CHAPTER ONE

Introduction

1.1 Background of the study:

Each and every individual investor wants to invest his capital in more secure and more returnable investment area. But the investor does not bear risk so he cannot earn more return by easy way. If the investor wants to yield more return he must bear high risk. Investor can invest his capital by different way of investment like giving loan to another person, promoting sole trading business, purchasing risk free T-bills, debenture, bond, preferred stock, common stock etc. Here my study area is investment in common stock of some selected listed commercial Banks in Nepal.

Return is sacrifice of the present investment for future benefit. Return is the extra benefit or premium for risk. Future is uncertain, so future return will be associated with some risk. In other words return is the income received in investment. People invest their belongings with an expectation of getting some reward for leaving its liquidity. They only invest in those opportunities where they can get higher return. Hence investor wants to favorable return to be yield by its stock and go for those investments, which yield more.

The risk associated with an investment may be defined as the variability that is likely to occur in the future returns from the investment risk is related to future and future is uncertain but risk is manageable rather than uncertain. Risk is the facts of life, which is product of uncertainty and its magnitude depends upon the degree of variability in uncertain cash flows. Risk in fact an indication of chance of losing investment back. Different people interpret risk in different ways. To some it is simply a lack of definite outcome, which can be any unknown unfavorable event. It is a chance of happenings some unfavorable event or danger of losing some material value.

Now days, each and every managerial decision-making is based on financial analysis. It covers the acquisition, utilization, control and administration of fund.

"Managerial finance is an increasing, exciting and dynamic area of study and its importance to the long run success of today's business in unquestioned".[1] Financial management leads to the decision-making most skillfully and tactfully. Finance has become an important branch of any economy of which share market is a leading sector. Securities raise funds in capital market that certainly helps to expand the national economy. Development and expansion of financial market are essential for the economic growth of the country. Financial market helps economic development by mobilizing long term as well as short-term capital needed for the financial market.

A stock reflects the uncertainty about future return, such that the actual return may be less than expected return. The main source of uncertainty is the price at which the stock will be sold. Dividends tends to be much more than stock prices which contributes to the return immediately received by investors and at the same time reduces the amount of earnings reinvested by the firm, which limits it's potential growth. And the stock prices can be affected by economic factors such as interest rates, economic growth, inflation and the strength of the dollar. They also can be affected by micro economic factors such as interest such as specific policies enacted by the particular firm that will affect future earnings. The risk of a stock can be measured by its price volatility.

What is risk? It is difficult to define the term risk. "Risk is like pornography. It is hard to define, but you know it when you see it."[2] Generally, investors are risk averse. They always seek higher return for more risk as risk premium. So the primary problem in investment is to identify the security which has low risk and high return. Although, return cannot be increased substantially, risk can be reduced by diversification of funds in different stocks making a portfolio. Well diversification can eliminate the unsystematic risk that is not explained by general market movement i.e. systematic risk is associated with change in return on the market as a whole, can not be avoided by diversification.

[1] Lawrence, J. Gittman, "Principles of Managerial Finance" 4th ed., Harper and Raw Inc., New York (1985).
[2] Van Horne, James C. & Wachowicz, "Fundamental of Financial Management" Prentice Hall, Inc., USA (1995).

"Stock market is a financial market which probably has the greatest glamour and is perhaps the least understood. Some observers consider it as a legalized heaven for gambling and many investors stock market investing as a game in which the sole purpose is picking winners."[3] Capital market is the part of financial market. A financial market is market in which financial asset (securities) such as stocks and bonds can be purchased or sold. One party transfers funds in financial market by purchasing financial assets previously held by another party. Financial market facilitates financing and investing by households, firms and governments agencies. The main objective of market is to create opportunity for maximum number of people to get the benefit from the return obtained by directing the economy towards the productive sectors by mobilizing the long-term capital. The objective can be fulfilled only by the rational and accountable behavior relating to the three factors of the capital market such as institution, mediator and investor. Emergence, growth and popularity of corporate securities, including common stock are accompanied by the development of capital market.

Financial market comprises of money market and capital market. Money markets for debt security that payoff in the short-term i.e. less than one year like government's treasury bills of 90 days. Capital market refers to the market for long term debt and equity shares. These can be further divided into primary market and secondary market. Primary market is the market, where the shares are offered to general public for the first time and in the secondary market the securities that have already been purchased by the general public in primary market are traded again and again.

In Nepalese context the institutional development of securities market began along with the "Securities Exchange Center" (at present Nepal Stock Exchange Limited) in 1976 A.D. As the institutional set up of securities market supports to potential investor by providing information of listed companies stock regularly and manage trading environment of the stocks. Most of the shareholders and investors are least familiar with risk and return. "Most of the Nepalese investors

[3] Lorie, James H. & Petter Dood, "The Stock Market: Theories and Evidence" Richard D. Irwin Inc. SA (1985).

are found to invest in single security."[4] People's participation in security investment and its dynamic trading play a vital role in overall economic development. For this purpose potential investors must be able to analyze risk and return of individual stock and portfolio as well. So it is necessary to evaluate the securities in terms of risk & return before investing. "Listing is primarily determined by the wishes of the economy, the size of the company and the trading activity of the stock".[5] And "Stock exchange means any body of individuals, whether incorporated or not, constituted for the purpose of regulating or controlling the business of buying, selling or dealing in securities".[6] "Security markets exist in order to bring together buyers and sellers of securities meaning their mechanism are created to facilitate the exchange of financial assets".[7]

1.1.1 Introduction of Sample Commercial Bank

There are 23 commercial banks are in operation among them 16 banks are listed in NEPSE. This study has been focused on the six listed commercial banks up to mid July 2006 (i.e. end of the F/Y 062/63). The positional orders of the selected sample banks are as follows:

- Nabil Bank Ltd. (NABIL)
- Nepal Investment Bank Ltd. (NIBL)
- Standard Chartered Bank Nepal Ltd. (SCBNL)
- Himalayan Bank Ltd. (HBL)
- Nepal SBI Bank Ltd. (SBI)
- Nepal Bangladesh Bank Ltd. (NBBL)

1.1.1.1 NABIL Bank Limited (NABIL):

NABIL Bank is the first joint venture commercial bank in Nepal. It was established in 2041 B. S. (1984 A. D.) and listed in NEPSE in year 1986 A. D. Dubai Bank Ltd. was the initial foreign joint venture partner with 50 percent equity investment. The

[4] Bhatta, Gopal P., "Assessments of the Performance of Listed Company in Nepal." MBA Thesis T.U. Kathmandu (1996)
[5] Edwin, J. Elton and Martin J. Gurber, "Modern Portfolio Theory and Investment Analysis", 5th Ed. New York 1996)
[6] V.K. Bhalla, "Invest management" 4th Ed. (1997)
[7] William, F. Sharpe, G. J. Alexander, J.V. Bailey, "Investment" Prentice Hall Inc. USA (1995)

shares owned by Dubai Bank Ltd., (DBL) were transferred to Emirates Bank International Ltd. (EBIL), Dubai. Later on, EBIL sold its entire 50 percent equity holding to National Bank Ltd., Bangladesh (NBLB). Now, NBLB is managing the bank in accordance with the technical service agreement signed between both banks on June 1995. Other information of the bank is as follows:

Authorized Capital	:	Rs. 1,600,000,000
Issued Capital	:	Rs. 689,216,000
Paid up Capital	:	Rs. 689,216,000
Par Value per share	:	Rs. 100
No. of share holders	:	6,892,160 as on listing date
Central Office	:	Kamaladi, Kathmandu

1.1.1.2 Nepal Investment Bank Limited (NIBL):

Nepal Investment Bank Limited was established on 21 January 1986 A. D. (B.S. 2042) as a third joint venture bank with the name of Nepal Indosuez Bank Ltd. and initially it was managed by Banque Indosuez, Paris in accordance with Joint-Venture and Technical services agreement signed it and Nepalese promoters. NIBL was listed in NEPSE on 05/08/2044 B.S. Now the bank is operating under the full ownership of Nepalese promoters and shareholders. Other information of the bank is as follows:

Authorized Capital	:	Rs. 2,000,000,000
Issued Capital	:	Rs. 1,203,915,400
Paid up Capital	:	Rs. 1,203,915,400
Par Value per share	:	Rs. 100
No. of share holders	:	12,039,154 as on listing date
Central Office	:	Durbar Marg, Kathmandu

1.1.1.3 Standard Chartered Bank Nepal Limited (SCBNL):

Standard Chartered Bank Nepal Limited was established on 1985 A. D. (B.S. 2042) as a second foreign joint venture bank with the name of Nepal Grindlays Bank Ltd. And initially it was managed by ANZ Grindlays Bank PLC in accordance with Joint-

Venture and Technical services agreement signed it and Nepalese promoters. Now Standard Chartered Bank England is managing the bank under joint-venture and technical services. SCBNL was listed in NEPSE on 03/21/2045 B.S. Other information of the bank is as follows:

Authorized Capital	:	Rs. 2,000,000,000
Issued Capital	:	Rs. 1,276,527,400
Paid up Capital	:	Rs. 1,276,527,400
Par Value per share	:	Rs. 100
No. of share holders: as on listing date		12,765,274
Central Office	:	New Baneshwor, Kathmandu

1.1.1.4 Nepal Bangladesh Bank Limited (NBBL):

Nepal Bangladesh Bank Limited was established on 1994 A. D. (B. S. 2051) as a foreign joint venture bank with IFIC Bank Ltd., Bangladesh, under the Joint-Venture and Technical services agreement signed between it and Nepalese promoters. NBBL was listed in NEPSE on 09/09/2052 B. S. Other information of the bank is as follows:

Authorized Capital	:	Rs. 2,000,000,000
Issued Capital	:	Rs. 719,800,000
Paid up Capital	:	Rs. 719,800,000
Par Value per share	:	Rs. 100
No. of share holders	:	7,198,000 as on listing date
Central Office	:	Bijulibazar, Kathmandu

1.1.1.5 Himalayan Bank Limited (HBL):

Himalayan Bank Limited was established on 1992 A. D. (B.S. 2048) and operation of the bank was started on February 1993 as first foreign joint venture bank managed by Nepalese Chief Executive Joint-Venture with Habib Bank Ltd,

Pakistan. HBL was listed in NEPSE on 03/21/2050 B.S. Other information of the bank is as follows:

Authorized Capital	:	Rs. 1,000,000,000
Issued Capital	:	Rs. 810,810,000
Paid up Capital	:	Rs. 810,810,000
Par Value per share	:	Rs. 100
No. of share holders	:	8,108,100 as on listing date
Central Office	:	Tridevi Marg, Thamel, Kathmandu

1.1.1.6 Nepal SBI Bank Limited (SBI):

Nepal SBI Bank Limited was established on 1993 A. D. (B.S. 2048) and operation of the bank was started on July 1993 as foreign joint venture bank managed by State Bank of India under the Joint-Venture and Technical services agreement signed between it. SBI was listed in NEPSE on 10/03/2051 B.S. Other information of the bank is as follows:

Authorized Capital	:	Rs. 1,000,000,000
Issued Capital	:	Rs. 500,000,000
Paid up Capital	:	Rs. 431,865,600
Par Value per share	:	Rs. 100
No. of share holders	:	4,318,656 as on listing date
Central Office	:	Hattisar, Kathmandu

1.2 Focus of the study:

There are different types of securities as treasury bills long-term government bonds, long term corporate bonds, common stocks etc. Among these securities this study concerns with common stocks. "Common stock represents a commitment on the part of corporation to pay periodically what ever its board of directors deems appropriate as a cash dividend".[8] Common stock is known as a risky security. Common stock holders of a company are its ultimate owners.

Collectively they own the company assuming that ultimate risk is associated with ownership.

Investors invest in common stock expecting higher return. But their expected return may or may not change into realities. This uncertainty is a major risk to investors in stock market investment.

Banking sector is the most dynamic part of economy, which collects unused funds and mobilizes it in needed sectors. It is the heart of trade, commerce and industry. In Nepalese context commercial banks have comparatively better performance among the public limited companies? Specifically, Nepalese banks have a high degree of internal (firm-specific) risk. On the other hand, they have to bear more social obligation and have to face government intervention, political affection, security problem and other too many problems of the country.

In Nepal, concept of formal banking system was introduced with the establishment of Nepal Bank Ltd. in 1937 AD. After establishment of Nepal Bank Ltd. the Govt. invested Bank like central bank of Nepal NRB, RBB were established. But the new modern banking system with latest technology & services and financial scenario has gradually changed after establishment of first private sector joint-venture bank, Nepal Arab Bank Limited (now NABIL Bank Limited) in 1984 AD. Now in Nepal 23 commercial banks are rendering their services to the general public. Out of total commercial banks 16 commercial banks have already issued its public share and they were listed in Nepal Stock Exchange Limited which claims highest contribution on the market capitalization as compared to other sectors. After establishment and development of the joint venture banks in Nepal people are getting banking services with the latest and modern technology than before. In Nepal also many commercial banks have introduced and rendered services by debit and credit card, ATM card etc to the general people. These are also proven that investment in common stock of commercial banks is more returnable than other sectors.

[8] William, F. Sharpe, G.J. Alexander, J.V. Bailey, " Investment" Prentice Hall Inc. USA (1995)

1.2 Statement of the Problem:

The study of "Risk & return analysis" is the most important and essential tool in the area of investment because by using risk and return analysis, investor can find the less risky higher profitable investment of the different investment alternatives from the security market. Investor's attitude and perception plays a vital role in rational decision, which are influences by the knowledge and access to the data required for analysis.

In Nepalese context most of the general public who wants to invest in common stock like to buy share from primary market rather than secondary market. Most of the investor they don't know where is the secondary market place for those stock, what are the process for selling & buying the stock, why the price of stock were fluctuate (up and down), why need to analyze the risk and return etc. So due to the lack of information and poor knowledge potential investor is manipulated or exploited by the financial institution and other market intermediaries to such as extent that investing in common stock in intolerably hazardous. So main problem is the lack of information to analyze the risk and return on common stock investment. Not only general public but also the academicians also can not analyze risk and return properly while making stock investment decision. Investor should be informed properly about the corporate, it's financial position and about the stock market because investors are the main bases for any company and stockbrokers. Investors are the primary source of funds or capital for company and also the source of revenue as a customer for the stockbrokers and financial intermediaries. But in Nepal, there are no any separate institutions which provides information required making rational decision that could accelerate the stock investment and market efficiency

To invest in stocks one should know what the accurate price of the stock is. For this the theoretical knowledge as well as market conditions should be known clearly about the determinants of stock prices. According to the theory of stock price, stock price in market is guided by the intrinsic value which is calculated with the inputs-dividend, required rate of return of investors and growth

individuals. The stock prices are assumed to remain in security market line and if is not so, they strive towards this line and come to the equilibrium. If the expected rate of return from stock and required rate of return on investors are not equal, the intrinsic and market value of stock will not be equal. In such case the price of stock may be over priced or under priced. Hence, the location of expected rate of return may lie above or below the security market line.

Common stocks firstly traded in the primary market by the issuing corporation and these securities are traded in the secondary market by the investors and stockbrokers. Common stock does not guarantee for annual returns nor it ensure for the return of price of stock thus is considerably risky. Hence it needs courage and at the same time faith to invest in common stocks. In most of the time which can be generated through proper evaluation with giving view to the prevailing market atmosphere. But how can one rely on these stocks. What are the criteria for evaluation that the stock they have to receive for bearing a certain degree of risk? How they know the magnitude of risk? How can one make higher return assuming lower risk? These are the burning issues that have influenced researcher to carry out this study.

While now we are in the age of modern technology the investor can get all the information and require data to analyze from the Internet but few people have computer and computer knowledge. They cannot get those data, so general people are much far from its advantages and moreover people feel that there is more risk in investment of security than its actual risk. It must be necessary to build their confidence unbiased analysis and information about it. There are no any availability of a simple and clear way or technique to analyze risk and return of individual stock & portfolio, therefore being major weakness to increase stock investment and stock market efficiency as well.

1.4 Objectives of the Study:

The general level objective of this study is to assess the risk and return on common stock investment of commercial banks. The specific level objectives could be listed as below:

- To find out whether the shares of selected commercial banks in Nepal are over priced, under priced or correctly valued by analyzing the risk and return of the individual shares,
- To calculate and analyze the risk and return of banking sector portfolios,
- To evaluate common stock of listed commercial banks in reference to their risk and return, and
- To provide relevant suggestion and recommendation to concerned authority.

1.5 Significance of the Study:

This study will give proper information about Nepalese stock market and may contribute in the analytical power of the investors. The main significances of this study are:

- This study will be helpful to analyze to the growth of the individual bank and market.
- It will be beneficial to concerned authority: i.e. analyst, promoters, investors, shareholders, management and policy makers.
- It will be provide some knowledge about the Nepalese stock market developments along with providing ideas to minimize the risk on stock investment
- It will be helpful to future researcher.

1.6 Limitation of the Study:

Each and every researcher is bounded by certain limitation of time, resources, study material, data etc. So this study is also not free from its limitation. The main limitations are:

- This study period covers five years data only from 2001/2002 to 2005/2006.
- The study mainly based on secondary data.

- Analysis is based on the tools developed in context of efficient market condition.
- Variation in data published from different source e.g. figure published by NEPSE, NRB, SEBON and related companies differ to some degree.
- The study is only to fulfill the requirement of Masters Degree in Business Studies so the study cannot cover all the dimension of the subject matter.
- Resource & time period will also limit the study.
- The reliability of conclusions of this study is based upon the accuracy of secondary data.
- The study is based on six listed commercial banks only they are as follows:
  - ❖ Nabil Bank Ltd. (NABIL)
  - ❖ Nepal Investment Bank Ltd. (NIBL)
  - ❖ Standard Chartered Bank Nepal Ltd. (SCBNL)
  - ❖ Himalayan Bank Ltd. (HBL)
  - ❖ Nepal SBI Bank Ltd. (SBI)
  - ❖ Nepal Bangladesh Bank Ltd. (NBBL)

1.7 Organization of the study

This study has been organized in to five chapters each devoted to some aspects of the risk and return on common stock investment of commercial banks in Nepal. The titles of each chapter are as follows.

