk

Systematic risk refers to that portion of total variability in return caused by factors affecting the prices of all securities. Systematic risk is external to an industry and of business and is attributed to broad forces out of the business. Unlike systematic risk it is the risk that cannot be diversified away. Due to this we can short out systematic risk using tool below;

Total risk= Systematic risk + Unsystematic risk

Systematic risk= $\beta_j^2 \times \sigma_j^2$

Unsystematic risk= Total risk- Systematic risk

$$\text{Portion of Systematic risk} = \frac{Systematic\ risk}{total\ risk} = \frac{\beta_j^2 m}{\sigma_j^2}$$

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$$\sigma_j^2 = \text{Variance of stock j}$$

$$\beta_j^2 = \text{square of beta to of stock j}$$

$$\sigma m^2 = \text{variances of market}$$

Beta coefficient (β)

Beta measures non- diversifiable risk. Beta shows the price of a security responds to market forces. In effect, the more responsive the price of security is to change in the market; the higher will be is beta. Beta measures change in stock, return resulting from per unit change in the market return. It is a useful tool for CAMPM Symbolically.

$$\beta_j = \frac{\text{cov}_j m}{\sigma_m^2}$$

Where,

$\beta_j = $ beta coefficient of stock j

$\text{cov}_j m = $ covariance of stock j and market return

$\sigma_m^2 = $ variances of market

CHAPTER-IV

PRESENTATION AND ANALYSIS OF DATA

4.1 Data Presentation and Analysis

This chapter includes analysis of data collection and their presentation. In this chapter, the effort has been made of analyze "risk and return on common stock in finance companies. The chapter Data presentation and analysis is the main body of the study. The purpose of this chapter is to analyze and elucidate the collected data to achieve the objective of the study following conversion of unprocessed data to an understandable presentation. In this course of analysis, data gathered from various sources have been inserted in the tabular form and shown in diagram form. The data have been analyzed by using financial and statistical tools. The results of the computation have also been summarized in appropriated tables. On the background of various reading and literature review in the preceding chapter, it is tried to analyze and diagnose the recent Nepal stock market movement, with taking a special reference with commercial banks of Nepal. The samples of computation of each model have been included in annexes.

Among the listed commercial banks only three commercial banks are taken as sample namely, Detail data of MPS and dividend of each finance companies and each sector, NEPSE index of each sector and market is presented and their interpretation and analysis is done with reference to the various reading and literature review in the preceding chapter, effort is made to analyze and diagnose the recent Nepalese stock market movement, with taking a special reference to the listed finance companies. Different tables and figures (diagrams) are drawn to make the result more simple and understandable.

- Expected Return
- Standard Deviation
- Correlation Analysis

4.1.1 Analysis of Individual Finance Companies

As the study has taken a special reference to listed finance companies, common stock of listed finance companies is analyzed here separately. There are 89 finance companies established up to now in Nepal, are in operation from 2005/06 to 2009/10. But only 50 finance companies are listed in NEPSE, among them the study has focused on the two finance companies as a sample. The main purpose of this section is to simply provide quantitative information of stock market functioning. The organized stock market is a recent phenomenon in Nepal. NEPSE has adopted an "Open Out -Cry" system. It means transactions of securities are conducted on the open auction principle in the trading floor. The buying broker with the highest bid will post the price and his code number on the buying column, while the selling broker with the lowest offer will post the price and code number on the selling column on the quotation board. The buying price will change when any other broker increases it and the selling price will change when someone will be ready to sell at low price. When the price matches the buying each company is introduced at appendixes at the end of the study their common stock's risk and return are analyzed and interpreted here. Name of the chosen two finance companies are as follows:

4.2 Number of Listed Companies in NEPSE:

As concerned with the number of listed companies present in table shows that the rate of listing companies for the fiscal year 2004/2005 is 9.65% which is highest increase rate.

Table 4.1

Number of Listed Company in NEPSE

Year	No of listed company	Percentage change
2004/2005	114	_
2005/2006	125	9.65%
2006/2007	135	8%
2007/2008	135	0%
2008/2009	142	5.19%
2009/2010	149	4.93%

Source: Annual report of NEPSE, 2010

While talking about in terms of numbers it is 114 for the FY 2004/05. There are Increase in number of listed companies for the FY 2005/06 with 9.65% highest from 5yrs.there is no change in FY2007/08.The number of listed companies increased by 7(4.93%) to 149in FY2009/10 while this number had increase by 135 in 2007/2008 to 142 in FY2008/2009.Increase in the number of listed companies indicates increasing interest of public towards the establishment of companies in the country.

Figure: 4.1

Number of Listed Company in NEPSE
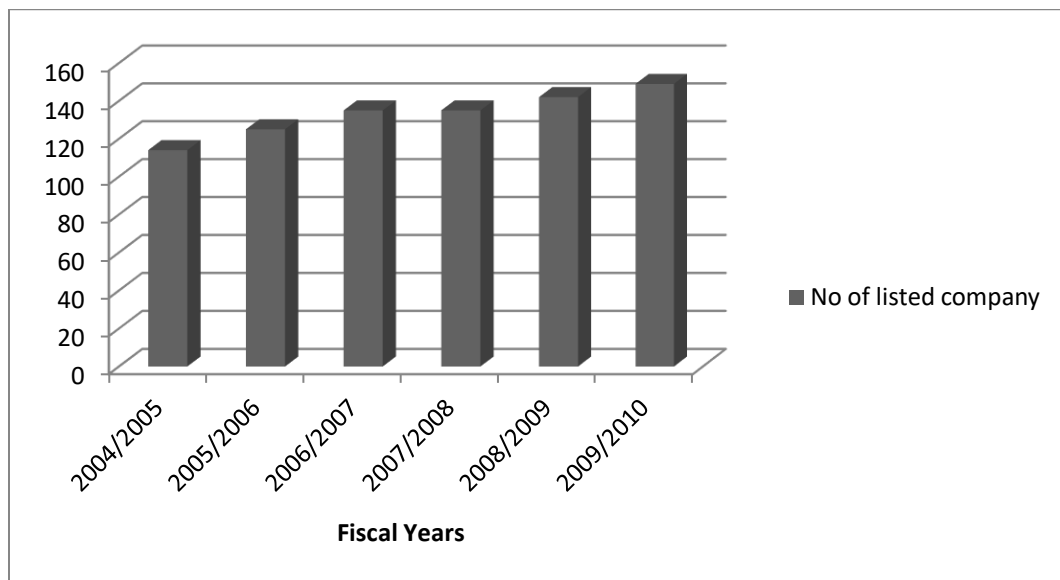
4.3 Nepal Finance and Saving Company (NFSCL)

Nepal Finance and Saving Company Limited was established in 1992 under the company act 1964. Their main objective is to collect deposit and to provide loans and advances to needy sectors NFS Saving. Was established on July 12th, 1984 under a technical service agreement with Dubai Bank Limited, Dubai, which was later merged with Emirates Saving., Dubai. NFS Bank is the first and major joint venture bank in the country with key points of representation all over the Nepal sharing is owned by N.B. International Limited, Ireland, sharing by 20% from financial institution on Nepal and sharing by 30% from general people. After 11 years of active participation, Emirates Bank International Limited (NFS) divested its 50% share holding in NFS to NFS, . NFS's decision to divest this investment was influenced by restructuring their own worldwide activities and

strategy to concentrate only in United Arab Emirates and Pakistan with increased economic co-operation under the SAARC frame work particularly in the field of trade and commerce and induction of SAPTA agreement, the participation of NFS of Bangladesh in Nepal, seemed to be most timely. However, the Board of Directors had decided to release the technical assistance contract with NFS, in May 2001 in a view to that the management of the NFS could be handled by the Nepalese employees. NFS was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, NFS provides a full range of commercial banking services through its points of representation across the reputed correspondent banks across the globe. NFS, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business. Operations of the bank including day-to-day operations and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes ATMs, credit cards, state-of-art, world renowned software from Infosys Technologies System, Bangalore, India, Internet banking system and Tele-banking system. The bank has focused to improve its operational efficiency by upgrading the information capability. Among the many 'firsts' to credit of NFS, the business of Credit Cards Issuance and Acquiring is one. It introduced MasterCard to the Nepalese Rupees and US Dollar and also issues Visa Card and Visa Electron. NFS has been introducing and expanding a number of IT based products. During the review period, NFS geared itself up and started to acquire Smart Cards. Similarly, NFS launched 'NFS prepaid' and 'NFS Kool Cash', two convenient prepaid card products. Growing network ATM facilities are available to account holders. DNFSt cards with PIN

Authorized Capital = Rs. 40,000,000

Issued Capital =Rs 20,000,000

Paid-up Capital =Rs 20,000,000

Par Value per share = Rs100

Number of Shareholder =1307

Its listing date in stock exchange is 20th Falgun 2049 (02-02-1993)

Table: 4.2

Realized Rate of Return, Expected Return, Year end Price and Dividend of

Common Stock of NFSCL

Fiscal Year	Year end Price (p)	Dividend (d)	Return
2005/06	134.00	154.50	2.130597
2006/07	265.00	90.00	1.132075
2007/08	475.00	50.00	0.475789
2008/09	651.00	40.00	-0.14593
2009/10	516.00	60.00	-0.88372
Total			**2.708812**
Mean			**0.541**
S.D			**1.159**
C.V			**2.141**

Source: Anex-1

Figure: 4.2

Year end Price (p) and Dividend (d') of Common Stock of NFSCL
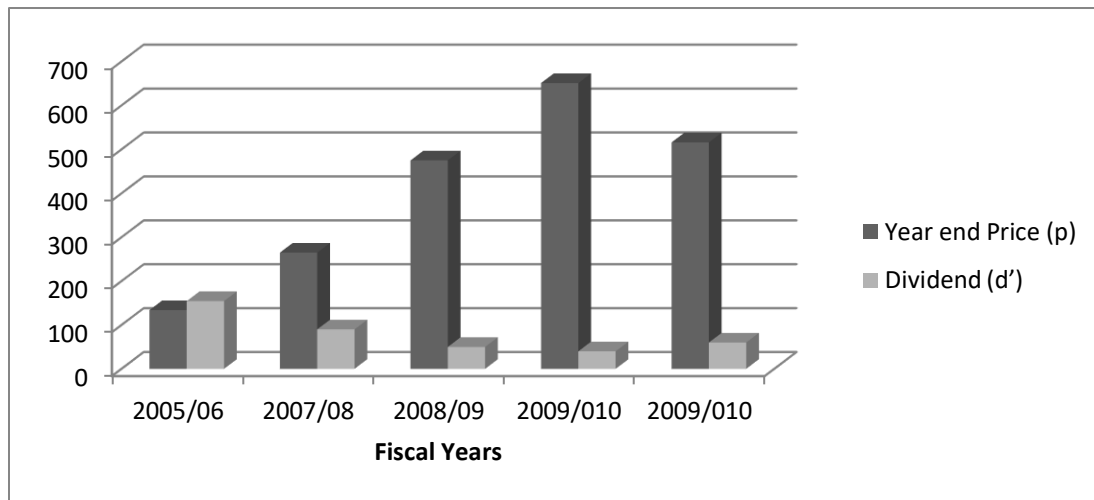
Above the table and figure 4.1 shows that the expected returns, standard deviation and Coefficient of Variation of Common stock of NPSCL. The total realized rate of return and expected return of NFSCL is 0.541 respectively. Its standard deviation 1.159 whereas

Coefficient of variation is 2.141 which means that for earning one extra unit of return from share of NFSCL, investors have to take 1.299 unit of risk.

The figure 1.1 shows the annual return of NFSCL in different years. The annual rate of return of common stock of NFSCL was negative in the fiscal years 2065/066 and 2066/067. The annual return of rest years was positive. In the FY 2007/08 the annual return was highest.

4.4 Introductions of NIDC

NIDC Capital Markets Ltd. (NCML) was established under the Finance Company's Act 2042 under the initiative of Nepal Industrial Development Corporation along with the participation of other institutions such as National Life & General Insurance, National Productivity, Rastriya Beema Sansthan, Rastriya Banijaya Bank, Nabil Bank, and Nepal Red Cross & Provident Fund. It was registered with the Company Registrar office on 1-10-2049 & commenced its operation from 28-10-2049.

NCML is the first Company to undertake merchant banking activity in Nepal. It has played an instrumental role in introducing various companies to the general public through initial public offerings (IPO). By providing services such as Registrar to shares, issuance of securities and underwriting, NCML is "the pioneer" in strengthening the transactions of the stock exchange by way of efficient transfer of title of shares.

At present, NCML has diversified its operations to include banking services such as deposits, loans and cash advances, money transfer in addition to merchant banking.

Objective
- Solidify the capital market in the country by mobilizing internal resources.
- Develop investment opportunities in the prevalent industries and business sectors of Nepal to achieve sustainable economic growth

NIDC Capital Markets Ltd, (NCML) was the first merchant bank in Nepal and its sole and primary objective was to solidify the capital market in the country by mobilizing internal resources. It also aimed to develop the investment opportunities in the prevalent industries and other business sectors of the country in order to achieve rapid economic development. As a pioneer in Merchant Banking, NCML has successfully handled the activities as a Market Maker, Issue Manager and Registrar to the Issue. NCML has always been proactive in introducing new instruments in the market. NCML introduced Registrar to the Share Services, Portfolio Management, and Mutual Fund Scheme etc. However, due to the very infant stage of capital market in the country, NCML is continuing its effort as a market leader in merchant banking to contribute in the development of capital market in the country.

It's Authorized Capital = Rs, 1, 20,000,000

Issued Capital = Rs, 60,000,000 and

Paid-up Capital =Rs. 58,003,800

Per Value per Share = Rs. 100

Number of Share holder =1567

Table: 4.3

Realized Rate of Return, Expected Return, Year end Price and Dividend of Common Stock of NIDC

Fiscal Year	Year end Price (p)	Dividend (d)	Return
2005/06	165	14	0.29697
2007/08	200	15	0.405
2008/09	266	15	0.379699
2009/010	352	68.40	0.438636
2009/010	438	68.24	-0.8442
Total			**0.676104**
Mean			**0.135**
S.D			**0.550**
C.V			**4.23**

Source: Annex-2

Figure: 4.3

Year End Price and Dividend of Common Stock of NIDC
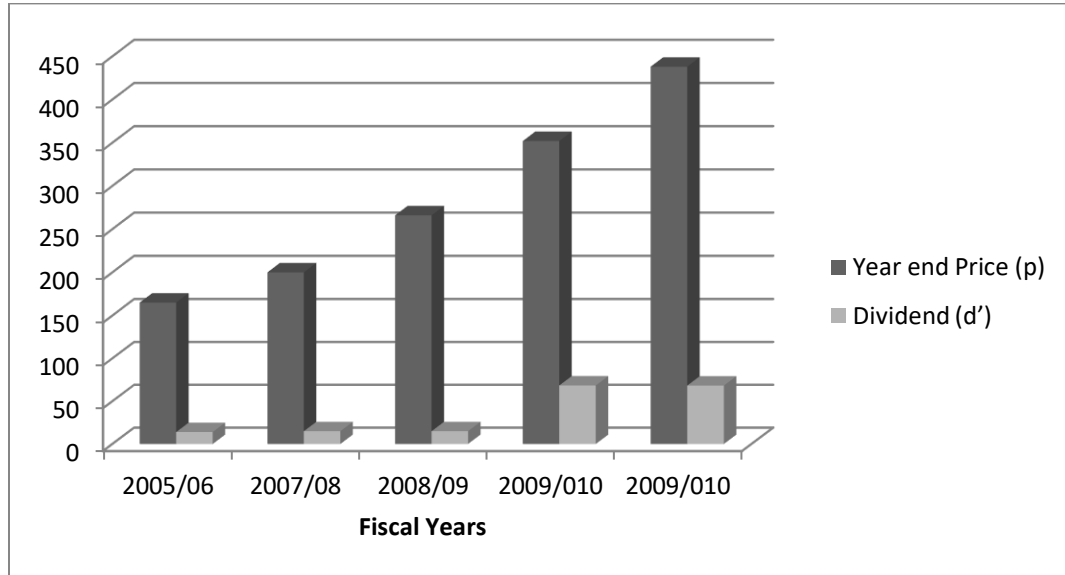
The above table 4.3 shows that the expected returns, standard deviation and Coefficient of Variation of Common stock of NIDC. The total realized rate of return and expected average of NIDC is 0.1352. Its standard deviation 0.550 whereas Coefficient of Variation is 4.23 which means that for earning one extra unit of return from the share of NIDC, investors have to take 0.9181 of risk.