Chapter- 1	Introduction
Chapter- 2	Review of literature
Chapter- 3	Research methodology
Chapter- 4	Presentation and Analysis of data
Chapter- 5	Summary, conclusion and Recommendation

- The first chapter contains the introductory part of the study. As already mentioned this chapter describes major issues to be investigated along with the objective and scope of the study.
- The second chapter is directed towards the review of literature of related studies. It contains conceptual frame work, major studies in general and reviews of major studies in Nepal.
- The third chapter describes the research methodology employed in the study. This chapter deals with the matter and sources of data, population and sample, statistical tools and financial tools.
- It deals with presentation and analysis of relevant data and information through definite courses of research methodology.
- It states summary, conclusion and recommendation of the study. This chapter sates main finding, issues, gaps and suggestive frame work of study.

CHAPTER - II

REVIEW OF LITERATURE

This chapter relates the conceptual frameworks of this study and it is devoted to discuss briefly about risk and return on common stock investment. Some academic course books, journals, magazines, some master degree thesis etc. related to the field of the study has been reviewed.

2.1 Conceptual Framework:

Various writers have defined the theoretical aspects of risk and return in various ways, which are taken into consideration in this chapter. Major focus of finance is trade off between risk and return. Here main focus is its implication in the investment on the common stock.

2.1.1 Common stock:

The Common stock is a legal representation of an equity or ownership position in a corporation. It lies under variable income security between two types of securities: fixed income and variable income and is a negotiable instrument. It can be bought and sold in the secondary market. It has a residual claim, in the sense that creditors and preference shareholders can receive payment only after the payment of all other claims with preferential basis. In bankruptcy, common stockholders are, in principal, entitled to assets remaining after all prior claimants have been satisfied. The risk is highest with common stock investment. When investors buy common stock they receive certificate of ownership as a proof of they're being part of company. The certificate states the number of shares purchased and their par value".

"All the shares, with the exception of preference shares, are regarded as equity shares (common stocks)."[9] In Nepal, as per the provision of Nepal Company Act 2053, the par value of a share should be Rs. 10 or Rs. 100. The issuance trend of common stock in Nepalese company is Rs. 100 per share.

[9] Nepal Company Act 2053

Common stocks have one important investment characteristics and are important speculative characteristics. Their investment value and average market price tends to increase regularly but persistently over the decades as their net worth builds through the reinvestment of undistributed earnings. But most of the time common stocks are subject to irrational and excessive price fluctuation in both directions, so most of the people speculate or gamble i.e. give way to hope fear and greed. (IBID: 98)

2.1.2 Dividend (D):

Dividend is relevant during the computation of rate of return, which is a reward to the shareholders for their investment. Normally there are two types of dividend i.e. cash dividend and stock dividend. 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 theoretical aspect after several discussions with NEPSE staffs and investors.

2.1.3 Return on common stock:

Return is the reward for waiting and risk bearing. Return is the motivating force in the investment process. It is the reward for undertaking the investment. The overall rate of return can be decomposed into two parts .the first component that usually comes to mind is the periodic cash receipts which is called dividend. The second component is the appreciation or depreciation in the price of assets which is commonly called capital gain or loss. Return measures the investor's rate of wealth accumulation. Capital appreciation is the difference between ending value and beginning value of an investment.

2.1.4 The risk on common stock:

Uncertainties and risks are the facts of life to the common stock holders. Different people interpret uncertainties and risk in different ways. Many investors consider, risk as a chance of happening some unfavorable event of danger of losing some value.

Risks and uncertainties are treated separately in financial analysis. The practice is to translate the uncertainty into a mathematical value, which represents the best estimate of all uncertain values. In other words uncertainty is taken care of by calculating the expected value of all possible uncertain outcomes. But risk is treated differently. Although risk from uncertainty its magnitude depends upon the degree of variability in uncertain cash flow and it is measured in terms of standard deviation.

The investor's perceptions about risk and their demand for compensation describe the risk return relationship. After making a concept about the adequate compensation for the assumption of risk, the investor will like to invest in risky assets such as common stocks. So, the risk return trade off is the main factor for the investor while investing on common stock.

"Risk, defined most generally, is the probability of the occurrence of unfavorable outcomes. But risk has different meanings in different context. In our context two measures developed from the probability distribution have been used as initial measures of return and risk. There are the mean and the standard division of the probability distribution".[10]

"Instead of measuring risk the probability of a number of different possible outcomes, the measures of risk should some how estimate the extent to which the actual outcome is likely to diverge from the expected outcome. Standard deviation is a measure that does this because it is an estimate of the likely divergence of actual return from an expected return".[11]

[10] Op. cit Weston and Brigham. Pg-93
[11] Sharpe, Alexander and Bailey, "Investments" p.41

Risk is the unlooked and unwanted event in the future; someone has said that risk was the sugar and salt of life. "Risk is defined in Webster's Dictionary as a hazard, a peril, exposure to the loss or injury, thus for most, risk refer to the chance that some unfavorable event will occur. If you invest in speculative stocks (or really, any stock), you are taking a risk in the hope of making an appreciable return".[12]

2.2 Reviews from Related Studies:

In this section necessary academic books, journals, Masters Degree thesis and other independent studies were reviewing related to the topic "risk and return".

2.2.1 Review from Journals:

There are very few books and research based journals in the field of finance in Nepal. There are very limited numbers of journals available in the subject of management and it is also hard to find any article in the subject matter of finance. Almost no articles about the risk and return analysis on common stock investment are found. Hence some foreign well-known journals of finance related to this topic have been reviewed here. However, it helps to build the conceptual framework on this topic.

In August 1999, an article entitled "Local Returns Factors and Turnover in Emerging Stock Markets" by Greet Rouwenhorust published in the journal of finance by American Finance Association has been reviewed here. "There is growing empirical evidence that multiple factors are cross-sectional correlated with average returns than large stocks Bang (1981). Fama Frence (1992/1996) and Lakosnishock, shleifer an Vishny (1994) show that value/stocks with book to market (B/M), earning to price (E/P), and cash flow to Price (C/P) out perform growth stocks with low B/M, E/P or C/P. Moreover, stock with poor performance (Jagadees and Titman 1993). The evidence that beta is also compensated for in average returns is weaker (Fama and Frence 1992), Kothari, Shaken and Stone (1995). The interpretation of the evidence is strongly debated. Some believe that the premiums are a compensation for pervasive risk factor, other attribute them to

[12] Op. cit. Weston, Basley & Brigham, P.182-183.

firm characteristics or inefficiency in the way market incorporate information into price.

This paper examines the sources of return variation in emerging stock market. Forms of collecting independent samples, emerging market countries are particularly interesting, because of their relative isolation from the capital markets of other countries. Compared to developed markets, the correlation between most emerging market and other stock markets has been low (Harvey 1995) and until recently many emerging countries restricted investment by foreign investors. Interestingly, Bekaert and Harvey (1995) found that despite the recent trend toward abolition of these restrictions and the substantial inflows of foreign capital, some emerging equity markets have actually become more segmented from world capital markets. A large portion of the equity capital of emerging economies is held by local investors who are likely to evaluate their portfolios in the light of local economy and market condition (Bekaert an Harvey 1997)".[13]

On the above background Rouwenhorst attempts to answer two set of questions. "The first set of three questions concern the existence of expected return premiums, (I) Do the factors that explain expected return difference in developed equity markets also describe the cross section of expected returns of emerging market firms? (II) Are the returns factors in emerging markets primarily local or they having global components as well? (III) How does the emerging market evidence contribute to the international evidence form developed markets around the world?

The second set of questions of the paper includes (I) is there a cross sectional relation between liquidity and average returns is emerging markets? (II) Are the return factors in emerging markets cross sectional correlated with liquidity?

About the data Raowenhorst stated that: as of April 1997 the emerging market Datavasarke (EMDB) of the IFC contains date on more than 2200 firms from 31 emerging markets but not all are included in the sample. Eleven countries are

[13] Rouwenhorst, K. Greet (1999),"Local Return Factors and Turnover in Emerging Markets" The journals of finance Vol. LIV No. 3, 1999, p. 1439-1440

excluded because of insufficient return histories, which leave 1705 firms in the 20 countries that the IFC tracks for at least seven years. For some firm's monthly closing process and dividends is available dating back to 1975. Starting at various points during 1981s the IFC expanded its reporting to include monthly time series for price-to-book ratios, price-earning ratios, market capitalization, trading volume and the number of days per month that a stock is traded.

Total return is calculated as the sum of the dividend return and price appreciation, using prices scaled by a capital adjustment factor, which the IFC computes to correct for price effects associated with stock splits, stock dividends and right issues. Many emerging market have firms with multiple share classes are treated as a single value weighted portfolio of the outstanding equity securities".[14]

In this paper Rounwenhorst has been made detail analysis of the data and he interprets the result in each section. Lastly, he has concluded his findings as: -

The first conclusion is that the return factors in emerging markets are qualitatively similar to those in developed markets: small stocks outperform growth stocks and emerging markets stocks exhibit momentum. There is no evidence that local market betas are associated with average returns. The low correlation between the country return factors suggests that the premiums have a strong local character. Furthermore global exposure can not explain the average factor returns of emerging markets. There is little evidence that the correlation between the local factor portfolios have increase, which suggests that the factors responsible for the increase of emerging market country correlation are separated from those drives the difference between expected return within these markets. A Bayesian analysis of premiums in developed and emerging markets shows that unless one has strong prior beliefs to the contrary, the empirical evidence favors the hypothesis that size, momentum and values strategies are compensated for in expected returns around the world.

Finally, the paper documents the relationship between expected returns and share turnover and examines the turnover characteristics of the local returns factor

[14] Ibid. p. 1442-1443

portfolios. There is no evidence of relation between expected returns and turnover in emerging markets. However, beta, size momentum and value are positively cross sectional correlated with turnover in emerging markets. This suggests that return premiums do not simply reflect a compensation for liquidity".[15]

This study by Rouwenhorst does not consider the analysis of single security. It has been analyzed the returns factors in worldwide stock markets. However, it concentrates in the various emerging stock markets. Hence the article contributes in the area of risk and return analysis in common stock investment.

2.2.2 Review from Thesis:

There are some studies had been conducted as a thesis for the partial fulfillment of Masters Degree in T.U. related to the topic "Risk and Return". Which are reviewed here?

Gopal Prasad Bhatta "**Assessment of the performance of listed companies in Nepal".** Master Degree unpublished Thesis, TU 1995 He has carried out a study on performance of listed companies in terms of risk and return. He had taken five years data 1990-1995. The main objective of the study was "To analyze the performance of listed companies in terms of risk and return".[16] From the study Mr. Bhatta addressed the following findings in risk return behavior from analysis of different stocks.

"A highly significant positive co-relationship has been addressed between risk and return character of the company. Investors expect higher returns from those stocks, which associated higher risk. Nepalese capital market is not efficient one. So the stock price does not contain all the information relating to market and company. Neither investor analyzes the overall relevant information relating to the market and company itself, nor does the member of the stock exchange try to

[15] Ibid. p. 1462
[16] Bhatta, Gopal Prasad, "Assessment of the Performance of Listed Companies in Nepal", unpublished MBA thesis, Central Department of Management. T.U. p. 1-100

disseminate the information. So, the market return and risk both may not represent reality.

Investors in Nepal have not yet practiced to invest in portfolio of securities. An analysis of the two securities portfolio shows that the risk can be totally minimized if the correlation is perfectly negative. In this situation, the risk can totally be diversified, but when there is perfectly positive correlation between the return of the two securities, the risk is un-diversifiable. The analysis shows some has negative correlation and some has positive Negative correlation between security return is preferred for diversification of risk".[17]

On the basis of findings Mr. Bhatta concluded: "Analysis of risk and return shows that many companies have higher unsystematic or specific risk. There is a need of expert institution, which will provide consultancy services to the investors to maximize their wealth through rational investment decision".[18]

At last Mr. Bhatta has recommended to concerned authority the following points to improve the market efficiency: -

- Develop institutions to consult investors for risk minimization,
- Establish an information channel in Nepal stock exchange, and
- Make proper amendment of trade rules.

After reviewed Mr. Bhatta's study from different aspect it can be said that focused of the study has been given in the analysis of risk and return in common stock investment. Due to various limitations the study has not explored actual viewpoint of the investor. It is concentrate only the companies and stock market. However, this study has explored some dimension and it will be more fruitful to further researcher.

Sapkota's Study:

Mr. Jeet Bahadur Sapkota "**risk and return on common stock investment."** Master Degree unpublished Thesis, TU 2000. He has performed an analysis of risk and return on common stock investment with special reference to banking industry

[17] Ibid p. 162-167
[18] Ibid p. 172

and included eight commercial banks. The main objective of the study is to analyze the risk and return of the common stock in Nepalese stock market, the study is focused on the common stock of commercial banks".[19] In his study Mr. Sapkota found that "Banking industry is the biggest one in terms of market capitalization and turnover. Expected rate of return on the common stock of Nepal Bank Limited is maximum (i.e. 66.99%) and CS of Nepal SBI Bank Limited is found minimum. In this regard CS of NBL is most risky and CS of NSB is least risky. In the context of industries, expected return of finance and insurance industry is found highest. Expected return of banking industry is 60.80%".[20]

At the end of study Mr. Sapkota has concluded, "Common stock is the most risky security and life blood of stock market because of the higher expected return, CS attracts more investors. Private CS holders are the passive owners of the company. But the private investors play a vital role in economic development of the nation by mobilizing the dispersed capital remained in different form in the society. As overall economy, Nepalese stocks market is in emerging state. Its development is accelerating since the political change in 1990 in effect of openness and liberalization in national economy. But lack of information and poor knowledge Nepalese investors can not analyze the securities as well as market properly".[21]

Mr. Sapkota has found some points and needs recommendation to concerned party. He recommended following points to private investors, regulating authority and government:

- ❖ Private investors should try and work out their attitude towards the risk of various investments.
- ❖ Investor needs to diversify their investment to reduce risk. Proper construction of portfolio never takes any considerable loss.

[19] Sapkota, Jeet Bahadur, "Risk and Return Analysis in Common Stock Investment" unpublished MBA Thesis T.U. (2000)
[20] Ibid p. 83-84
[21] Ibid p. 89

- ❖ HMG needs to manage the trading of government securities in NEPSE, instead of NRB.
- ❖ As per changing scenario government needs to amend rules and regulation and implementation those amendment regarding stock market.

2.2.3 Review of other independent studies in Nepal:

In Nepalese context, very few studies can be found in the topics of finance. But there are some independent studies, which are related to the topics, the Nepalese stock markets and about the shareholders democracy are reviewed here.

Radhe Shyam Pradhan carried out a study in the topic of "Stock Market Behavior on small capital market: A case study in Nepal".[22] This study was based on the data collected for seventeen enterprises from 1986 to 1990. One of the major objectives of the study was "To assess the stock market behavior in Nepal".

Mr. Pradhan has summarized the following findings:

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

In the research period, it is also found that Professor Dr. Manohar Krishna Shrestha in the title of "Shareholders Democracy and Annual General Meeting feedback". Dr. Shrestha prefers to consider this book as an assemblage of opinions which he had express in different occasions of various annual general meeting. Where, he has critically analyzed the situation of common stock investors that is not improving till date.

[22] Pradhan, Radhe Shyam "Stock Market Behavior in Small Capital Market: A Case Study in Nepal" The Nepalese Management Review, vol. IX-no 1, p. 23-49. (1993)

The contents of the book have been divided into two parts. The first part includes views on the rights of the shareholders regarding how they can exercise them in democratic perspective. Where as the second part consists of feedback and the issues raised by shareholders at different annual general meeting of the public limited companies and financial institutions.

Writer has found the overall shareholders democracy in terms of the protection of their interest, is basically focused on the payment of satisfactory dividend and the maximization of shareholders wealth by appreciating the value of share they hold.

"In many cases the existing authoritarian mentality of management seems to have not considered the share holder in deciding the managerial plans and policies. Top level decisions often bypass the interest of shareholders. The management lacks serious concern to protect the shareholders rights and exceptions. The annual general meeting has become a plate-form for shareholders to express their opinions and grievances in front of the management and response so the feelings of shareholders. Thus, it reflects unwillingness of the management and board of directors to change their traditionally held activities towards shareholders".[23]

Dr. Shrestha has expressed his deep concern to the government for not taking any initiative in formulating the separate Act. Which protects the shareholders right despite the increase in population of shareholders in Nepal and questioned the need of separate Act are regarding the protection of shareholders right.[24]

He has further quoted as writing company and other concerned acts relating to financial and industrial sector have provisioned rights of the shareholders as:

- Voting rights
- Participation in general meeting
- Rights of getting information
- Electing as a board director

[23] Ibid. p-9
[24] Shrestha, Manohar K., "Shareholders Democracy and Annual General Meeting Feedback" p.12

- Participation in the profit and loss of the company
- Transferring shares
- Proxy representation

The collective rights of the shareholders are:

- Amend the internal by laws
- Authorize the sales of assets
- Enter into merger
- Change amount of authorized capital

As reviewed above, Nepalese stock being in emerging state, study conducted previously in Nepal in relation with the subject was not in specific issues but in broad manner.

Similarly, Narayan Prasad Poudel also carried out another study in a topic of "Investing in shares of Return and Risk elements", in 2001. The study was based on the data collected for eight banks from mid July 2001. The main objectives of the study was to determine whether the shares of commercial banks in Nepal are over or under priced by analyzing risk and return characteristics of the individual shares.

CHAPTER - III

RESEARCH METHODOLOGY

3.1 Introduction:

Research methodology is the systematic way of solving research problems. Research methodology refers to the overall research process, 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 of gathering, recording and analyzing and interpreting the data with the purpose of finding answer to the problem. Hence, the entire process by which we attempt to solve the problem is called research.

"Research methodology refers to the various sequential step (along with a rational of each step) to be adopted by a researcher in studying a problem with certain objects in view".[25]

Research can be conducted on the basis of primary and 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 simple way. In this study, the research design, data collection procedure and analysis are described consequently.