The figure 4.3 shows the annual return of NIDC in different years. The annual rate of return of Common stock of NIDC was in the fiscal years 2005 /06.The annual return of rest years was positive. In the FY 2009/010 the annual return was highest.

Table: 4.4

Market Capitalization of two Finance Companies

Fiscal years	NFSL		NIDC	
	Market Capitalization (Rs. In millions)	Percentage (%)	Market Capitalization (Rs. In millions)	Percentage (%)
2005/06	265	16.98	455	14.01
2007/08	475	30.44	901	27.74
2008/09	400	25.64	1200	36.95
2009/010	208	13.33	493	15.18
2009/10	212	13.58	198	6.09
Total	1560	100	3247	100

Figure: 4.4

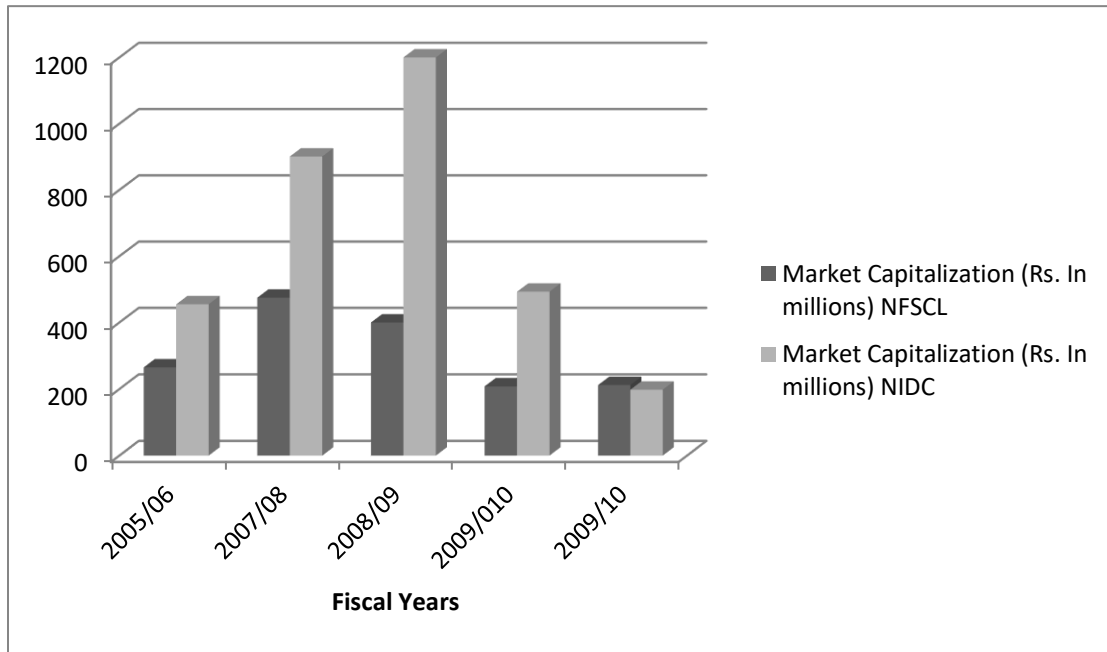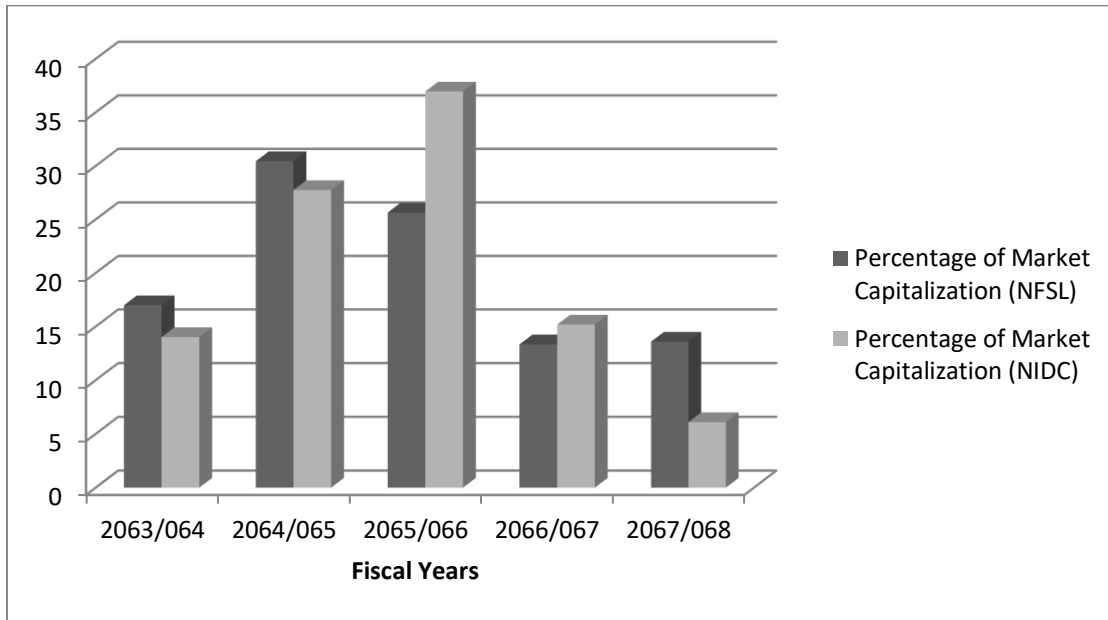**Market Capitalization of two Finance Company**

Figure: 4.5

Percentage of Market Capitalization of two Finance Company

The above table and figure shows that the market capitalization of two selected finance companies is shown in both table and figure the smallest finance company on the basis of the market capitalization. The table shows the annual return of NFSCL in different years. The annual rate of return of common stock of NFSCL was negative in the fiscal years 2007/08 and 208/09. The annual return of rest years was positive. In the FY 2007/08 the annual return was highest