3.2 Research Design:

Research design is a controlling part for the collection of data and it helps to collect the accurate information, which is related to the research topic." Research

[25] Kothari, C.R. "Research Methodology, Method and Techniques", New Delhi: Vikas Publishing House (P.) Ltd (1994).

design is the plan structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance".[26]

In this study, the research is based on the recent historical data, so simply it is a historical research. It covers the data from the fiscal year 2001/02 to 2005/06 AD. It deals with the common stocks of commercial banks on the basis of available information. For the portfolio analysis, other companies' common stocks common stocks are also taken into consideration. As the title of the study suggests, it is more analytical and empirical and less descriptive.

3.3 Population and Sample:

The population of the study is all the listed companies in NEPSE index. Till 16th July 2006 (i.e. end of the F/Y 062/63) total numbers of listed companies are 110. Hence, the total population is 110. This study is concentrated in listed commercial banks only. The numbers of listed commercial banks as on 16th July 2006 (i.e. end of the F/Y 062/63) is 16 .In this study, total numbers of sample taken are six. Common stocks of six listed commercial banks are the sample for this study**.**

3.4 Sources of Data:

This study is mainly based on secondary data. However, during the study period, informal opinion survey has also been taken with the individual investors, Bank officials, Security Board of Nepal, Nepal Stock Exchange Ltd. staffs and other related personalities. Data related to the market price of stocks, market capitalization, movement of NEPSE index etc. is taken from the Trading report published by NEPSE. Financial statements of commercial banks and their annual reports are also collected. Followings are main sources of data:

- Financial and annual reports of concerned commercial banks,
- Banking and Financial Statistics published by NRB
- Annual Report of SEBO
- Trading reports published by Nepal Stock Exchange Limited,
- Related web sites (e.g. nepalstock.com, sebonp.com etc.)

[26] Kerlinger, F.N, "Fundamental Behavioral Research", New Delhi, Surjeet Publication.

- Materials published in papers and magazines and
- Other related books and booklets.

3.5 Data Collection Techniques:

The necessary data have been collected from Security Board Nepal, Nepal Stock Exchange Limited and Internet web site search and campuses library also used to collect data of concerned banks chosen as sample for this study. Beside the secondary data informal personal talk conducted with staffs of Nepal Stock Exchange Limited and Security Board Nepal and other professional and it is considered as a primary data.

3.6 Data Analysis Tools:

For the analysis of data all the tools taken are as appropriate as possible. The related financial and statistical tools and terms are described below.

Dividend (D):

Normally there are two types of dividend i.e. cash dividend and stock dividend. We can obtain total dividend by using following model..

The model is:

In case of stock dividend,

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

Where, MPS = Market price per share.

Stock Price (P):

Market price of stock is also the major part of return, NEPSE index shows the three types of prices- high, low and closing. Among them the closing price of each year has been taken as the stock price. So, the study has focused in an annual basis.

The range:

"The range (maximum return – minimum return) is known as one of the traditional way of measuring risk. It simply shows the difference between the best possible

return and the worst possible return but does not provide information about the distribution of the rates of return between the extremes".[27]

Range = Best possible rate of return- worst possible rate of return.

Return of Common Stock Investment (R):

Return is the income received in an investment plus any change in market price, usually expressed as a percent of the beginning market price of the investment.

Symbolically,

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

Where,

R	=	Actual rate of return of common stock
P_t	=	Price at the end of a period t
P_{t-1}	=	Price at the beginning of period t
D_t	=	Cash Dividend received at the end of period t

Expected Rate of Return of Common Stock ($\overline{R}_j$):

The return that an investor expects from his investment in the forthcoming future is called expected rate of return. "The weighted average of possible returns, with the weights being the probabilities of occurrence is called expected return".[28] The expected rate of return can be estimated by analyzing the trend of return of previous periods and by using probability distribution of returns. The ex-post returns can be averaged for calculating the future expected return and a probability distribution could be used to forecast the future rate of return.

Expected rate of return is the average rate of return on common stock. It is calculated by the arithmetic mean of historical returns or from probability distributions.

[27] Op. cit. Cheney and Moses, "Fundamental of Investments." p. 41
[28] op.cit.van Horne and Wachowicz jr.p.95

Symbolically,

If historical returns are taken:

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

If Probability distribution is taken:

$$\overline{R} = E(R_j) = \sum R_j P_i$$

Where,

$\overline{R_j}$= E (R_j) = Expected rate of return on stock j

n = No. of years that the return is taken

R_j = Return on security j

P_i = Probability of returns

Required rate of return:

Required rate of return refers to the minimum return that an investor expects at least not to suffer from loss. It means if investor gets the return below the required rate of return the investor suffers from loss. The required rate of return is the function of real rate of return and risk. Security Market Line (SML) gives that

$$R_j = R_f + (\overline{R}_m - R_f)_j$$

required rate of return as follows:

Where,

R_j = Required rate of return on stock j

R_f = Risk free rate of return

R_m = Expected rate of return

β = Beta coefficient of stock j

This formula can be used to calculate both the returns on individual investment and portfolio investment.

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

is forgone today, the investor is entitled to a rate of return that compensates for this deferred consumption. Since the investor expects to receive an increase in the real goods purchased later, and assuming for the moment, zero expected inflation and risk, the required rate could equal the real rate of return, in which case it would represent the pure time value of money. The capital markets determine this rate based upon the supply of money to be invested relative to the demand for borrowed money.

For example, if an investor plans to lend $ 500 today in exchange for consumption at some later date (assuming no inflation and risk), then the lender may expect to receive $515 at the expected time of consumption. The $15 return on the investment of $500 or three percentages represents the pure time value of money the real return paid to compensate the investor for deferred consumption".[29]

Standard Deviation (S.D):

The standard deviation is a statistical measure of the variability of distribution around its mean. It provides more information about the risk of asset. Its advantage is that the uncertainties of the return can be summarized into a single, easily calculated number. The major disadvantage is that the standard deviation considers possible return above the expected value to be as risky as return below the expected value. Greater the standard deviation, greater the risk of the investment. Standard deviation measures the degree of risk on common stock.

Standard deviation measures the magnitude of the difference between best possible return and the worst possible return. Hence it measures the degree of risk of common stock. Because we have defined risk as the variability of returns, we can measure risky by examining the tightness of the probability distribution, associated with the possible outcome. "Probability distribution is a set of possible values that a random variable can assume and their associated probabilities of occurrence". [30] Normally, the width of the probability distribution indicates the

[29] Cheney, J.M. and Moses, E.A. "Fundamental on Investment" 5th edition, St. Paul: west publishing co. p. 33
[30] Op. cit. VanHorne and Wachowicz Jr. "Fundamentals of Financial Management" p.95

amount of scatter or variability of the probable outcomes. Hence, the tighter the probability distribution of the expected returns, the less its variability thus the small risk associated with the investment will occur. The risk or standard deviation is denoted by the symbol sigma (σ). Which is given by:-

For the historical return the standard deviation is calculated by simply taking the

$$\pm = \sqrt{\sum_{i=1}^{n} (R_i - \overline{R}_i)^2 . P_i}$$

deviation of returns from the mean return of the ex-post returns as:-

$$\pm = \sqrt{\frac{\sum_{i=1}^{n} (R_i - \overline{R}_i)^2}{n-1}}$$

Where,

$\overline{Ri}$	=	Expected rate of return
Pi	=	Probability of occurrence of expected return
σ	=	Standard deviation of returns
R_I	=	Return for i^{th} possibility
n	=	No. of historical returns

In summary, standard deviation is the weighted average deviation from the expected value, and it gives an idea of how far above and the actual value likely to be. It is the statistical tool for measuring risk, which contains total risk i.e. systematic and unsystematic. Standard deviation with lower value is acceptable.

Coefficient of Variation (C.V):

"The standard deviation can sometimes be misleading in comparing the risk or uncertainty surrounding alternatives if they differ in size." The coefficient of variation is the relative measure of dispersion, comparable across distribution, which is defined as the ratio of standard deviation to the mean expressed in

percentage".[31] It is applicable to calculate the risk per unit of the expected return. It gives the result regarding the unit of risk to bear for earning one unit of return. The formula to calculate coefficient of variation is,

$$C.V_j = \frac{\pm_j}{R_j}$$

To adjust for the size or scale, problem, the standard deviation can be divided by the expected return to compute the coefficient of variation (C.V.) "

Thus, the coefficient of variation is a measure of relative dispersion (risk) – a measure of risk per unit of expected return. The larger the C.V. the larger the relative risk of the investment".[32]

Where, $C.V_j$ = Coefficient of variation of stock j.

Systematic and Unsystematic risk:

Systematic and unsystematic risks are the terms frequently used in the portfolio context. Each and every organization suffers risk because investment is a part of economics and economical cycle changes frequently. The total risk associated with the investment can be classified as systematic risk and unsystematic risk.

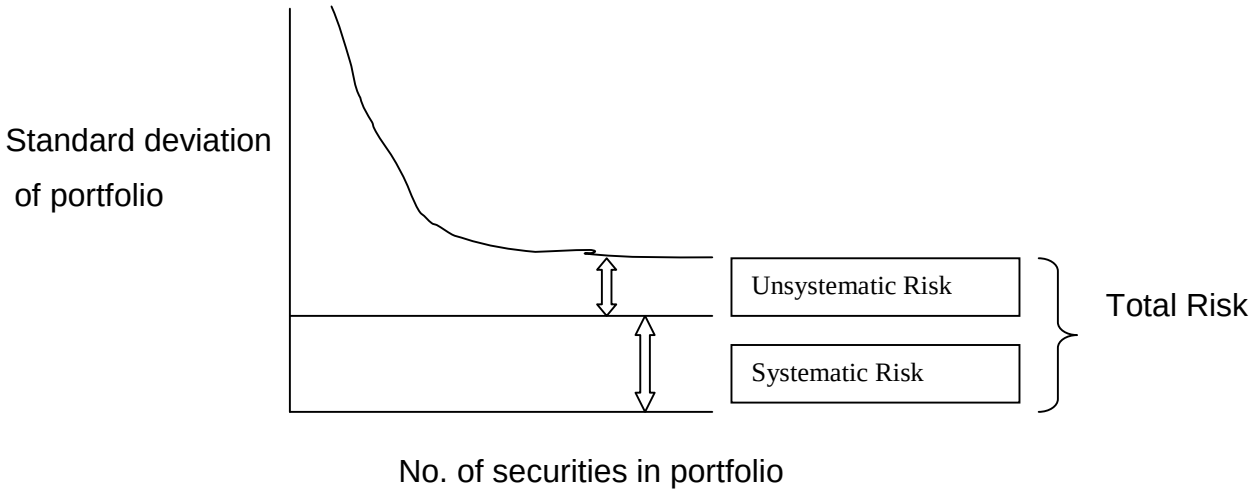
Systematic risk is that type of risk that affects all the marketable assets and thus can not be diversified away. This type of risk will be beyond the control of management of any organization. We can consider systematic risk as non-diversifiable or unavoidable risk and arises due to the changes in the nations economic policy, government policy, tax policy, interest rate, inflation, political affection etc. hence it is called non-diversifiable risk.

Unsystematic risk is that type of risk that can be diversified totally and also avoided to some extent if diversification is efficient. Such types of risk arise due to various unsystematic factors within the organization. It is independent from the nation's economic, political and other factor. This type of risk will be within the control of

[31] Levin, R. I. and Rubin, D.S. Statistics for Management, Prentice Hall of India Pvt. Ltd., New Delhi (1994)
[32] Op.cit. VanHorne and Wachowicz Jr. p.97

management body of the organization. "For most stocks, unsystematic risk accounts for between 60 to 70 percent of stocks total risk or standard deviation".[33] The relationship between systematic risk and unsystematic risk are shown in given figure.

Figure 2.1



Total risk (σ_j) = Systematic risk + unsystematic risk

Where,

Systematic risk ($\sigma_j.p_{jm}$) = unsystematic risk $\sigma_j(1- p_{jm})$

Here, p_{jm} is the correlation coefficient between the return of given stock (j) and the return on market portfolio.

2.1.6 Capital Assets Pricing Model (CAPM):

The capital asset pricing model provides us a means by which to estimate the required rate of return on a security. On the basis of price and dividend data, expected return can be calculated with comparison of these two returns. Investors can analyze whether the stock is under priced or over priced.

"CAPM is a model describing the relationship between risks and expected (required) return at which a security's expected (required) return is the risk free

[33] Van Horne and Wachowicz P-91 "Fundamental o Financial Management 9th Ed.

rate plus a premium based on the systematic risk of the security".[34] It is a very simple model and extremely important analytical tool in both managerial finance and investment analysis. "In fact, the Nobel Prize was awarded to the developers of the CAPM, Professors Harry Markowitz and William F. Sharpe, in part because of their work in this area".[35]

The equation of CAPM is: -

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

Where,

K_j = Required rate of return on stock j

R_f = Risk free rate of return

$E(R_m)$ = Expected rate of return on market portfolio

β_j = Beta coefficient of stock j

Beta:

Beta is the measure of percentage change in security return as a result of one percentage change in excess market return. "Beta measures the sensitivity of a stock's returns to change in the returns on the market portfolio. The beta of a portfolio is simply a weighted average of the individual stock betas in the portfolio".[36]

If beta is one (i.e. $\beta = 1$) then the required return is simply the average return for all situation, that is the return on market portfolio, other wise, the higher the beta, higher the risk premium and the total required return. However, a relatively high beta does not guarantee a relatively high return. The actual return depends partly on the behavior of the market, which acts as a proxy for general economic factor.

The capital assets pricing model states that the expected risk premium on each investment is proportion to its beta. This means that each investment should lie on the sloping security market line connecting treasury bills and market portfolio.

[34] op. cit. Van Horne and Wachowicz, Jr. p. 103
[35] op.cit. Weston and Brigham, p.193
[36] op. cit. Van Horne, p. 100

In mid 1960's three economists William Sharpe, John Linter and Jack Treynor created the CAPM, a theory which began a quest to identify the rate of return indicates whether the stock is under priced or overpriced. And when these two returns are equal then it is said to be market equilibrium i.e. all the stocks lie on the security market line (SML).

Beta Coefficient ( ):

Market sensitivity of stock is explained in terms of beta coefficient, Higher the beta, greater the sensitivity and reaction to the market movement. Logically, the

$$_j = \frac{COV(R_j R_m)^2}{\pm^2 m}$$

systematic risk is the covariance between the returns of an individual asset or portfolio and the returns of the market portfolio. The measure of systematic risk is represented by beta. It is an index of systematic risk, which cannot be eliminated through the means of diversification. Beta measures the sensitivity of a stock's return on market portfolio. The formula for the calculation of beta is given by,

Where,

β_j = Beta coefficient of stock j.

COV ($R_j R_m$) = Covariance between returns on stocks j and Return of market

σ^2_m = Variance of market return

$$COV(R_j R_m) = \frac{\sum_{j=1}^{n}(R_j - \bar{R}_j)(R_m - \bar{R}_m)}{n-1}$$

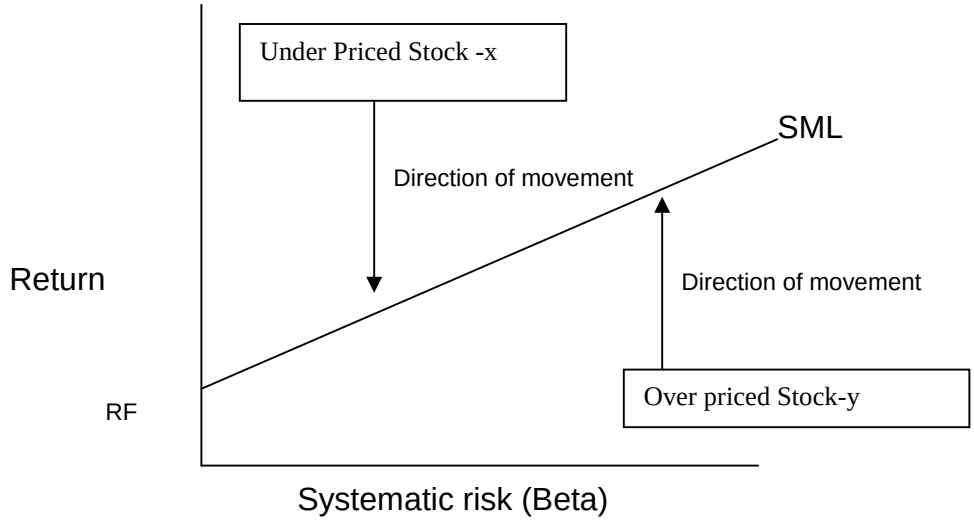
Market beta serves as benchmark or a measuring scale for the evaluation of risk of individual stock, the beta could be less than, equal to or more than one depending upon the volatility of that stocks return relative to market returns.

An asset or a portfolio with a beta greater than 1 is considered to be aggressive (more risky than the market). An asset or portfolio with a beta less than 1 is considered to be defensive (less risky than the market). Beta coefficient of market is always equal to 1.