Figure 4.2 shows the companies proportion of the market capitalization of selected two finance companies. Figure show that the NFSCL and NIDC have better performance from the views point of market capitalization than other finance companies.
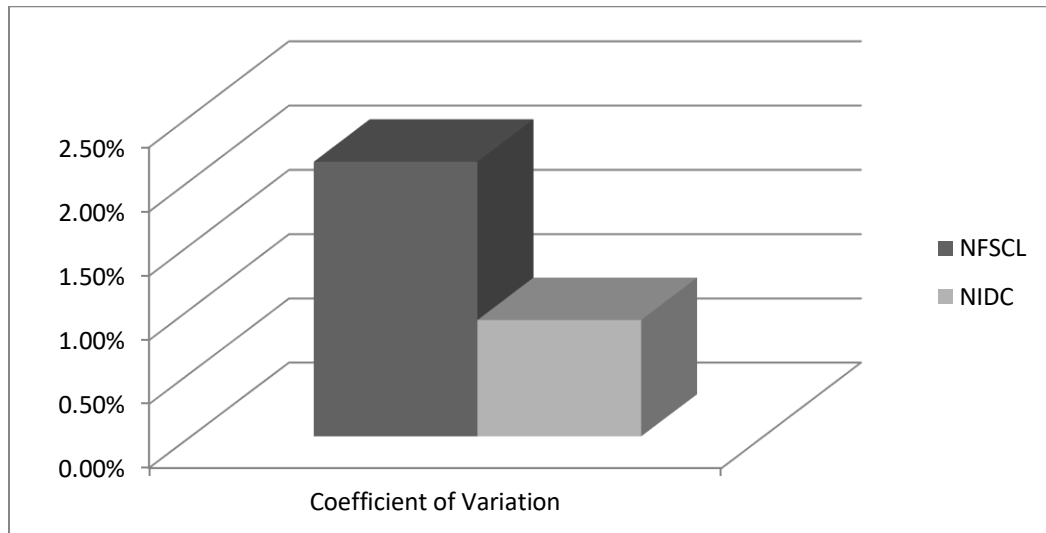
Table: 4.5

Expected Return, Standard Deviation and coefficient of variation of two Finance Companies

Companies	Expected Return	Standard Deviation	Coefficient of Variation
NFSCL	0.541	1.159	2.141%
NIDC	0.135	0.550	1.723%

Figure: 4.6

Coefficient of variation of two Finance Companies

Above table and figure 4.3 shows the expected rate of return of NFSCL is the highest (i.e. 1.159).It means by investing Rs 100 in the common stock of NFSCL, The Best way of comprising the Coefficient of Variation of NIDC is the lowest which means that to earn one unit return, the investors of NIDC should bear 0.9181 unit of risk. Expected rate of return and Coefficient of Variation of selected finance accompanies is shown in the figure 4.3 respectively.

4.5 Industry wise Comparison

A comparison made on the basis of market capitalizations and NEPSE index. The industry wise proportion of the market capitalizations is shows in the following table.

Table: 4.6

Industry wise comparison market capitalizations of last years

Name	Market Capitalization (in millions)	Percentage
Banking	200606.23	27.61
Finance and insurance	51118.32	7.035
Manufacturing and processing	7608.45	1.047
Hotel	7434.34	1.023
Trading	1183.65	0.162
Other	96667.33	13.30
Market	361919.21	49.81
Total	726537.5	100
Mean	14.28	
S.D	18.45	
C.V	129.20	

Source: Annex-3

Above the table and figure shows that Industry wise comparison market capitalizations of last year's is calculated on the basis of NEPSE index. Even though industry wise NEPSE index is not available in NEPSE .It is calculated on the basis of data provided and model applied as per SEBONN. The market capitalization is difference in different industries in the last years the banking market capitalizations is very high and trading sector is very low. Industry wise NEPSE index is calculated in annex. The average of banking is very high and trading is very low and a market capitalization is high in the fiscal years 2008/09 and low in the fiscal years 2005/06.

4.5.1 Analysis of Inter Industry Comparison on the Basis of End Price

Before year 2005/06, the different company that was listed in NEPSE was categorized into six sectors i.e. Banks, Manufacturing & Processing Company, Hotel Trading Company, Finance Company and Insurance Company and others. But from the year 2005/06, it was categorized into eight sectors, splitting banking Sector into commercial banks and development banks and finance company and Insurance Company as separate sectors. So, for the convenient of the study in Table 4.4 the NEPSE index of commercial bank and development bank from Year 2005/06 to 2009/010 as an average of the respective years and as so for the Insurance Company and Finance Company.

Table: 4.7

Market Capitalization of Inter Industry at the end of the years

In millions

Name	2005/06	2006/07	2007/08	2008/09	2009/10	Average
Banking	41169.23	40272.81	141599.54	277953.25	200606.32	140320.2
Finance and insurance	7632.23	9952.65	17949.32	48915.41	51118.15	27113.55
Manufacturing and processing	5024.65	5472.45	6200.16	7516.23	7608.25	6364.348
Hotel	2308.25	2344.65	3261.61	4809.62	4734.15	3491.656
Trading	635.31	764.58	796.24	1170.32	1183.52	909.994
Other	4594.58	8008.23	16495.15	25881.52	96667.16	30329.33
Total	**61364.25**	**66815.37**	**186302**	**366246.4**	**361917.6**	

Figure: 4.7

Market Capitalization of Inter Industry at the end of the years
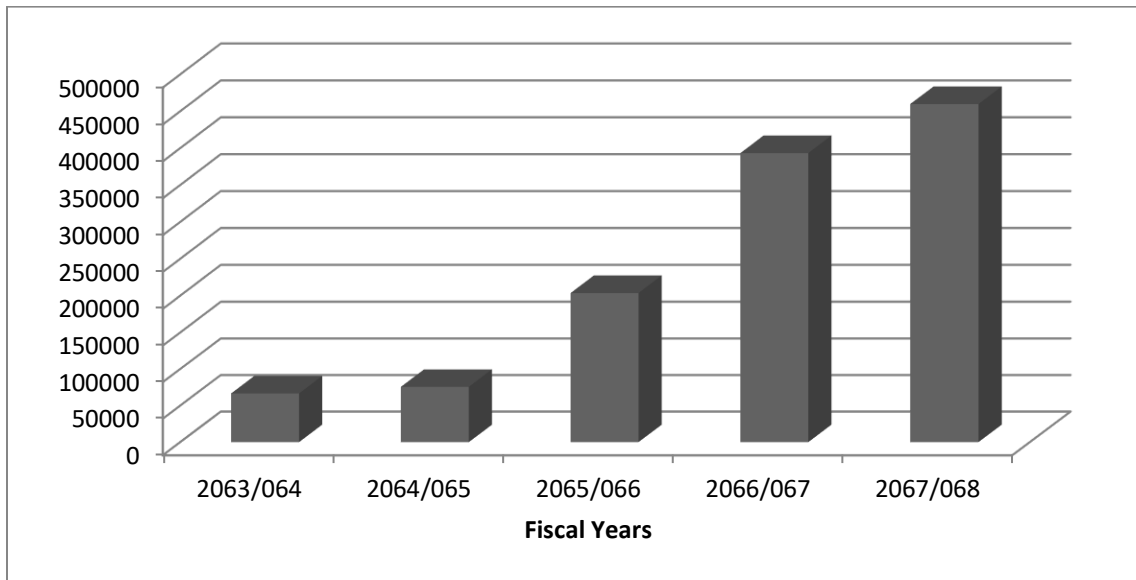
The detailed Calculation of realized return, expected return, standard deviation and Coefficient of variance of each sector are shown at Appendix at the end of the study. Here the calculation coefficient of variance of finance sector .Markets is in the following. A Comparison made on the basis of market capitalization and NEPSE index. The industry wise proportion of the market capitalization is shown in the following table and figure.

The above table and figure shows that the return of each industry is calculated on the basis of industry wise Nepse index. Even though industry wise NEPSE index is not available in NEPSE .It is calculated on the basis of data provided and model applied as per SEBONN. Details of return; of finance and insurance sector in different years. In FY 2009/010 the of finance and insurance sector was high. Year and industry wise NEPSE index is given in table 4.5 Annual realized return, expected return standard deviation of return and Coefficient of Variation of finance industry are shown in According to the result of the return of common stock investment another sectors highest which shows that higher the return higher will be risk. The return of Manufacturing and processing sector is lowest. The average of banking is very high and trading is very low and a market capitalization is high in the fiscal years 2008/09 and low in the fiscal years 2005/06.

4.6 Analysis of Risk and Return

Risk measures the degree of volatility in the market price movements of individual securities. The higher the magnitude of fluctuations, higher will be degree of risk though it is difficult to measure risk, some statistical tools like standard deviation and coefficient of variation are used to measure the risk involved in individual security. All these are calculated by using the formula described in research methodology chapter.

A. Standard Deviation

Standard deviation is a strong statistical device to measure the total risk involved in an investment, which consists of both market risk and diversifiable risk. Moreover it denotes the volatility of the expected rate of return. The calculated value of expected realized return and standard deviation of two sampled different finance are presented in the above table.

B. Coefficient of Variation

The standard deviation may not be appropriate measure of risk when the realized rates of returns are not same in all of the companies taken under consideration. Hence also the average realized rates of return are not same for the entire sample. Therefore, it is recommended to use the coefficient of variation to measure the risk involved in individual bank. The coefficient of variation measures the risk per unit of return. The coefficients of variation of the realized rates of return of the sampled finance are shown in the above table.

4.6.1 Analysis of Risk and Return of Market OF NSFL

In Nepal there is only one stock market which is the Nepal stock exchange (NEPSE).It is the nonprofit organization operating under securities exchange act 1983.Overall market movement is represented by market index or NEPSE index. Market return, its standard deviation and coefficient of variation is shown in the following.
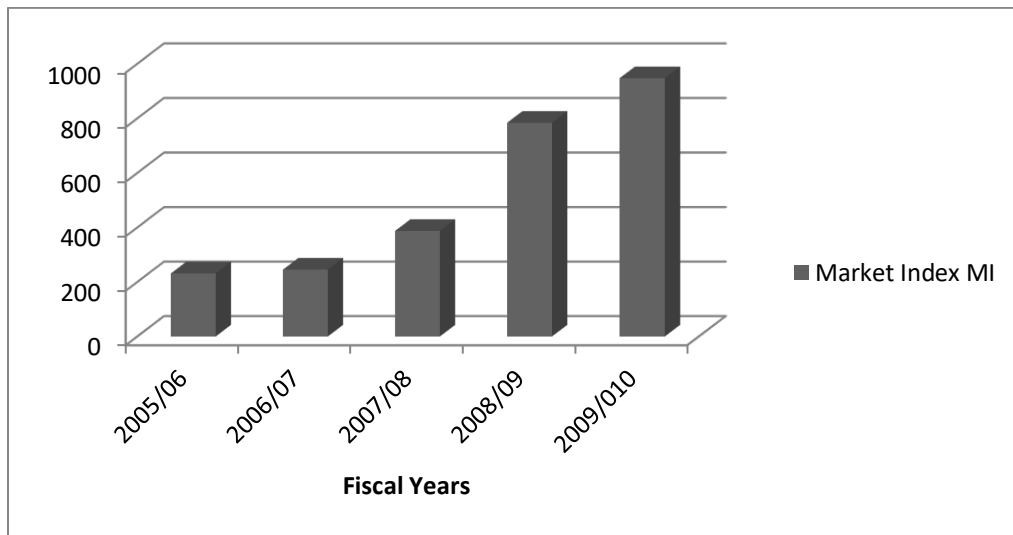
Table: 4.8

Realized Rate of Return. S.D and the CV of the Market Index of NSFL

Fiscal Year	Market Index MI	
2005/06	231.4	-
2006/07	245.5	0.578411
2007/08	387.5	1.023535
2008/09	784.12	0.207978
2009/10	947.2	1.870859
Total		**0.060933**
Mean		**0.78**
S.D		**0.68**
C.V		**87.75**

Source: Annex-4

Figure: 4.8

Realized Rate of Return of the Market of NSFL

The above table 4.7 shows the expected return, standard deviation and coefficient of variation of market. The total realized rate of return and expected return of market is 0.78. The total risk (S.D) is 0.68 whereas Coefficient of variation is 87.75.

The figure 4.7 shows the annual return of NIDC in different years. The annual rate of return of common stock of NIDC was negative in the fiscal years 2001/02. The annual return of rest years was positive. In the FY 2009/010 the annual return was highest.

4.6.2 Analyses of Risk and Return of Market of NIDC

In Nepal there is only one stock market which is the Nepal Stock Exchange (NEPSE). It is the nonprofit organization operating under securities exchange act, 1983. Overall market movement is represented by market index or NEPSE index. Market return, its standard deviation and coefficient of variation is shown in the following.

Table: 4.9

Realized Rate of Return, S.D and the CV of the Market of NIDC

Fiscal Year	Market Index MI	Ratio
2005/06	386.83	-
2006/07	683.95	0.768089
2007/08	963.40	0.408582
2008/09	904.30	-0.06135
2009/10	968.42	0.070906
Total		**1.186232**
Mean		**0.352**
S.D		**0.34**
C.V		**97.908**

Source: Annex- 5

Figure No: 4.9

Realized Rate of Return of the Market
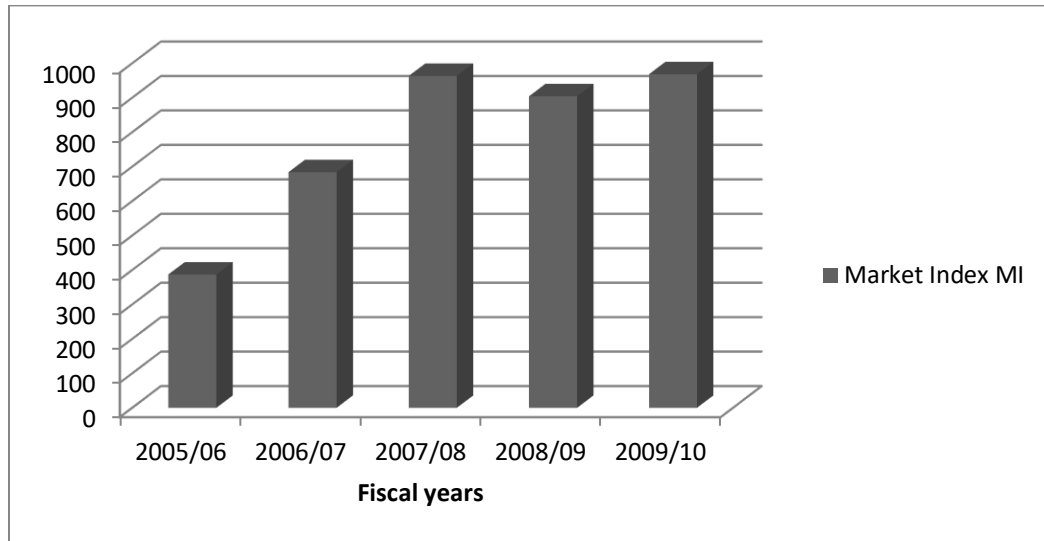
The table 4.4 shows the expected return, standard deviation and coefficient of variation of market. The total realized rate of return and expected return of market is 0.35. The total risk (S.D) is 0.34 whereas Coefficient of Variation is 97.90.

The figure 4.4 shows the annual return of NIDC in different years. The annual rate of return of Common stock of NIDC was in the fiscal years 2005 /06.The annual return of rest years was positive. In the FY 2009/010 the annual return was highest.