Security Market Line (SML):

SML is the graphical representation of the CAPM. It shows the relationship between risk and required rate of return. The SML clearly shows that returns are the increasing function, in fact all linearly increasing function of risk. Further it is only market risk that affects return. The investor receives no added return for bearing the diversifiable risk. If stocks are under priced it lie above the SML and if stocks are over priced lie below the SML. The following diagram shows the SML with over priced and the under priced stocks. "SML is the line that shows the relationship between risk as measured by beta and the required rate of return for individual securities".[37]

Figure 2.2



(Sources: Van Horne & Wachowicz, p-107)

"Above figure 2.2 clarifies that stock x is under priced relative to the security market line while stock-y is overpriced. As a result stock x is expected to provide a rate of return greater than that required, based on its systematic risk. In contrast, stock y is expected to provide a lower return than that required compensating for its systematic risk. Investor seeing the opportunity for the superior return by investing in stock x, will rush to buy. This action would drive the price up and expected return comes down. How long would this continue? It would continue

[37] op. cit. Weston and Brigham, p.208

until the market price was seen that the expected return would now lie on the SML. In the case of stock y, investors holding this stock will start to sell it, recognizing that they could obtain a higher return for same amount of systematic risk with others stocks. This selling pressure would drive Y's market price down and its expected return goes up until the expected return matches on the SML. When the expected return for these two stocks returns to SML, market equilibrium will prevail".[38]

"The CAPM is some times used to estimate the required rate of return for any firm with publicly traded stock. The CAPM is based on the promise that the only important risk of firm is systematic risk, or the risk that returns from exposure to general stock market movements. The CAPM is not concerned with so-called unsystematic risk, which is specific to an individual firm, because investors can avoid that type of risk by holding diversified portfolios".[39]

Investors appear to be concerned principally with the risk that they cannot eliminate by diversification. If this is not so, we find that stock prices increases whenever two companies merge to spread their risk, and we should find that investment companies which invest in the share of other firm are more highly valued than the shares they hold. But we do not observe either phenomenon. Mergers under taken just to spread risk don't increase stock prices and investment companies are no more highly valued than the stock hold. The CAPM model captures these ideas in simple way.

That's why many financial managers find it is the most convenient for coming to the decision with the slippery motion of risk. And it is why economists often use the CAPM to demonstrate important ideas in finance even when there are other ways to prove these ideas.

Correlation coefficient (P_{ij}):

The correlation is also measure of the relationship between two assets. The correlation coefficient can be taken on a value form –1 to +1.

[38] op. cit. Van Horne & Wachowiz, p-107

[39] Jeff Madura, "Financial Market & Institutuin". South western college publishing 5th ed. 2001

Correlation coefficient and covariance are related by the following equation.

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

$$P_{ij} = \frac{COV_{ij}}{\pm_i \pm_j}$$

Where,

σ_I and σ_j are the standard deviations of returns for asset i and j and P_{ij} is the correlation coefficient for assets i and j.

There are various cases of correlation and risk condition, which are presented below:

1. Perfectly Positive Correlation ($P_{ij} = +1$)

Return on two perfectly positive correlated stocks would move up and down together and a portfolio of two such stocks would be exactly as risky as the individual stocks. Thus diversification cannot reduce risk if the portfolio consists of perfectly positive correlated stocks.

2. Perfectly Negative Correlation ($P_{ij} = -1$)

Returns on two perfectly negative correlated stocks would move perfectly together but in exactly opposite in directions. In this condition, risk can be completely eliminated. Perfect negative correlation almost never found in the real world.

3. No relation between returns ($P_{ij} = 0$)

When the correlation between two stocks is exactly zero there is no relationship between the returns of the two stocks. In such case some risk can be reduced.

4. **Intermediate risk ($P_{ij} = +0.5$)**

Most of the stocks are positively correlated but not perfectly. On average the returns on two stocks would lie on the range of +0.4 and +0.75 under this

condition combining stocks into portfolios reduces risk but not eliminate it completely.

Portfolio:

Investment in two or more than two assets is called portfolio. A portfolio is the combination of investment assets. Portfolio is the holding of securities and investment in financial assets like bond, stock etc. Portfolio management is related to the efficient portfolio investment in financial assets. By managing the portfolio, risk can be diversify and also minimize to some extent. A basic objective of the portfolio is to maximize the return and minimize the risk. But overall objectives of the portfolio includes generate regular and stable income, safety of investment, tax benefit, appreciation of capital etc.

The expected return on the portfolio is simply a weighted average of the expected returns of the individual securities that they are included in the portfolio. The weights are equal securities (the weight must sum to hundred percent or one). The general formula for expected return of a portfolio, $\overline{R}_p$ is as follows

$$\overline{R}_p = \sum_{j=1}^{n} W_j R_j$$

Where,

W_j = Proportion or weight of total funds invested in security j

R_j = Expected return for security j

n = Total no. of different securities in the portfolio.

"While the portfolio expected return is straightforward weighted average of returns on the individual securities, the portfolio standard deviation is not the weighted average of individual security's standard deviations. To take a weighted average of individual security standard deviations would be to ignore the relationship or collection between the returns of the two securities. This correlation however as no effect on the portfolios expected returns. Correlation between securities returns complicates our calculation of portfolio standard deviation by forcing us to calculate the covariance between returns for every possible pair wise combination of

securities in the portfolio. But this dark cloud of mathematical complications contain a silver lining correlation between securities provides for the possible of eliminating some risk without reducing potential returns".[40]

Portfolio is the combination of two or more securities or asset and portfolio return is simply a weighted average of individual stock returns and sum of weights equals to 100%. The return on the portfolio, in case of only two assets portfolio is

$$\overline{R}_p = W_A \overline{R}_A + W_B \overline{R}_B$$

Where,

R_A	=	Expected return on security A
R_B	=	Expected return on security B
W_A	=	Weight on security A
W_B	=	Weight on security B

Risk of a portfolio is not the weighted average of the standard deviations of specific securities comprising that portfolio. It rather depends upon the co-movement (interactive risk) among the security as well. This interactive risk is measured by covariance, which is absolute measurement, and by correlation, which is relative measurement. The correlation is the statistical measure of the degree to which two variables such as securities' returns move together.

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

$$\pm_p = \sqrt{\pm^2_A W^2_A + \pm^2_B W^2_B + 2W_A W_B COV(A,B)}$$

Where,

σ_p	= Standard deviation of portfolio A and B.
σ^2_A	= Variance of asset A, i.e. risk of asset A.
σ^2_B	= Variance of asset B, i.e. risk of asset B.
W_A	= Weight of asset A.

[40] Van Horne, James C., Financial Management and Policy, 10th ed., Prentice Hall India, p-96, (1997)

W_B = Weight of asset B

COV (A, B) = Covariance between the returns of assets A and B

The formula for n-assets case is given by:

$$\pm^2_p = \sum_{i=1}^{n} \sum^{n} W_i W_j \pm_{ij}$$

The covariance of the possible return of two securities is a measure of the extent to which they are expected to very together rather than independently of each other. The covariance term in the above formula can be written as,

$$COV_{j,k} = p_{jk} \pm_j \pm_k$$

Where,

P_{jk} = The correlation coefficient between possible return for security j and k

σ_j = S.D. of the security j.

σ_k =S.D. of the security k.

The correlation coefficient that is significant in portfolio construction is standardized statistical measure of the linear relationship between two variables. Its range will be –1 to +1 (perfectly negative correlation to perfectly positive correlation). The positive correlation coefficient shows that the returns from two securities generally moves in the same direction, while negative correlation coefficient shows that they move in opposite direction and zero correlation coefficient shows that the returns from two securities are un-correlated. They show no tendency to vary together in either a positive or negative in linear function.

Risk Minimizing Portfolio:

It is the proportion of stock that minimizes the possible (unsystematic) risk.

Mathematically,

$$W_A = \frac{\pm^2_B - COV(R_A R_B)}{\pm^2_A + \pm^2_B - 2COV(R_A R_{B)}}$$

Where,

W_A = Weight of stock A that minimize the portfolio risk of stock A and stock B.

σ_B = Standard deviation of stock B.

$COV(R_A R_B)$ = Covariance of returns between stocks A & B.

Market Return (R_m):

Market return is the return of overall market portfolio, which can be obtained by takin differences between the market indexes (i.e. NEPSE index).

Here market dividend is ignored,

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

Where,

NI_t = NEPSE index at time t.

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

R_m = Return on market.

3.7 Method of presentation and analysis:

All the method of analysis and presentation are applied as simple as possible. Proper financial and statistical tools are used and results are presented in tables and also shown in diagrams. Interpretation is made in very simple way. Details of calculation, which cannot be shown in the main body part, are presented in Appendices, at the end. Summary, Findings, conclusion and recommendations are presented finally.

3.8 Limitations of the Methodology:

Each and every research and study may bounded by some limitations. Certainly this study and methodology is also within the bracket of limitations. In methodology used some problems were arises and had faced that. Some limitations of the methodology used, are mentioned below:

- Research design for this study is historical. Past may be the origin for future but the past may not happen in future in same manner.
- The population is 110 listed companies. Which are listed in NEPSE as on mid July 2006 and the total no. of samples are six commercial banks. So the samples do not cover whole the industry.
- The source of data is secondary and accuracy is based on secondary data. Limitations of secondary data may exist.
- The data analysis tools are based on financial and statistical concepts. The values provided by such tools that might be the approximation values only.

CHAPTER-IV

Data Presentation and Analysis

This chapter includes presentation and analysis of collected data properly to fulfill the adjectives of the study, which have been earlier mentioned in first chapter. In this chapter mainly focused on the presentation and analyze “risk and return on common stock investment of commercial banks" in Nepal. The data related to DPS, MPS of each bank and NEPSE index of each sector with market and introduction and financial performance of each bank is presented and analysis and interpretation of them is made. The presentation and analysis of data consists of organizing, tabulating and accessing financial and statistical results. To make simpler, understandable and readable tables, diagrams, pie chart and trend line has drawn in separately for same data.

4.1 Data Presentation and Analysis of Individual Commercial Banks.

4.1.1.1 Data: Nepal Arab Bank Limited

Market price and dividend records of common stock of NABIL are shown in Table 4.1 and year-end price movement is shown in the Trend Line 4.1

Table 4.1

MPS and Dividend data of NABIL

Fiscal Year	High MPS (RS)	Low MPS (RS)	Closing MPS (RS)	DPS (RS)	Stock Dividend	Total Dividend (RS)
2002/03	1495	700	1400	55	-	55
2003/04	2301	1310	1500	40	-	40
2004/05	1500	465	735	30	-	30
2005/06	1515	1000	1505	65	-	65
2006/07	2300	1500	2240	85	10:1	395*

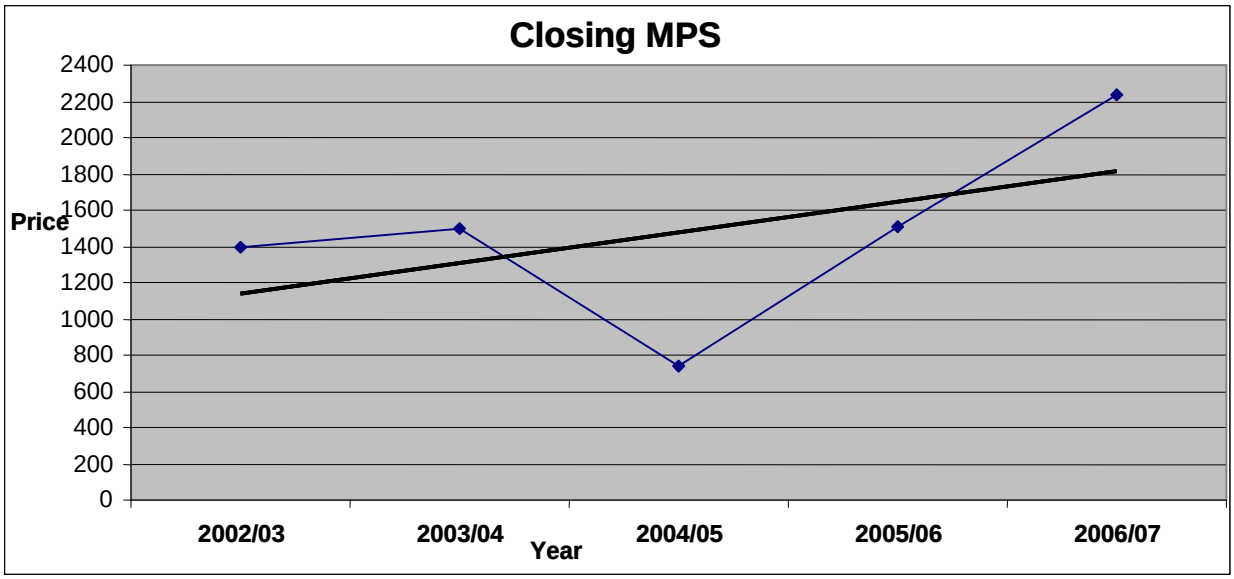
Data Source: NEPSE and Annual Report of Security Board

*85+0.10x3100 = Rs. 430 (The closing MPS for 2006/07 is Rs.3100.00)

Note: Total Dividend = DPS + Stock dividend percentage x next year’s closing MPS

Figure 4.1

Year End price movement of



ABIL

From the above trend line, it is observed that the highest closing price is in year 2005/06 and the lowest closing price is in year 2003/04. Closing price of the share is in increasing trend.

4.1.1.2 Realized Return (R), Standard deviation (±) and Expected return ($\bar{R}$):

Year-end price and dividend amounts are used to calculate realized rate of returns for each. Table 4.2 shows the yearly-realized return, expected return and standard deviation of return. The calculations are in appendix no.1.

Table 4.2

Realized returns, expected returns and S.D. of the C. S. of NABIL

Fiscal Year	Year end price (P)	T. dividend (D)	$R=\frac{D_t+(P_t-P_{t-1})}{P_{t-1}}$	$(R-\bar{R})$	$(R-\bar{R})^2$
2002/03	1400	55	----------	-------	---------
2003/04	1500	40	0.1	-0.2725	0.0742
2004/05	735	30	-0.49	-0.8625	0.7439
2005/06	1505	65	1.13	0.7575	0.5738
2006/07	2240	395	0.75	0.3775	0.1425
		Total	**1.49**		**1.5344**

We have,

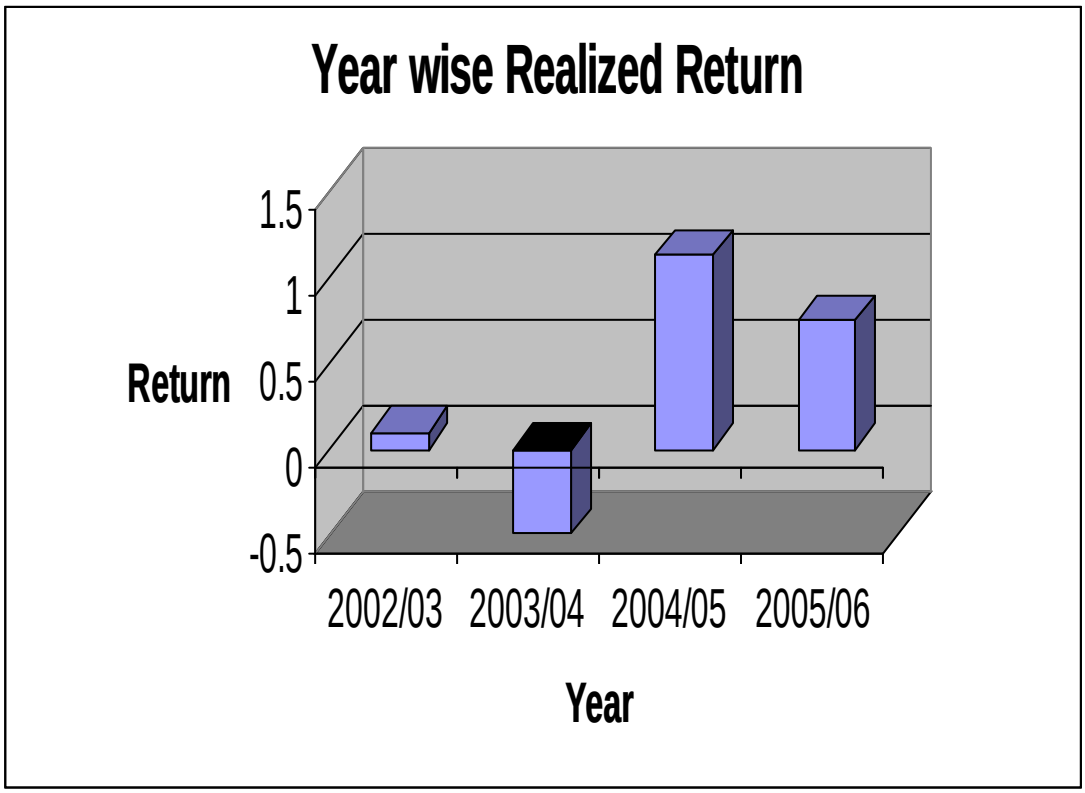
Expected Return = 0.3725

Standard Deviation =0.7152

Coefficient of Variation = 1.92

Figure 4.2

Annual Rate of Return on Common Stock of NABIL



From the above diagram it is observed that highest return on common stock of NABIL is in year 2004/05 and lowest return (i.e. negative) is in year 2003/04. Since year 2003/04 the returns on C. S. of NABIL is increased and again decreased in year 2005/06.

4.1.2.2 Data: Nepal investment Bank Limited

Market price and dividend records of common stock of NIBL are shown in Table 4.3 and year-end price movement is shown in the Trend Line 4.2

Table 4.3

MPS and Dividend data of NIBL

Fiscal Year	High MPS (RS)	Low MPS (RS)	Closing MPS (RS)	DPS (RS)	Stock Dividend	Total Dividend (RS)
2001/02	1415	822	1401		30%	345*
2002/03	2730	1080	1150	20		20
2003/04	1150	575	760	15		15
2004/05	1430	760	800	12.5		12.5
2005/06	1265	762	1260	5	25%	530**

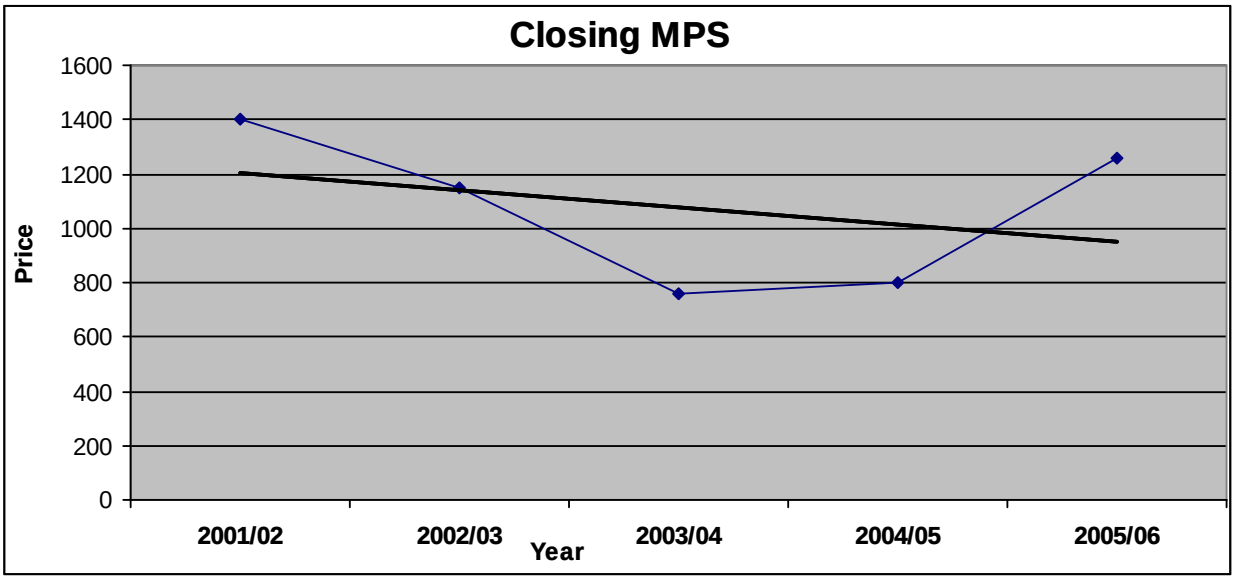
Data Source: NEPSE and Annual Report of Security Board

* 0+0.30x1150 = Rs. 345

**5+0.25x2100 = Rs. 530 (The Closing MPS for 2006/07 is Rs.2100)

Figure 4.3

YEAR END PRICE MOVEMENT OF NIBL



From the above trend line it is observed that, the maximum closing price of NIBL is in year 2001/02 and it is in decreasing trend.