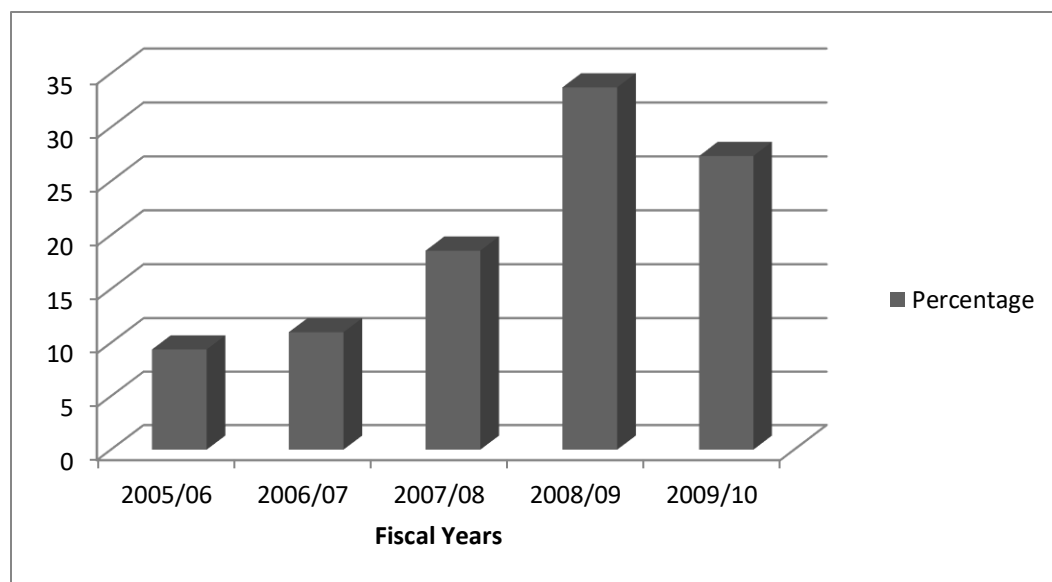## 4.6.3 Analyses of Risk and Return of financial index (FI)

Table: 4.10

Calculations of realize rate of return, standard deviations and C.V

Years	Financial index (FI)	Percentage
2005/06	274.39	9.38
2006/07	321.31	10.99
2007/08	542.51	18.56
2008/09	985.21	33.70
2009/10	799.32	27.34
Total	**2922.74**	**100**
Mean		**19.99**
S.D		**10.45**
C.V		**52.31**

Source: Annex-6

Figure: 4.10

Financial index

From the above table and figures shows that calculation of realize rate of return on the basic of financial index. Even though calculation of financial index is not available in Nepal stock exchange. It is calculations on the basic of provided data. Details of

calculation of index are not included in this report. Financial index is very high in 2008/09 and very low in 2005/06 i.e. 985.21 and 274.39. The mean, standard deviations and coefficient of variance are 19.99, 10.45 and 52.31representaly.

4.7 Total Risk, Unsystematic Risk, and Systematic Risk

The total variation of the rate of return for an individual security as measured by the standard deviation or variance of the rate of return .According to CAPM total risk is divided into two parts. They are unsystematic risk which is explained below.

Unsystematic risk.

Unsystematic risk is that portion of the total risk which results from controllable and known factors. Unsystematic risks refer to that portion of the risk which is caused due to factors unique or related to a firm or industry. The unsystematic risk is the change in the price of stock due to the factors which are particular to the stock.

Systematic risk.

The portion of the total risk of an individual security caused by market factors that simultaneously affect the prices of all securities. It can't be diversified away. It is also called market risk or unavoidable risk or non-diversifiable risk or beta risk. It stems from factors, which systematic risk affect all firms such as war, inflation, recession, high interest rates, depressions, and long term changes in consumption in the economy. Systematic and Unsystematic Risks

Systematic risk has its source factors that affect all marketable assets and thus cannot be diversified away. The sources of systematic risk are market pervasive. The measure of systematic risk permits an investor to evaluate an asset's required rate of return relative to the systematic risk of the stock. Unsystematic (company specific/unique) risk can be reduced through diversification. The relationship among total risk, systematic risk and unsystematic risk are shown below: (Detail Calculations See in Annex-7)

4.8 Major Finding

On the basis of the detailed study of the listed finance company in regards to investment in common stock including risk and return analysis following major findings have seen, they are presented as follows;

- Talking about number of listed companies under NEPSE, the increasing trend shows the positive percentage change which indicates increasing interest of public towards the establishment of companies in the country.

- The total realized rate of return and expected return of NFSCL is 0.541 respectively. Its standard deviation 1.159 whereas Coefficient of variation is 2.141 which means that for earning one extra unit of return from share of NFSCL, investors have to take 1.299 unit of risk and the annual rate of return of common stock of NFSCL was negative in the fiscal years 2065/066 and 2066/067.

- The company's proportion of the market capitalization of selected finance comparative and the NFSCL and NIDC have better performance from the views point of market capitalization than other finance companies.

- Nepalese stock market is in emerging stage. Its development is acceleration since the political change in effect of openness and liberalization in National economy. But due to lack o information and poor knowledge, Nepalese individual investor cannot analyses the securities as well as market properly.

- On the basis of market capitalization on July 15, 2008 banking sector covers more than 75.89% of total market capitalization which means that the banking sector has good performance than others.

- Other sectors has the maximum (50.31%) expected return and rest sectors has the minimum expected return. The expected rate of return of banking, finance and insurance, manufacturing and procession, hotel and trading are 24.01%, 22.72%, 4.10%,9.00% 9.65%, respectively CV of Manufacturing and Processing is highest 4.2491 and finance sectors has the lowest CV.

CHAPTER-V
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter includes the conclusion derived from the analysis of the study. Summary of the study has been mentioned the first section. The second has been designed for the finding and conclusion drawn from the study. The recommendation to eliminate the weakness, drawbacks of the common stock investment observed on the basis of finding has been labeled in the third section.

5.1 Summary

The main focus of the study is tradeoff between risk and return. The relationship between risk and return is described by investors' perception about risk and their demand for compensation. No investor will like to invest in risky assets unless he is assured of adequate compensation for the acceptance of risk. Hence the risk plays the vital role in the analysis of the investment. Risk and return is getting considerable attention in financial decision. The rate of return on the investment is the function of many factors including the real cost of money, inflation risk, maturity risk and default risk etc. the investors willingly offer more capital at higher rate of return where as the users of capital shows their readiness to use more capital at lower rate. Risk is the probability of chances of losses. It shows the variability of the return on the investment. Risk and return, analysis concept is a foundation of modern investment. The study was conducted to find out the behavior of stock price of three sampled commercial banks with respect to the movement of various financial indicators, tentative external events and some other factors. The chapter consists of three sections; the first section provides the summary of the study; the second section draws the conclusion of the study. Finally, the third section proposes recommendations to solve the problems observed on the basis of the findings.

As we know that every investment has the risk factor. And to maximize the profit we should minimize the risk. Every rational investor has to follow the following statement, 'not to -put all the eggs in one basket' it means by making or constructing appropriate

portfolio investor can increase their return instead of investing in a single security. A portfolio is the combination of different investment assets. It should be able to reduce unsystematic or diversifiable risk. The main focus of the study is the stock market investment.

Common stock is the most risky security and life blood of stock market. An investment in common stock of corporate firm neither ensures the rate of return nor ensures the return of principle. Common stock is the residual claimant to the earnings of the company. Common stocks holders receive whatever is left the other entire claimholder have taken their rightful share. Therefore, investment in common stock is very sensitive on the ground of risk.

Finance companies are the newly emerged institutions in Nepal. They came into operation under finance companies act, 1985. They are registered as limited liability companies with the office of the register of companies according of the provision made in the companies act, 1985. The accept time deposit and advance loans to individual, firms, companies or institution for agriculture as well as non agriculture purpose in order the increase economic activities. They also perform functions of merchant banking with the prior approval of NRB. They have become popular among low income and medium classes people as they make loans available for hire purchase and for the purchase vehicle, machinery, tools durable household goods or other similar movable goods.

Since the main objective of the study is to analyze the risk and return of common stock of Nepalese finance companies and that the stock of selected companies are overpriced, under priced or correctly priced. And also evaluate the optimum portfolio. Ten listed finance companies are taken as reference to analyze the risk and return in common stock investment. While analyzing the risk and return, brief review of literature has been conducted. Scientific method are used in data analysis and table, graph, diagram are used to present the result. Secondary data are collected from NEPSE, SEBONN, NRB and related finance companies. Major finding and conclusion of the study are drawn as follows.

The main objective of study is to analyze the common investment and risk and return attributes of investment with the help of two sampled finance company namely NFSCL and NIDC. It is mainly focused to developed the model accordingly and its empirical test in previous chapter. The model consists of standard deviations; coefficient of variations, beta coefficient, Sharpe's, Treynor's, and Jemison's model and under and overpricing of shares were adopted as test methodologies.

Before analyzing the results of test, the overview of the Nepalese stock markets has been sketched. The recent position and performance of market in Nepal has been analyzed. The Nepalese stock market has not been developed remarkably in the economy because of various market imperfections like limited number of buyers and sellers, effective government policies, negligence in development of corporate sectors etc. Market price of stock is the main outcome of investor's psychology. The psychology of investors is affected by various factors. Here in Nepalese market, dividend and price appreciation of stock is major factors for the investors to decide about purchasing of shares. Every investor must consider the financial status of organization before making any decision regarding the investment.

The decision for investment generally depends on the information about the performance of the company. In general, most investors prefer to buy shares of those companies whose earnings are very attractive and dividend payout ratio is high. However, rational investors not only analyze earnings but also various information regarding the company's management, dividend policy, market penetration, financial situation, and other internal and external factors before making investment decision. It is also found that some of the investors invest in shares for dividend and price appreciation and most of them are not interested about the other indicators which could affect the price of shares. It also seems from the research that the investors are conscious about the market price of the share they have bought as many investors seek for their share's price daily or weekly. Although they seek for their share price, most of them are not trading their shares in secondary market, which shows that most of the investors are holding their shares for only dividend and they are not using the change in share price for speculative purpose.

5.2 Conclusions

The dependence in the series of price changes observed implies that the price changes in the future market will not be independent from the price changes of the future days. It brings about that the information of the past price changes is helpful in predicting future price changes. In Nepal the shares of commercial bank are largely traded in the stock market. These shares play a key role in determination of stock exchange indicators. This study tries analyzing the result of the investment of shares of the commercial banks from risk and returning perspective. As we know that the prices of shares tend to fluctuate from time to time as a result the investors can buy shares when the value of shares decreases and hold till the share price increase. Therefore, sufficient opportunities are available to institutional and individual investors to make higher expected profits in future based on those historical price series. In the mean time while the statistical analysis regarding the risk and return of the sampled stocks shows that the all the banks seems to be risky than the average stock. But as most of the banks are offering cash dividends every year which may not be applicable to other types of no banking firms, there is race of investors towards the stocks of banking sectors.

Two of sampled Finances stock price found to be underpriced because their required rate of return is lower than the expected rate of return and one sampled finance' stock price found to be overpriced because their required rate of return is greater than the expected rate of return. The study also shows that Nepalese investors are more conscious towards the dividend and price appreciation of the shares they are investing but most of the investors are only using buy and hold strategy as only few of them are trading their shares in secondary market. This shows that there is lack of professionalism among Nepalese investors.

5.3 Recommendations

The finding of this study might be useful for those who are concerned with the investment in common stock of finance companies directly or indirectly. On the basis of major finding of the study the researcher thinks appropriate to recommend the concerned

institutions to individual authorities as well as other in order to consider the following suggestions.

- Expected return recommends that, the finance companies common stock are the best option for the investment as they are providing attractive rate or return.

- The public limited companies that have listed their share in NEPSE should disseminate exact and update information to the general public. The financial statement of each year should be published through appropriate means. Hence, the updated and exact statement should be published.

- The stocks of eight listed finance companies are under price so the investor should invest their funds of these stocks to make more beneficial.

- It was noticed that some of the listed finance companies have not submitted annual report to NEPSE on time. Hence, there must be stringent rules and regulations for listed companies in order to make them responsible to disseminate update information in timely fashion.

- Investment should be done with cleat objective i.e. to make additional money not to cover up losses and better to investigate.

- Stock market is very risky job so investors should know his need, desires, risk taking capabilities, adaptability in the in the changing market to win the stock market. Good forecasting ability self knowledge and sound understanding on information of stock market can give a winning edge to the investors.

- The listed companies should fulfill their liabilities of providing the financial status of the companies timely and comprehensively and they should hold Annual General Meeting regularly.

- Before making an investment decision in stock market, analyze our own risk attitude yours needs and requirements make several discussions with stock broker and make your decision on the basis of reliable information rather than rumor and imagination.

- The development of stock market is also dependent on political stability of the nation. So, government should be stable for the development of the stock market.

- Investment in capital market is a new phenomenon in Nepal. Most of the investors are purchasing shares in primary market only. They are not so conscious the risk involves in initial public offering.

- In case of the stocks are undervalued and some are overvalued thus investors are recommended to sell the overvalued stocks and to buy the undervalued stock.

- Administration should be made further coefficient to check the performance of individual companies' flow of information should be more regular.

- Generally the higher level of potential return higher will be the risk. Investment risks are better covered through a large and diversified portfolio. Diversifying is a way of reducing the poor investment portfolio.

- NEPSE need to modernize the trading system and effective information channel. It needs to develop different programmed for private investors such as meeting and seminars in different subject matters like 'trading rules and regulations' key factors that should be considered in stock market etc.

At last, it can be concluded that investment in common stock is risky task. One should know the basic models of security evaluation, concept of time value of money, security market operating procedure, fundamental analysis, tools of financial analysis and process of portfolio management. Investor can get much knowledge from the above key factor which will enable them to get maximum benefit from their investment by minimizing their level of risk.

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Annex- 1

Realized Rate of Return, Expected Return, Year end Price and Dividend of

Common Stock of NFSCL

Fiscal Year	Year end Price (p)	Dividend (d')	$R = \dfrac{Pt - p_{t-1} + Dt}{p_{t-1}}$	$(R - \bar{R})$	$(R - \bar{R})^2$
2005/06	134	154.50	2.130597	1.589597	2.526819
2006/07	265	90	1.132075	0.591075	0.34937
2007/08	475	50	0.475789	-0.06521	0.004252
2008/09	651	40	-0.14593	-0.68693	0.471872
2009/10	516	60	-0.88372	-1.42472	2.02983
	Total		2.708812	0.003812	5.382143

Source: Annual Report SEBON

We have,

Expected rate of return $\bar{R} = \dfrac{\sum R}{n} = 0.541$

Standard Deviation $\sigma = \sqrt{\dfrac{\sum (R - R)^2}{N - 1}} = \sqrt{\dfrac{5.3821}{5 - 1}} = 1.159$

Coefficient of Variation, CV $= \dfrac{\sigma}{\bar{R}} = \dfrac{1.159}{0.541} = 2.141$

Annex- 2

Realized Rate of Return, Expected Return, Year end Price and Dividend of Common Stock of of NIDC

Fiscal Year	Year end Price (p)	Dividend (d')	$R = \dfrac{Pt - p_{t-1} + Dt}{p_{t-1}}$	$(R - \bar{R})$	$(R - \bar{R})^2$
2005/06	165	14	0.2969	-0.24403	0.0595
2006/07	200	15	0.405	-0.136	0.0184
2007/08	266	15	0.3796	-0.1613	0.0260
2008/09	352	68.40	0.4386	-0.10236	0.0104
2009/10	438	68.24	-0.8442	-1.3852	1.9187
	Total		0.6761	-2.0289	2.0333

Source: Annual Report of SEBON

We have,

Expected rate of return $\bar{R} = \dfrac{\sum R}{n} = 0.1352$

Standard Deviation $\sigma = \sqrt{\dfrac{\sum (R - R)^2}{N - 1}} = \sqrt{\dfrac{2.033}{5 - 1}} = 0.550$

Coefficient of Variation, CV $= \dfrac{\sigma}{\bar{R}} = \dfrac{0.55}{0.135} = 4.23$