4.1.2.3 Realized Return (R), Standard deviation (±) and Expected return ($\bar{R}$): Year-end price and dividend amounts are used to calculate realized rate of returns or each. Table 4.4 shows the calculation of yearly-realized return, expected return and standard deviation of return. The calculations are in appendix no.2

Table 4.4

Realized returns, expected returns and S.D. of the C. S. of NIBL

Fiscal Year	Year end price (P)	T. dividend (D)	$R=\frac{D_t+(P_t-P_{t-1})}{P_{t-1}}$	(R-$\bar{R}$)	(R-$\bar{R}$)^2
2001/02	1401	345	----------	-------	---------
2002/03	1150	20	-.1649	.3688	0.1360
2003/04	760	15	-.3261	0.53	0.2809
2004/05	800	12.5	0.0691	0.1348	0.0182
2005/06	1260	530	1.2375	-1.0336	1.0683
		Total	**0.8156**		**1.5034**

We have,

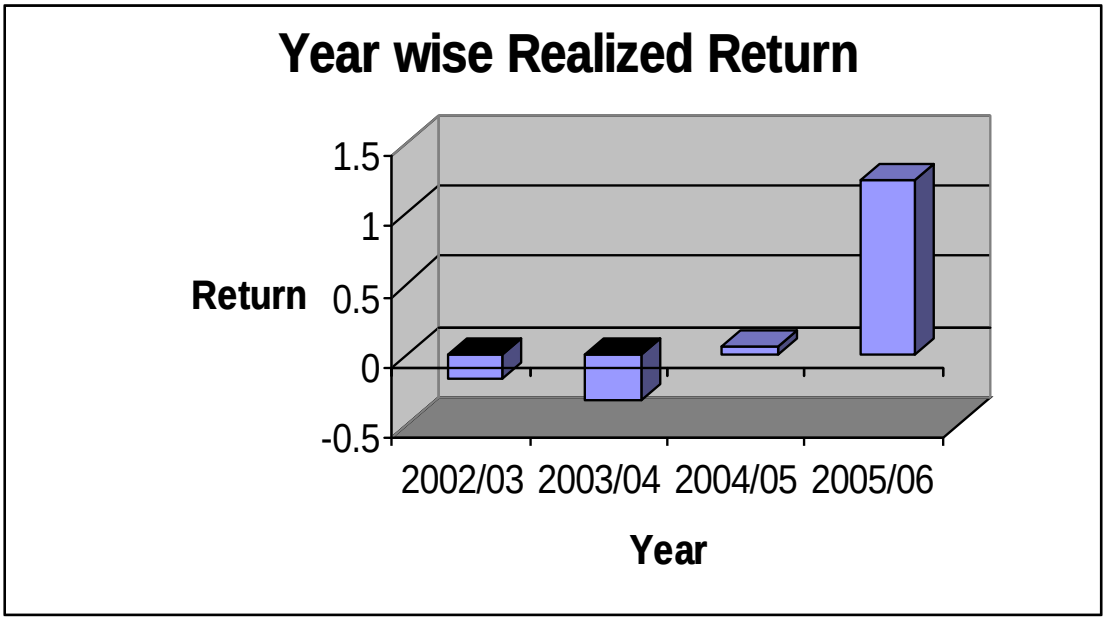
Expected Return = 0.2039

Standard Deviation =0.7079

Coefficient of Variation = 3.4718

Figure 4.4

Annual Rate of Return on Common Stock of NIBL



From the above diagram it is observed that highest return on common stock of NIBL is in year 2005/06 and lowest return (i.e. negative) is in year 2003/04

4.1.3.2 Data: Standard Chartered Bank Limited

Market price and dividend records of common stock of SCBNL are shown in Table 4.5 and year-end price movement is shown in the Trend Line 4.3

Table 4.5

MPS and Dividend data of SCBNL

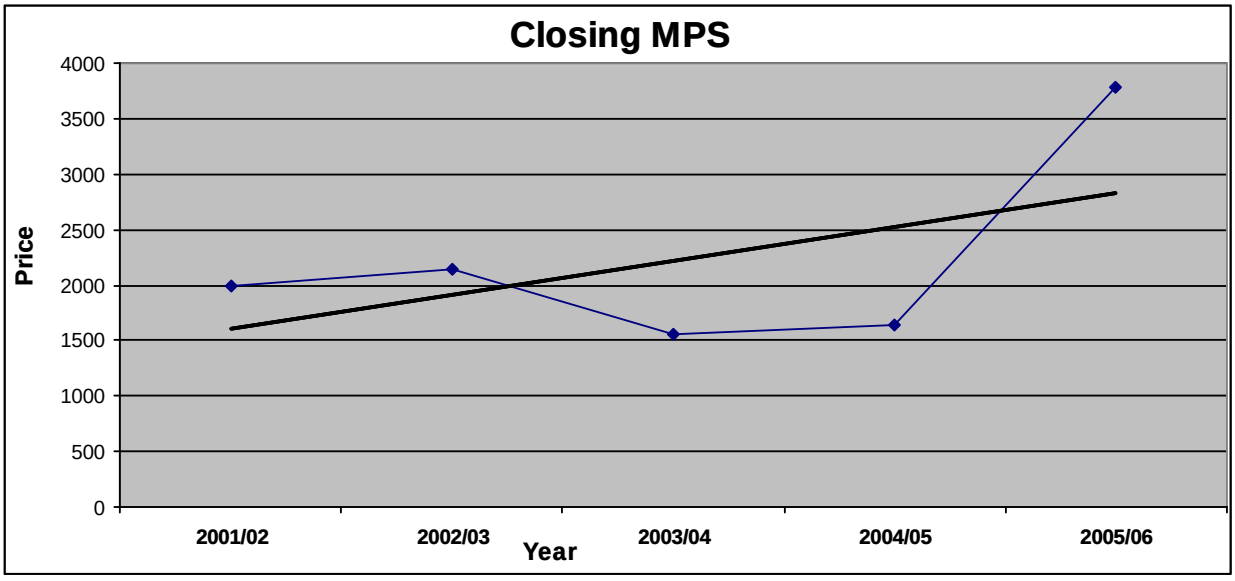
Fiscal Year	High MPS (RS)	Low MPS (RS)	Closing MPS (RS)	DPS (RS)	Stock Dividend	Total Dividend (RS)
2001/02	2050	1181	1985	100	-	100
2002/03	3111	1860	2144	110	10%	265*
2003/04	2100	1000	1550	120	-	120
2004/05	1760	1380	1640	120		120
2005/06	3775	2200	3775	130	10%	636**

Data Source: NEPSE and Annual Report of Security Board

*110+0.1x1550 = Rs. 265
**130+0.1x5060= Rs.636 (Closing MPS for 2006/07 is Rs .5060)

Figure 4.5

Year end price movement of SCBNL



From the above trend line it is observed that, the maximum closing price of SCBNL is in year 2005/06 and lowest closing price is in year 2003/04. The price of the share is in increasing trend.

4.1.3.3 Realized Return (R), Standard deviation (±) and Expected return ($\bar{R}$):

Year-end price and dividend amounts are used to calculate realized rate of returns for each. Table 4.6 shows the calculation of yearly-realized return, expected return and standard deviation of return. The calculations are in appendix no.3.

Table 4.6

Realized returns, expected returns and S.D. of the C. S. of SCBNL

Fiscal Year	Year end price (P)	T. dividend (D)	$R=\frac{D_t+(P_t-P_{t-1})}{P_{t-1}}$	$(R-\bar{R})$	$(R-\bar{R})^2$
2001/02	1985	100	----------	-------	----------
2002/03	2144	265	0.2136	-0.2408	0.0579
2003/04	1550	120	-0.2211	-0.6755	0.4563
2004/05	1640	120	0.1355	-0.3189	0.1017
2005/06	3775	636	1.6896	1.2352	1.5257
		Total	**1.8176**		**2.1416**

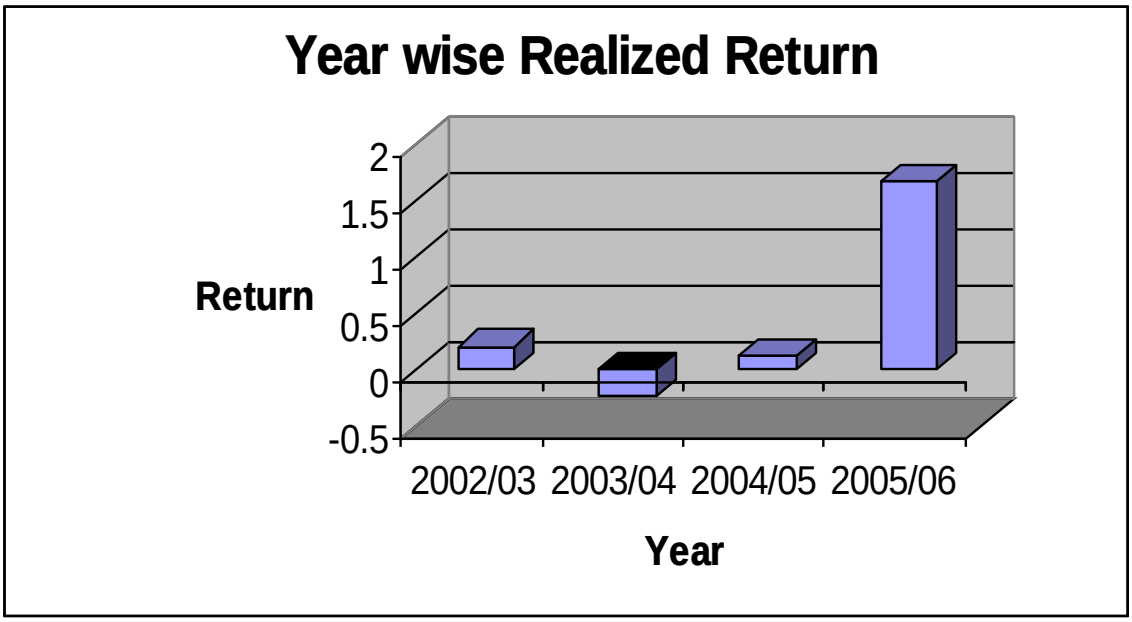
We have,

Expected Return = 0.4544

Standard Deviation =0.8449

Coefficient of Variation = 1.8594

Figure 4.6
Annual Rate of Return on Common Stock of SCBNL



From the above diagram it is observed that highest return on common stock of SCBNL is in year 2005/06 and lowest return (i.e. negative) is in year 2003/04.

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4.1.4.2 Data: Himalayan Bank Limited

Market price and dividend records of common stock of HBL are shown in Table 4.7 and year-end price movement is shown in the Trend Line 4.4

Table 4.7

MPS and Dividend data of HBL

Fiscal Year	High MPS (RS)	Low MPS (RS)	Closing MPS (RS)	DPS (RS)	Stock Dividend	Total Dividend (RS)
2001/02	1530	610	1000	25	10%	108.6*
2002/03	950	750	836	1.32	23.68	200.32**
2003/04	1010	600	840	-	20%	340***
2004/05	1780	1000	1700	11.58	20%	231.58****
2005/06	1200	900	1100	30	5%	586*****

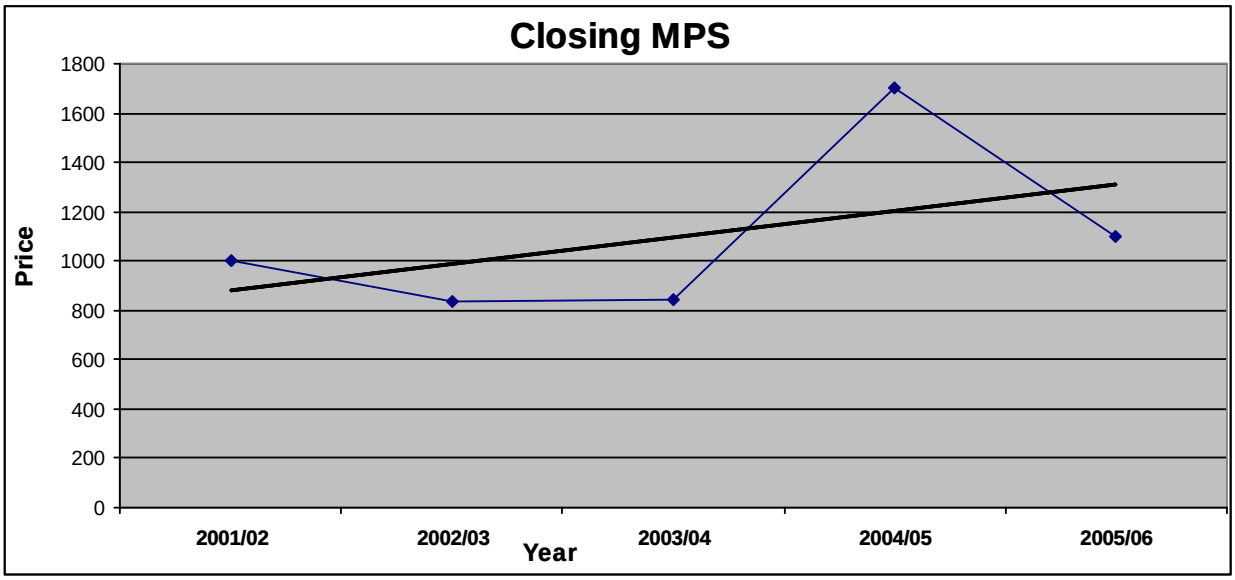
Data Source: NEPSE and Annual Report of Security Board

***** 25+.10x836=108.6
** 1.32+0.2368x840= 200.23
*** 0+0.20X1700 = 340
**** 11.58+.20*1100= 231.58

***** 30+0.20*2780 = 586 (Closing MPS of year 2006/07 is Rs. 2780)

Figure 4.7

Year end price movement of HBL



From the above Trend line it is observed that, the maximum closing price of share of HBL is in year 2004/05. Trend line also shows an increasing trend.

4.1.4.3 Realized Return (R), Standard deviation (±) and Expected return ($\bar{R}$):

Year-end price and dividend amounts are used to calculate realized rate of returns for each. Table 4.6 shows the calculation of yearly-realized return, expected return and standard deviation of return. The calculations are in appendix no.4.

Table 4.8

Realized returns, expected returns and S.D. of the C. S. of HBL

Fiscal Year	Year end price (P)	T. dividend (D)	$R=\frac{D_t+(P_t-P_{t-1})}{P_{t-1}}$	$(R-\bar{R})$	$(R-\bar{R})^2$
2001/02	1000	108.6	----------	---------	----------
2002/03	836	200.32	0.0363	-0.3984	0.1588
2003/04	840	340	0.4115	-0.0233	0.0005
2004/05	1700	231.58	1.2995	0.8647	0.7478
2005/06	1100	586	-0.0082	-0.4430	0.1963
		Total	**1.7391**		**1.1033**

We have,

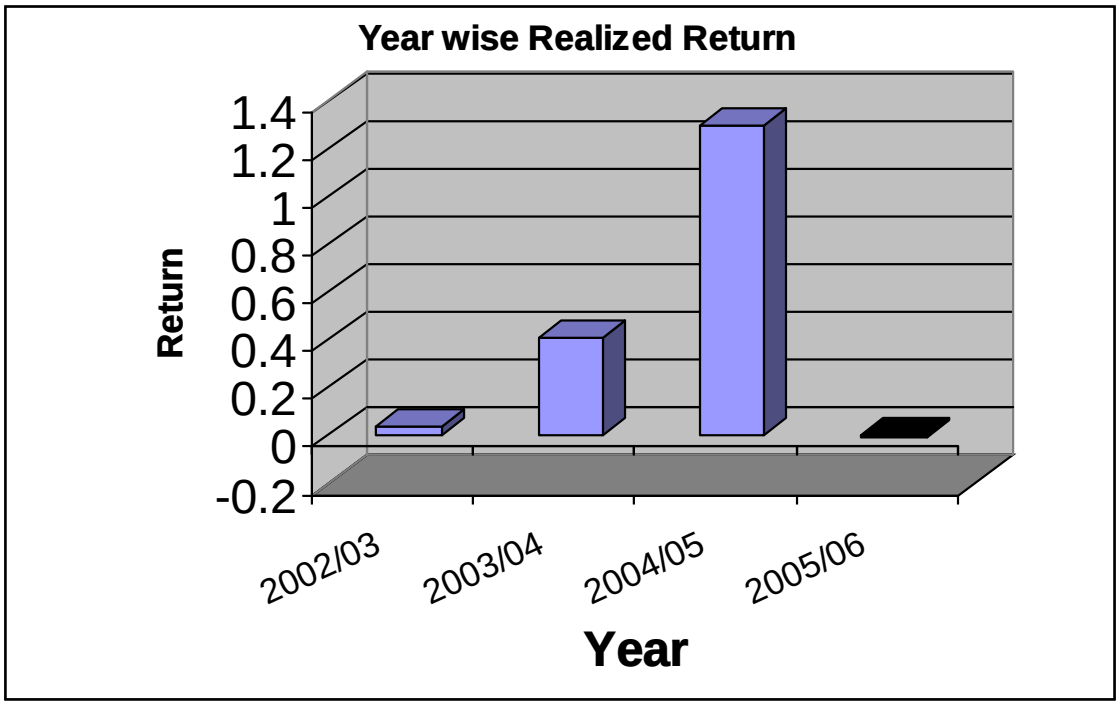
Expected Return = 0.4348

Standard Deviation =0.6064

Coefficient of Variation = 1.3947

Figure 4.8

Annual Rate of Return on Common Stock of HBL



From the above diagram it is observed that return on common stock of HBL increasing trend from 2002/03 to 2004/05.The highest return is in year 2004/05 and then after the returns on C. S. of HBL in decreased in year 2005/06.