Annex- 3

Industry wise comparison market capitalizations of last years

Fiscal Year	Market Capitalization (in millions)	Percentage	$(R - \bar{R})$	$(R - \bar{R})^2$
Banking	200606.23	27.61	13.33	177.6889
Finance and insurance	51118.32	7.035	-7.245	52.4900
Manufacturing and processing	7608.45	1.047	-13.233	175.1123
Hotel	7434.34	1.023	-13.257	175.748
Trading	1183.65	0.162	-14.118	199.3179
Other	96667.33	13.30	-0.98	0.9604
Market	361919.21	49.81	35.53	1262.381
Total	**726537.5**	**100**		**2043.698**

Source: Annual Report of SEBON

We have,

Expected rate of return $\bar{R} = \dfrac{\sum R}{n} = 14.28$

Standard Deviation $\sigma = \sqrt{\dfrac{\sum(R - R)^2}{N - 1}} = \sqrt{\dfrac{2043}{7 - 1}} = 18.45$

Coefficient of Variation, CV= $\dfrac{\sigma}{\bar{R}} = \dfrac{14.28}{18.45} = 129.20$

Realized Rate of Return, S.D and the CV of the Market of NSFL

Fiscal Year	Market Index MI	R	$(R - \bar{R})$	$(R - \bar{R})^2$
2004/05	185.2	-	-	-
2005/06	231.4	0.247	-0.542	0.293764
2006/07	245.5	0.578411	-0.21059	0.044348
2007/08	387.5	1.023535	0.234535	0.055007
2008/09	784.12	0.207978	-0.58102	0.337587
2009/10	947.2	1.870859	1.081859	1.170419
Total		**3.927**		**1.901**
Mean		**0.785**		
S.D		**0.689**		
C.V		**87.758**		

Source: Annual Report of SEBON

We have,

Expected rate of return $\bar{R} = \dfrac{\sum R}{n} = 0.785$

Standard Deviation $\sigma = \sqrt{\dfrac{\sum(R - R)^2}{N - 1}} = \sqrt{\dfrac{1.901}{5 - 1}} = 0.68$

Coefficient of Variation, CV$= \dfrac{\sigma}{\bar{R}} = \dfrac{0.689}{0.785} = 87.75$

Realized Rate of Return, S.D and the CV of the Market of NIDC

Fiscal Year	Market Index MI	R	$(R - \bar{R})$	$(R - \bar{R})^2$
2004/05	245.32			
2005/06	386.83	0.5768	0.2248	0.050535
2006/07	683.95	0.768089	0.416089	0.17313
2007/08	963.4	0.408582	0.056582	0.003202
2008/09	904.3	-0.06135	-0.41335	0.170858
2009/10	968.42	0.070906	-0.28109	0.079014
Total		**1.763**		**0.476739**
Mean		**0.352**		
S.D		**0.345**		
C.V		**97.908**		

Source: Annual Report of SEBON

We have,

Expected rate of return $\bar{R} = \dfrac{\sum R}{n} = 0.352$

Standard Deviation $\sigma = \sqrt{\dfrac{\sum (R - R)^2}{N - 1}} = \sqrt{\dfrac{0.476}{5 - 1}} = 0.345$

Coefficient of Variation, $CV = \dfrac{\sigma}{\bar{R}} = \dfrac{0.345}{0.352} = 97.908$

Calculations of realize rate of return, standard deviations and C.V

Fiscal Year	Year end Price (p)	Percentage	$(R - \bar{R})$	$(R - \bar{R})^2$
2005/06	274.39	9.38	-10.61	112.5721
2006/07	321.31	10.99	-9	81
2007/08	542.51	18.56	-1.43	2.0449
2008/09	985.21	33.70	13.71	187.9641
2009/10	799.32	27.34	7.35	54.0225
Total	**2922.74**	**100**	0.02	437.6036

Source: Annual Report of SEBON

We have,

Expected rate of return $\bar{R} = \dfrac{\sum R}{n} = 19.99$

Standard Deviation $\sigma = \sqrt{\dfrac{\sum (R-R)^2}{N-1}} = \sqrt{\dfrac{437.60}{7-1}} = 10.45$

Coefficient of Variation, CV $= \dfrac{\sigma}{\bar{R}} = \dfrac{10.45}{19.99} = 52.31$

Risk Measurement

Calculation for Risk Measurement

Portion of Systematic risk $= \dfrac{Systmatic\ Risk}{Total\ Risk} = \dfrac{\beta_j^2 m}{\sigma_j^2}$

Total Risk $= \sigma_j^2$

Total risk= Systematic risk + Unsystematic risk

Systematic risk= $\beta_j^2 \times \sigma_j^2$

$\beta_j = \dfrac{\mathrm{cov}_j m}{\sigma_m^2}$

Where,

$\beta_j =$ beta coefficient of stock j

$\mathrm{cov}_j m =$ covariance of stock j and market return

$\sigma_m^2 =$ variances of market

Unsystematic risk= Total risk- Systematic risk

Calculation for Risk Measurement of NFSCL

Compilations co-variances between NFSCL return and market index return

years	Market index return			NFSCL Return		
	X	$X - \overline{X}$	R	$R - \overline{R}$		$(X - \overline{X}) \times R - \overline{R}$
2005/06	0.247	-0.533	2.130597	1.5896		-0.84726
2006/07	0.57841	-0.20159	1.132075	0.59108		-0.11915
2007/08	1.02354	0.243535	0.475789	-0.0652		-0.01588
2008/09	0.20798	-0.57202	-0.14593	-0.6869		0.392939
2009/10	1.87086	1.090859	-0.88372	-1.4247		-1.55417
Total	**3.92779**	**0.027784**	**2.708811**	**0.00388**		**-2.14352**
Mean						0.785557
S.D						0.689395
C.V						87.75886

$$Cov_{jm} = \frac{\sum[(R_j - \overline{R}_j) \times (R_m - \overline{R}_m)]^2}{N-1} = \frac{-2.143}{5-1} = -0.533$$

Beta coefficient $\beta_j = \dfrac{cov_j \, m}{\sigma_m^2} = \dfrac{-0.533}{0.689} = -0.774$

Systematic risk = $\beta_j^2 \times \sigma_j^2 = 0.599 \times 1.34 = 0.802$

Total Risk = $\sigma_j^2 = 1.34$

Unsystematic risk = Total risk - Systematic risk

$$= 1.34 - 0.802 = 0.537$$

Portion of Systematic risk $= \dfrac{Systmatic \; Risk}{Total \; Risk} = \dfrac{\beta_j^2 m}{\sigma_j^2} = \dfrac{0.802}{1.34} = 0.59$

Calculation for Risk Measurement of NIDC

Compilations co-variances between NIDC return and market index return

years	Market index return X	$X - \overline{X}$	NIDC Return R	$R - \overline{R}$	$(X - \overline{X}) \times R - \overline{R}$
2005/06	0.576	0.224	0.296	-0.244	-0.054
2006/07	0.768	0.416	0.405	-0.136	-0.056
2007/08	0.408	0.056	0.379	-0.161	-0.009
2008/09	-0.061	-0.413	0.438	-0.102	0.042
2009/10	0.070	-0.281	-0.844	-1.385	0.389
Total					**0.311**
Mean					**0.352**
S.D					**0.345**
C.V					**97.908**

$$Cov_{jm} = \frac{\sum[(R_j - \overline{R}_j) \times (R_m - \overline{R}_m)]^2}{N-1} = \frac{0.096}{5-1} = 0.024$$

Beta coefficient $\beta_j = \dfrac{cov_j m}{\sigma_m^2} = \dfrac{0.024}{0.302} = 0.079$

Systematic risk= $\beta_j^2 \times \sigma_j^2 = 0.006 \times 0.302 = 0.018$

Total Risk = $\sigma_j^2 = 0.302$

Unsystematic risk= Total risk- Systematic risk

$$= 0.302 - 0.018 = 0.284$$

Portion of Systematic risk $= \dfrac{Systmatic\ Risk}{Total\ Risk} = \dfrac{\beta_j^2 m}{\sigma_j^2} = \dfrac{0.0180}{0.302} = 0.0596$