4.1.5.2 Data: Nepal SBI Bank Limited

Market price and dividend records of common stock of SBI are shown in Table 4.9 and year-end price movement is shown in the figure 4.9

Table 4.9

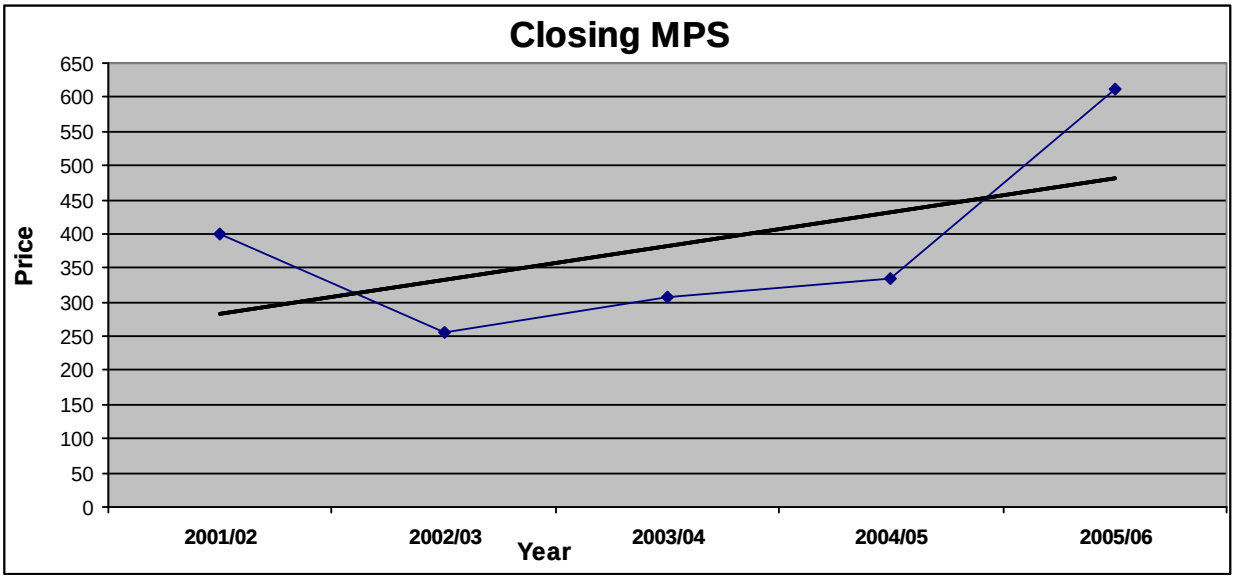
MPS and Dividend data of SBI

Fiscal Year	High MPS (RS)	Low MPS (RS)	Closing MPS (RS)	DPS (RS)	Stock Dividend	Total Dividend (RS)
2001/02	1600	300	401	-	-	-
2002/03	410	255	255	8	-	8
2003/04	307	231	307	-	-	-
2004/05	480	315	335	-	-	-
2005/06	689	335	612	-	-	-

Data Source: NEPSE

Figure 4.9

Year end price movement of SBI



From the above trend line it is observed that, the maximum closing price of SBI is in year 2005/2006 then after the closing MPS is in increasing trend.

4.1.5.3 Realized Return (R), Standard deviation (±) and Expected return ($\bar{R}$):

Year-end price and dividend amounts are used to calculate realized rate of returns for each. Table 4.10 shows the yearly-realized return, expected return and standard deviation of return. The calculations are in appendix no.5.

Table 4.10

Realized returns, expected returns and S.D. of the C. S. of SBI

Fiscal Year	Year end price (P)	T. dividend (D)	$R=\frac{D_t+(P_t-P_{t-1})}{P_{t-1}}$	$(R-\bar{R})$	$(R-\bar{R})^2$
2001/02	401	-	----------	----------	----------
2002/03	255	8	-0.3441	-0.5384	0.2901
2003/04	307	-	0.2039	0.0095	0.0001
2004/05	335	-	0.0912	-0.1033	0.0107
2005/06	612	-	0.8269	0.6324	0.3999
		Total	**0.7779**		**0.7008**

We have,

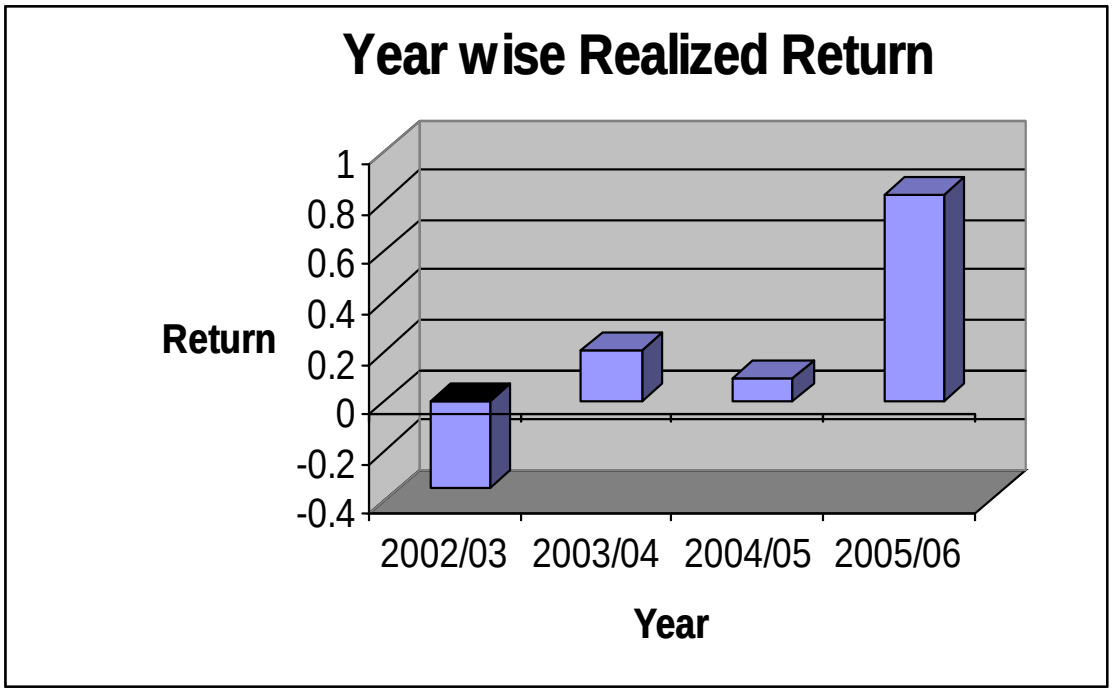
Expected Return = 0.1945

Standard Deviation =0.4833

Coefficient of Variation = 2.4848

Figure 4.10

Annual Rate of Return on Common Stock of SBI



From the above diagram it is observed that highest return on common stock of SBI is in year 2005/06 and lowest return (i.e. negative) is in year 2002/03.

4.1.6.2 Data: Nepal Bangladesh Bank Limited.

Market price and dividend records of common stock of NBBL are shown in Table 4.11 and year-end price movement is shown in the Trend Line 4.

Table 4.11

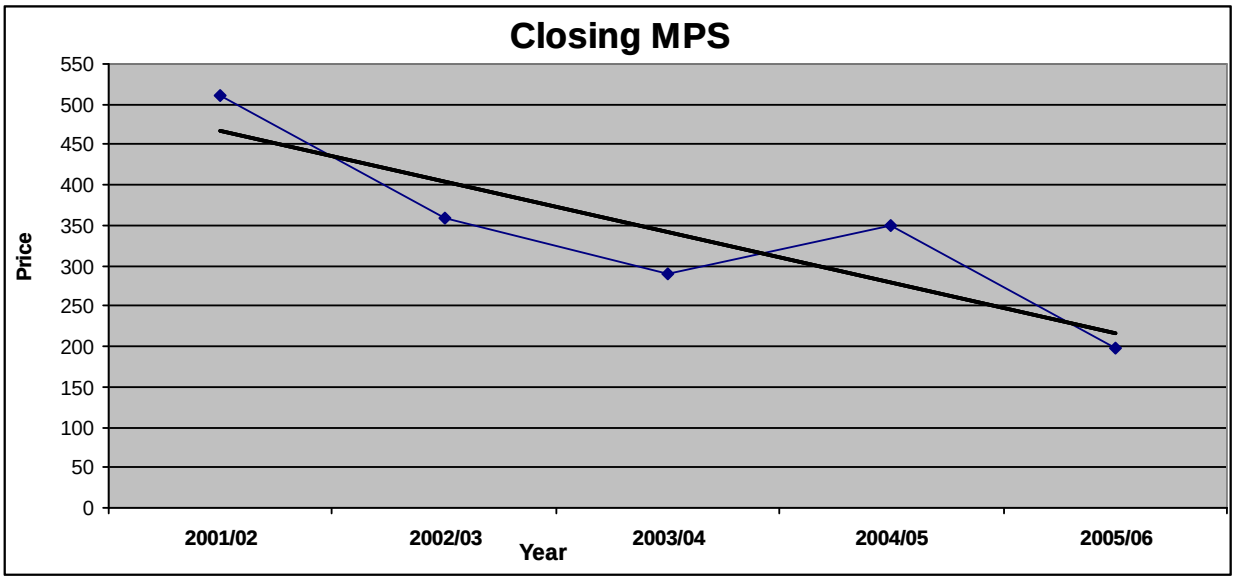
MPS and Dividend data of NBBL

Fiscal Year	High MPS (RS)	Low MPS (RS)	Closing MPS (RS)	DPS (RS)	Stock Dividend	Total Dividend (RS)
2001/02	1200	340	510			
2002/03	535	341	360			
2003/04	477	290	290	-	-	-
2004/05	372	320	350	-	-	-
2005/06	300	152	199	-	-	-

Data Source: NEPSE and Annual Report of Security Board

Figure 4.11

Year end price movement of NBBL



From the above trend line it is observed that, the highest closing price of NBBL is in year 2001/02 and it is lowest in year 2005/06.The trend line shows decreasing trend.

4.1.6.3 Realized Return (R), Standard deviation (±) and Expected return (R):

Year-end price and dividend amounts are used to calculate realized rate of returns for each. Table 4.12 shows the calculation of yearly-realized return, expected return and standard deviation of return. The calculations are in appendix no.6.

Table 4.12

Realized returns, expected returns and S.D. of the C. S. of NBBL

Fiscal Year	Year end price (P)	T. dividend (D)	$R=\frac{D_t+(P_t-P_{t-1})}{P_{t-1}}$	$(R-\bar{R})$	$(R-\bar{R})^2$
2001/02	510		----------	--------	----------
2002/03	360		-0.2941	-0.1158	0.0134
2003/04	290		-0.1944	-0.0161	0.0003
2004/05	350		0.2069	0.3812	0.1454
2005/06	199	-	-0.4314	-0.2571	0.0641
		Total	**-0.713**		**0.2232**

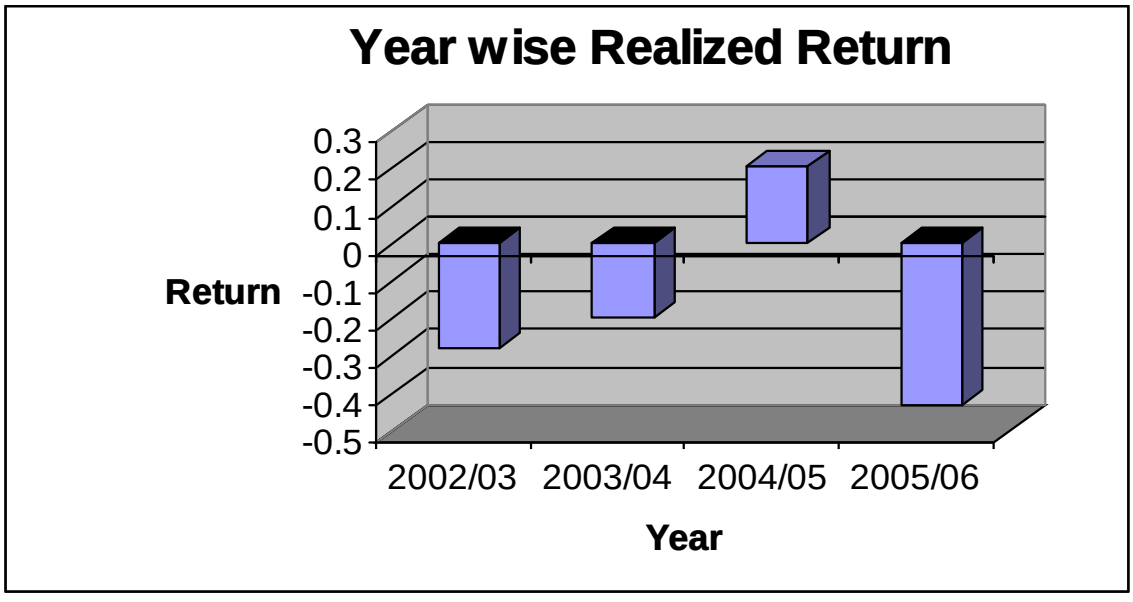
Expected Return = -0.1783

Standard Deviation =0.2728

Coefficient of Variation = -1.53

Figure 4.12

Annual Rate of Return on Common Stock of NBBL



From the above figure 4.12 it is observed that return on common stock of NBBL is negative. Lowest (i.e.-negative) return is in year 2005/06. So it is not suitable for invest in common stock of NBBL

4.2 Inter Bank Comparison

4.2.1 On the basis of risk and return:

Based on the calculation of individual selected banks in section 4.1, a comparative analysis of risk and return performed here. For the comparative analysis the expected return, standard deviation of returns and coefficient of variation of each bank for the year 2001/02 to 2005/06 are given in table 4.13.

Table 4.13

Expected Return, S.D. and Coefficient of Variation of each bank

Name of the Bank	Expected Return ($\bar{R}$)	Standard deviation (±)	Coefficient of Variation (C.V.)
NABIL	0.3725	0.7152	1.92
NIBL	0.2039	0.7079	3.4718
SCBNL	0.4544	0.8449	1.8594
HBL	0.4348	0.6064	1.3947
SBI	0.1945	0.4833	2.4848
NBBL	-0.1743	0.2724	-1.5628

From the above analytical table based on historical analysis of past five years data it can be stated that the SCBNL has highest rate of return and NBBL has negative rate return on common stock. So, the investors who had invested on C. S. of SCBNL can get more return and the investors who had invested on common stock of NBBL can get low return.

From the risk side, NIBL has the highest C. V. and NBBL has lowest C. V., which shows the risk per unit of return. Lowest C. V. means more consistency in returns. For the investment purpose mostly the investor should select the bank having lowest C. V. but it depends upon the investors' attitude towards risk or return. Whether the investors are risk seeker or risk averter.

To make easy to understand above statistical data expected return, S.D. and C.V. are presented below in figure 4.13, 4.14 and 4.15 respectively. From the figure 4.13, 4.14 and 4.15 we can say that the investment in common stock of HBL is best because of its lower C.V.

Figure 4.13

Expected Return of each bank

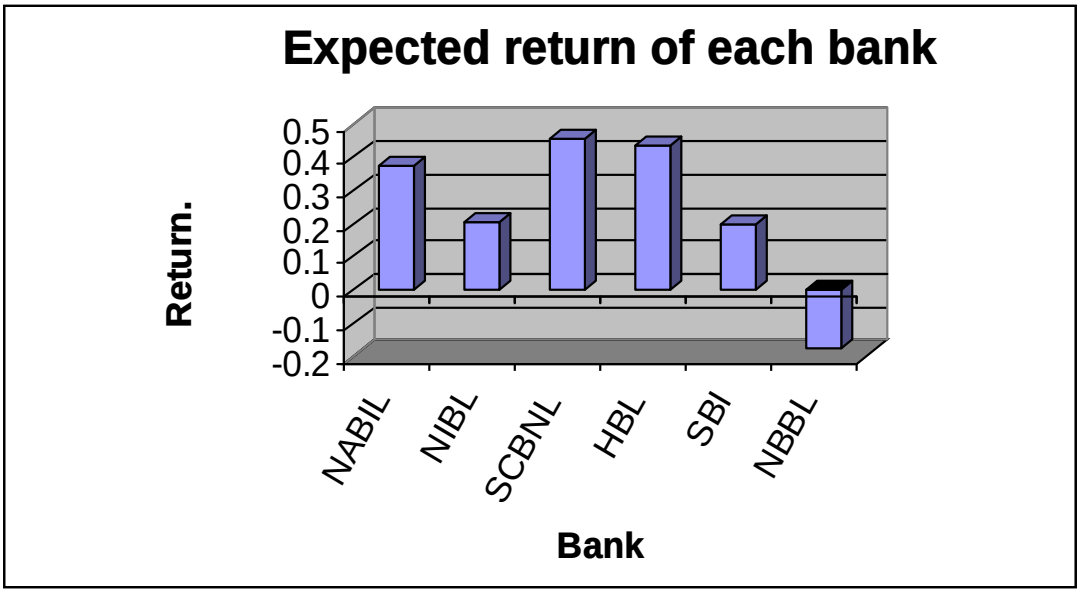


Figure 4.14

Standard Deviation of each bank

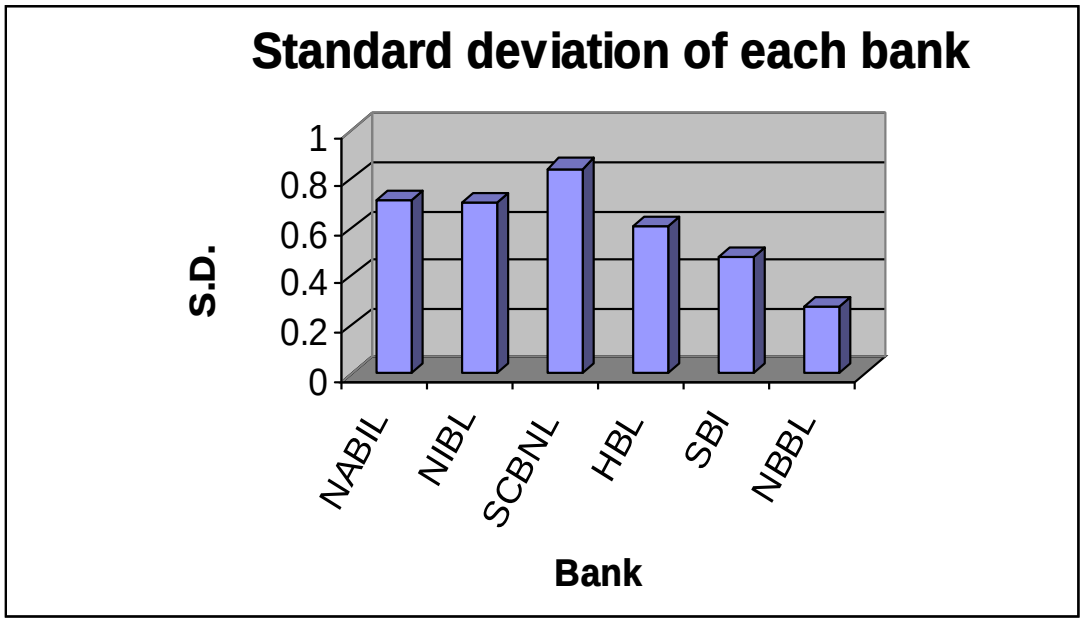
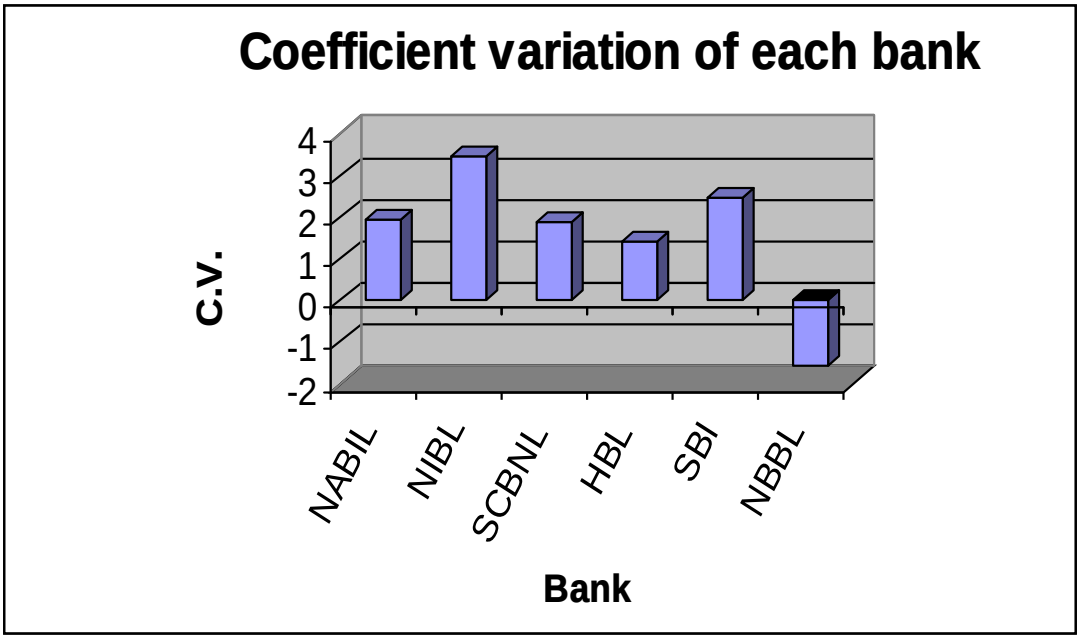


Figure 4.15

C.V. of each bank



4.2.2 On the basis of market capitalization:

Market capitalization is the total market value at specific time period of the company, industry and as whole. The size of the bank can be determined with the help of market capitalization. Table 4.14 shows the size of the banks on the basis of market capitalization.

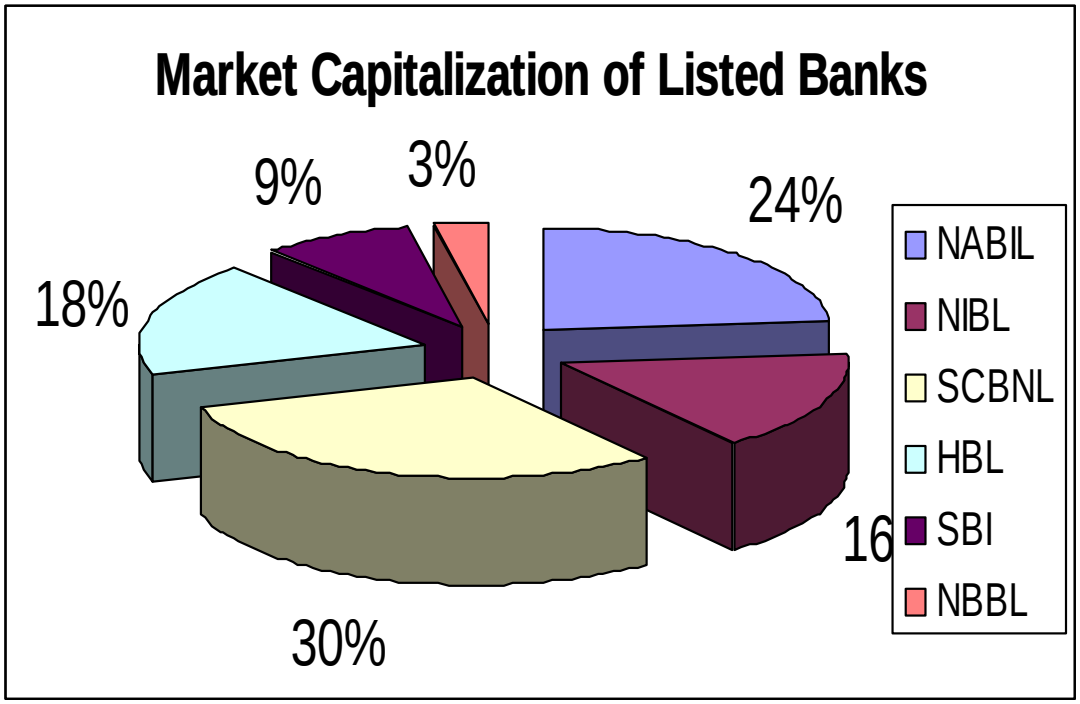
Table 4.14

Market Capitalization of Listed Banks at July 15, 2006

Name of the Banks	Market Capitalization (Rs. in Million)	Ratio (%)
Nabil Bank Limited	10998.29	24
Nepal Investment Bank Limited	7441.38	16
Standard Chartered Bank Nepal Ltd.	14142.68	30
Himalayan Bank Limited	8494.20	18
Nepal SBI Bank Limited	3964.56	9
Nepal Bangladesh Bank Limited	1432.65	3
Total	**46473.76**	**100**

Figure 4.16

Market Capitalization of Listed Banks



On the basis of market capitalization, SCBNL is largest bank amongst the listed banks under study as on 16th July 2006. Market capitalization shows only theoretical value (i.e. market value) and it could not be realized. So, the investor can not made proper investment decision under its market capitalization.

4.2.2.1 Movement of Market Capitalization:

Market capitalization movement denotes the changed values of the company from year to year. It shows the consistent type of company on the basis of market capitalization on different year. Figure 4.17 shows the year wise movement of market capitalization.

Table 4.15

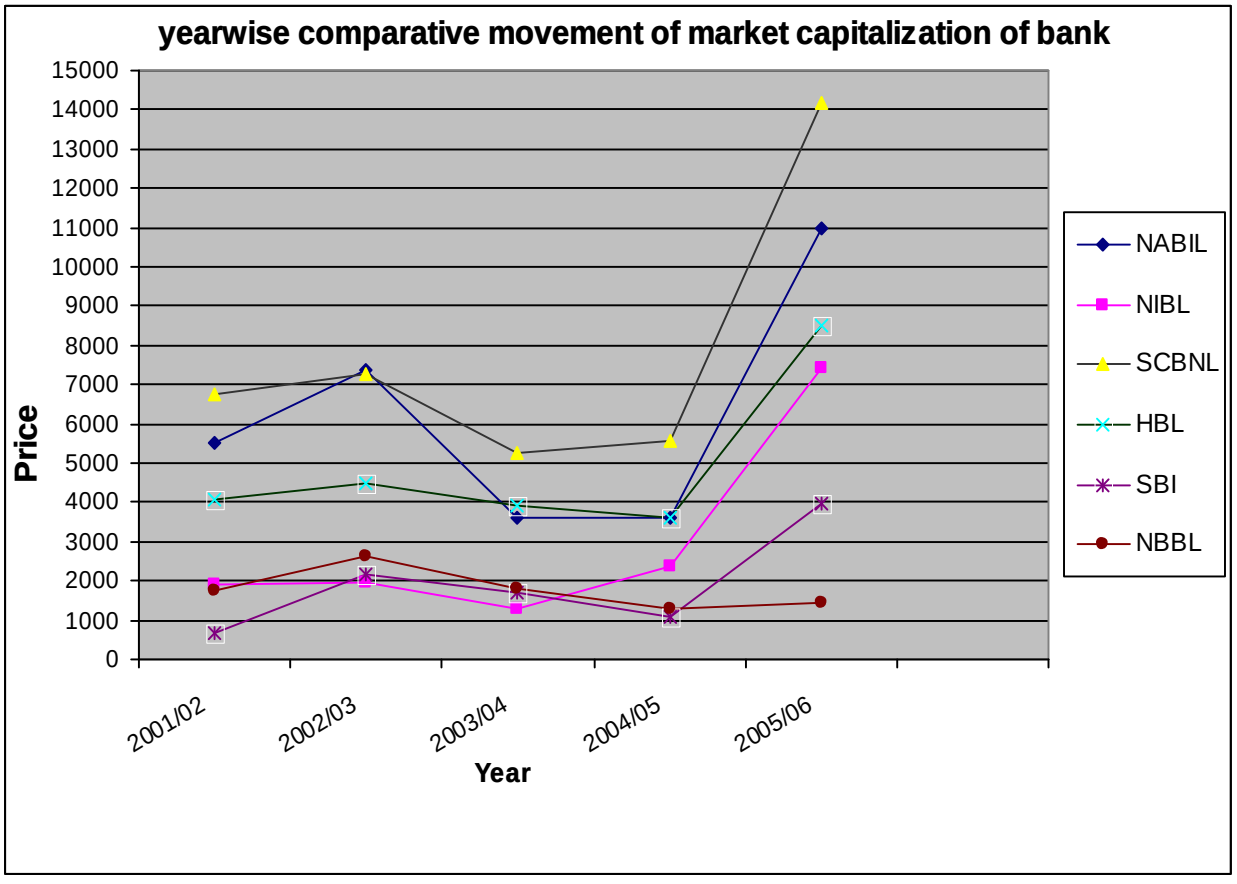
Year wise comparative movement of market capitalization

Rs. in million

	Year				
Banks	**2001/02**	**2002/03**	**2003/04**	**2004/05**	**2005/06**
NABIL	5499.20	7374.75	3613.63	3613.63	10998.29
NIBL	1896.25	1954.77	1291.85	2347.56	7441.38
SCBNL	6740.07	7279.95	5263.03	5568.62	14152.68
HBL	4080.00	4500.00	3900.00	3586.44	8494.2
SBI	674.12	2159.10	1703.81	1084.16	3964.56
NBBL	1768.91	2619.76	1821.98	1295.71	1432.65

Figure 4.17

Year wise comparative movement of market capitalization



From the above figure 4.17 we observe that the movement of market capitalization in year 2005-06 is highest. Market capitalization of NABIL is lowest in year 2003-04and 2004-05 and highest in year 2005-06.Market capitalization of NIBL is lowest in year 2003-04 then after it has increasing trend and highest in year 2005-06. Market capitalization of SCBNL is lowest in year 2003-04 and highest in year 2005-06. Market capitalization of HBL is lowest in year 2004-05 and highest in year 2005-06. Market capitalization of SBI is lowest in year 2001/02 and highest in year 2005-06. Market capitalization of NBBL is lowest in year 2004-05 and highest in year 2005-06.

Inter Industry Comparison:

4.3.1 On the basis of market capitalization:

To compare the size of the industry market capitalization of the different companies are presented below. Table no.4.16 and Chart 4.18, shows industry wise market capitalization, which covers the capital market of listed companies.

Table no. 4.16

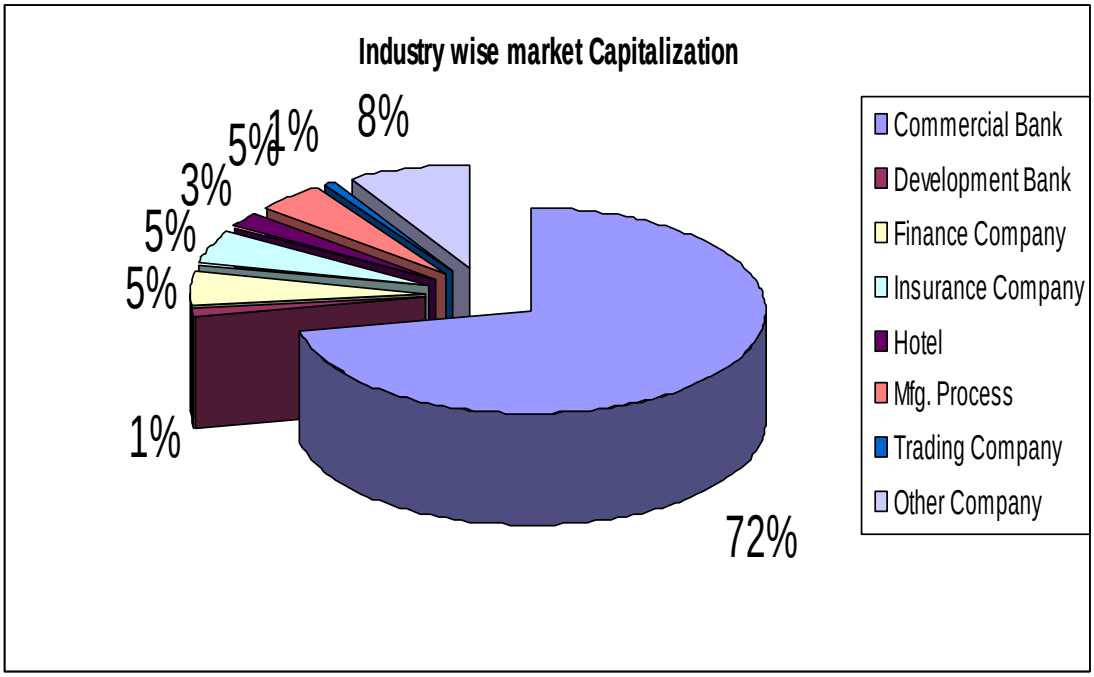
Industry wise market capitalization as at July16, 2006

Rs. in million

S. No.	Industry	Market capitalization	Percent
1	Commercial Bank	68841.24	72
2	Development Bank	1227.49	1.28
3	Finance Company	4930.63	5.16
4	Insurance Company	4852.19	5.08
5	Hotel	2393.61	2.50
6	Manufacturing & Processing	4612.20	4.82
7	Trading Company	737.39	0.77
8	Other Company	8012.20	8.38
	Total	**95606.95**	**100**

Figure 4.18

Industry wise market capitalization as at July 16, 2006



From the above chart 4.18, it is seemed that major portion i.e. 72% of the total market capitalization occupies by the Banking industry. So we can say Nepalese share market largely depends upon the Banking industry and Banking industry plays the vital role in Nepalese share market.

4.3.2 On the basis of risk and return:

On the basis of market capitalization banking industry is the largest industry in Nepalese share market. Banking industry is gaining public trust, and it caused motivates investor to invest in banking industry than other industry. But investment decision should take on the basis of risk and return not only on the basis of market capitalization. Risk and return factor should be considered as a key factor on investment decision. Table no. 4.17 shows the expected return, standard deviation and C.V. of each industry. The expected return, standard deviation and C.V. of different industry have calculated in Appendices no. 8 to 14. The industry wise NEPSE index has presented in Appendix no. 7.

Table no. 4.17

Industry wise expected return, standard deviation and C.V.

Industry	Expected return	S.D.	C.V.	Remarks
Banking	0.1702	0.2708	1.5911	
Manuf. & Processing	-0.0470	0.1052	-2.238	
Hotel	-0.1291	0.1614	-0.5037	
Trading	-0.0042	0.1210	-28.8095	
Finance	-0.0154	0.2536	-16.4675	
Insurance	-0.0434	0.3015	-6.9470	
Others	0.5750	1.2148	2.1126	Highest Return

Figure 4.19
Expected Return of each industry

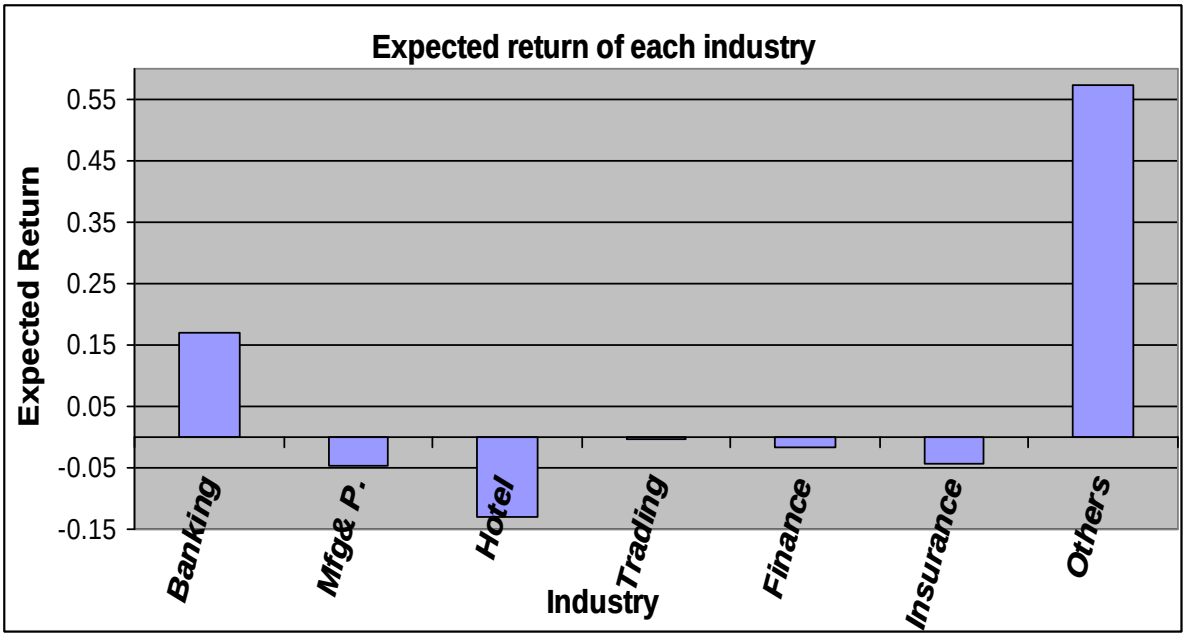
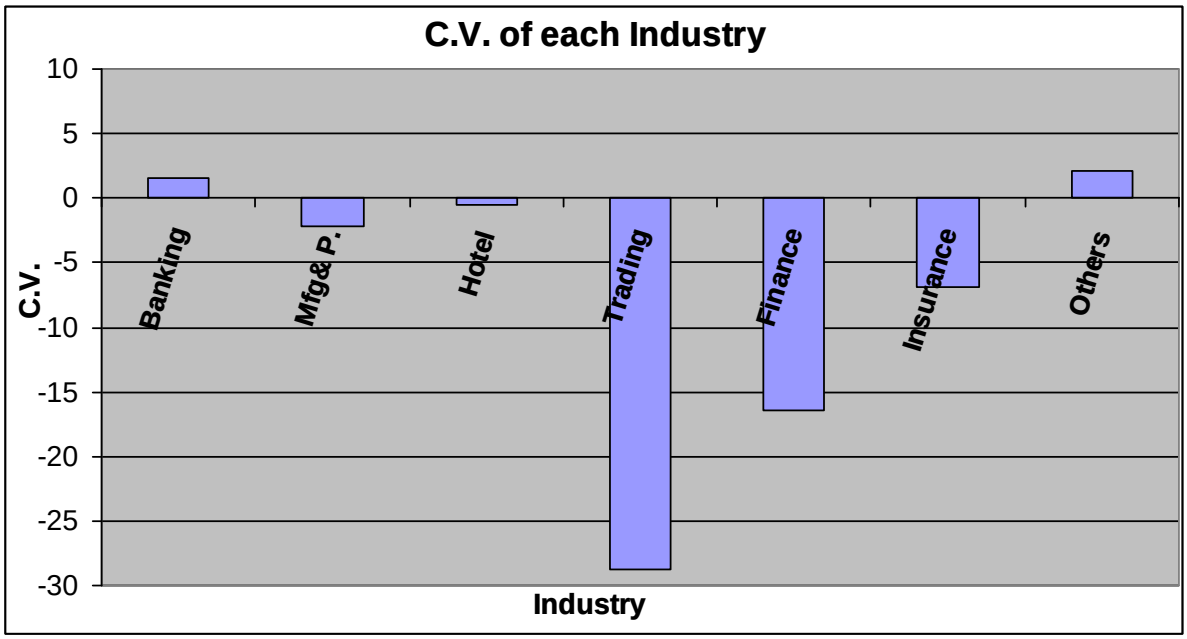


Figure 4.20

C.V. of each industry



Expected market return of other industry is best industry in comparison with banking, manufacturing, hotel, trading, finance, insurance industry and market as well, because it has highest expected rate of return i.e. 0.5750 of 57.50%. Almost industry except banking has negative expected return under study period of latest five years despite of bad condition of country and obviously it caused to negative effect in business and financial sector as well.

From the above figure 4.20 Almost industries except banking and other industry has negative C.V. Between banking and other industry C.V. of banking industry is lowest. Therefore Investment in banking industry is best because of its lower C.V

Comparison with Market:

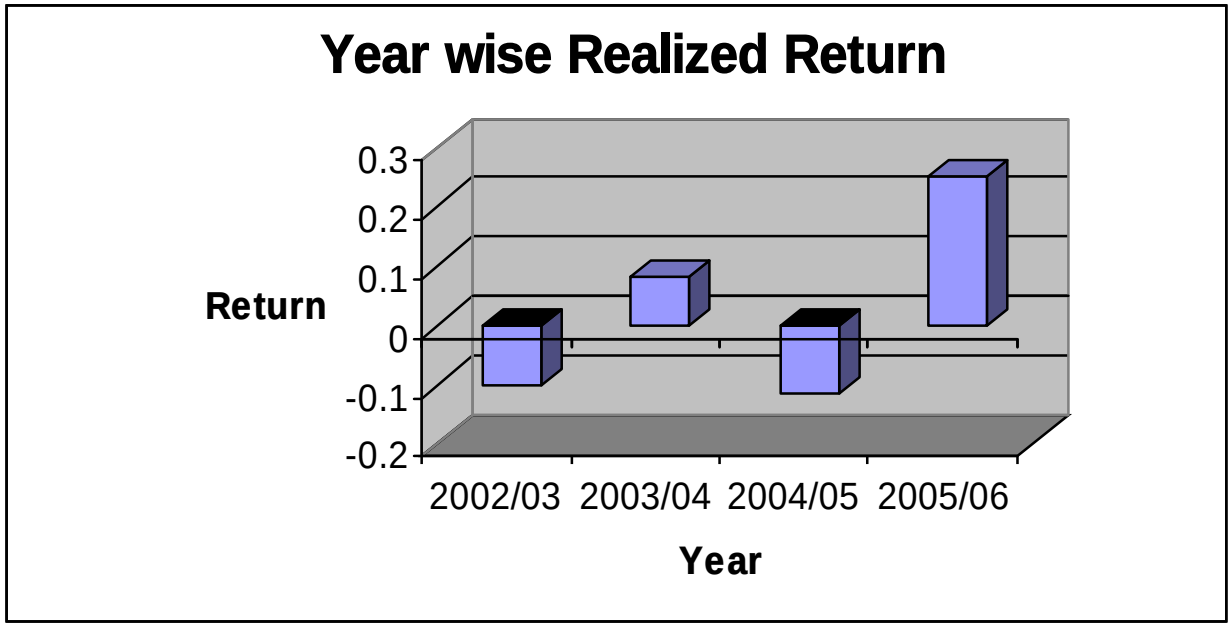
Till now, there is only one stock market exist in Nepal namely Nepal Stock Exchange Limited. All the trading of stock traded in Nepal stock exchange limited. Index of Nepal stock exchange limited is called NEPSE. Overall stock market represented by NEPSE. In this section risk and return of each industry will compare with market risk and return (i.e. NEPSE index).

4.4.1 On the basis of risk and return:

Expected return, Standard deviation and Coefficient of variation of the market is as follows. It is calculated in Appendix no.15.

Figure 4.21

Movement of Market Return



Expected Return on Market E (R_m)	=	0.0300
Standard Deviation (σ)	=	0.1723
Coefficient of Variation (C.V.)	=	5.7395

From the above diagram we can see that realized returns on the market is in negative trend up to F/Y 2002/03 and then after it is in positive trend for the year 2003/04 and it indicates the market return is gradually increasing so it will give positive message to investors but it decreased again in the year 2004/05. So, Highest realized rate of return on market is in F/Y 2005/6 and lowest realized rate of return on market is in F/Y 2004/05.

4.4.2 On the basis of Market Sensitivity of Common Stock:

Market sensitivity is explained by its beta coefficient. Beta is known as systematic risk measurement. The beta of market is always equals to 1. Beta of common stock more than 1 is called aggressive and Beta of stock less than 1 is called defensive.

Aggressive denotes more risky and highly returnable and defensive denotes vice versa. Aggressive stock can get more return than market return.

Calculation of Beta of Market:

We have,

$$B_i = \frac{COV\ (R_j R_m)}{\pm_m^2} = \frac{\pm_j \pm_m p_{jm}}{\pm_m^2} = \frac{\pm_j p_m}{\pm_m}$$

Where,

P_{jm} = Correlation Coefficient between returns of market and stock j.

Again,

$$B_m = \frac{COV\ (R_m R_m)}{\pm^2_m} = \frac{\pm_m \pm_m p_{mm}}{\pm_m \pm_m} = P_{mm} = 1$$

Hence, Beta coefficient of market is equals to 1.

Calculation of Beta coefficient of Common stock of each Banks:

The Beta coefficient of C.S. of each common stock has calculated in Appendix no. 16 to Appendix no. 21. The summary data has been presented below on table 4.18

Table 4.18

Beta Coefficient of different Banks

Banks	Beta Coefficient	Remarks
NABIL	-0.4188	Defensive
NIBL	-2.9897	Most Defensive
SCBNL	3.5121	Most Aggressive
HBL	-1.9303	Defensive
SBI	2.5198	Aggressive
NBBL	-1.1138	Defensive

The beta coefficient of SCBNL is highest than that of other banks market as well so, common stock of SCBNL it is most aggressive stock among the sample banks under this study period. The beta coefficient of SBI is greater than one so its common

stocks are aggressive. The beta coefficient of NIBL is lowest than other sample banks so, common stock of NIBL is most defensive stock among the sample banks under study period. The beta coefficient of NABIL, HBL and NBBL are less than one so their common stocks are defensive.

4.4.3 On the basis of Price Evaluation of Common Stock of each bank:

Comparison of required rate of return and expected rate of return gives the result, whether the stock is under priced or overpriced. There are three conditions of price evaluation which are as follows:

- When expected rate of return is greater than required rate of return in that case the pricing of the stock will be under priced.
- When expected rate of return is less than required rate of return in that case the pricing of the stock will be over priced.
- When expected rate of return is equals to required rate of return in that case the pricing of the stock will be correctly priced.

For price evaluation, the calculation of required rate of return is necessary. The required rate of return can be calculated as:

$$\text{Required rate of return } E(R_j) = R_f + [E(R_m) - R_f] B_j$$

In the above equation, the risk free rate of return (R_f) is needed to determine required rate of return. The discount rate of Treasury bill (T-bill) issued by Nepal Rastra Bank is taken as risk free rate (R_f) in Nepal. NRB issued two types of T-bill i.e. 91 days and 364 days. According to suggestion of T-bill section of NRB it is better to take 364 days average discount rate as risk free rate. T-bill rate will be differ in various issue in this study I have taken average discount rate of 364 days T-bill of mid of the July 2006 (i.e. F/Y 2062/63). As provided by the T-bill section of NRB average T-bill rate for F/Y 2005/06 is 3.7273%.

Hence;

Risk free rate for the calculation is 3.7273%. = 0.037273

Expected return on market $E(R_m)$ is 3.73% = 0.0373 which is calculated in Appendix no.15

The beta coefficient of each bank has calculated in appendices 16-21.

Table 4.19

Price evaluation table of different banks

Banks	Beta	Required rate of return $E(R_j) = R_f + [E(R_m) - R_f] B_j$	Expected Return	Price Evaluation
NABIL	-0.4188	0.0403	0.3725	Under Priced
NIBL	-2.9897	0.0591	0.2039	Under Priced
SCBNL	3.5121	0.0117	0.4544	Under Priced
HBL	-1.9303	0.0513	0.4348	Under Priced
SBI	2.5198	0.0189	0.1945	Under Priced
NBBL	1.1138	-0.0039	-0.1743	Over Priced

From the above table it is observed that pricing of common stock of almost banks are under priced due to the negative return on market and the only one bank's common stock that has over priced that is NBBL. Under pricing situation of the common stock of the banks indicates all the sample commercial bank's stock demands are very good investment opportunity except NBBL. The investors can gain from buying the under priced stocks. It is recommended to purchase under priced stock but buyer must consider other factors as well to invest from the investment point of view.

4.3 Correlation between returns of common stock of different banks:

Correlation between the returns of the two securities plays a vital role to risk minimization. Portfolio management is very effective tools for risk minimization. For portfolio construction, it is must be known correlation between two securities. If there is perfectly negative correlation between the returns of the two stocks, in that case risk can be diversified easily but this situation may not happen. Most stock are positively correlated, not perfectly. Here, correlation between returns on common stock of each banks are presented below:

Correlation between NIBL and SBI (P_{BE})

We have,

$$P_{BE} = \frac{COV(R_B R_E)}{\pm_B \pm_E} = \frac{-0.2870}{(0.7079)(0.4833)} = -0.8389$$

Where,

P_{BE} = Correlation coefficient of return between Common Stock of NIBL and SBI.

σ_B = S. D. of NIBL

σ_E = S. D. of SBI

Similarly correlations of return between other banks are calculated and correlation coefficient is presented below in Table no. 4.20

Table 4.20

Correlation coefficient between Common Stock of different banks

Banks	NABIL	NIBL	SCBNL	HBL	SBI	NBBL
NABIL	-	0.5568	0.4815	0.4738	0.2883	0.4062
NIBL		-	-0.9845	0.3224	-0.8390	0.4634
SCBNL			-	-0.4628	1.0661	-0.5800
HBL				-	-0.1765	0.9796
SBI					-	-0.3699
NBBL						-

Above table shows correlation between return on common stock of different banks how they are correlated and how can minimize the risk by portfolio construction investing two stocks? From the above table it is observed that correlation between NIBL and SBI has negative correlation and by investing into common stock of these two banks risk can be reduced significantly.

4.4 Portfolio Analysis:

In simple and understandable language; if you kept all the eggs what you have in single basket there will be higher risk it means if any problem persist in that basket there is maximum chances to lost all the eggs so if you want to minimize risk without losing benefit from the basket you have to kept those eggs in more than one basket and certainly this policy helps you to minimize risk to some extent and you will be optimum benefited from those basket.

The concept of portfolio theory was developed by Professor Harry M. Markowitz. Markowitz explained that the risk can be reduced without loosing considerable return by constructing portfolio; the investor can diversify the unsystematic risk

up to zero level. The main objective of portfolio is reduction of unsystematic risk, from which the investor can get optimum return in certain degree of risk by constructing efficient portfolio. In making portfolio investment, the total available fund is divided into proper amount or proportion for different securities it means in this study investment making in common stock of different banks. The total weight of a portfolio is equals to 100%. Therefore, a brief analysis of risk and return is straightforward weighted average of returns on the individual stocks.

4.6.1 Analysis of risk diversification by investing into portfolio:

The analysis is based on the two assets portfolio and the tools for analysis are presented in the third chapter (research methodology). Here, the portfolio of the common stock of NIBL (say stock B) and SBI (say stock E) likewise common stock of NIBL (say stock B) and NBBL (say stock F). The calculation of covariance between above mentioned portfolio, Proportion of investment in common stock of above banks common stocks and equation of portfolio that minimized the risk and optimized the return.

Portfolio Construction 1: (NIBL & SBI)

Table 4.21

Calculation of covariance of return on C.S. of NIBL & SBI (R_B R_E)

Year	$R_B-\bar{R}_B$	$R_E-\bar{R}_E$	$(R_B-\bar{R}_B)(R_E-\bar{R}_E)$
2001/02	0	0	0
2002/03	0.3688	-0.5384	-0.1986
2003/04	0.53	0.0095	0.0050
2004/05	0.1348	-0.1033	-0.0139
2005/06	-1.0336	0.6324	-0.6536
	Total		**-0.8611**

$$COV(R_B R_E) = \frac{\sum (R_B - \bar{R}_B)(R_E - \bar{R}_E)}{n-1} = \frac{-0.8611}{4-1} = -0.2870$$

To minimize the risk, the proportion of C.S. of stock B in the portfolio is given as;

$$W_B = \frac{\pm_E^2 - COV(R_B R_E)}{\pm_B^2 + \pm_E^2 - 2COV(R_B R_E)} = \frac{(0.4833)^2 - (-0.2870)}{(0.7079)^2 + (0.4833)^2 - 2(-0.2870)} = 0.40$$

$W_B = 0.40$ or 40%

$W_E = 1\text{-}W_B = 1\text{-}0.40 = 0.60$ or 60%

The Portfolio Return of NIBL & SBI will be:

= 0.40x (0.2039) + 0.60x 0.1945

= 0.1983 or 19.83 %

The Portfolio Risk of NIBL & SBI will be:

$$= \sqrt{(0.40)^2(0.7079)^2 + (0.60)^2(0.4833)^2 + 2 \times (-0.2870) \times 0.40 \times 0.60}$$

= 0.1628 or 16.28 %

Comparative analysis:

Making investment diversification, we can reduce the risk (S.D.) of portfolio (NIBL and SBI). Before the diversification the risk of NIBL and SBI was 70.79% & 48.33% respectively and average risk was 59.56%. But after diversification the risk of portfolio reduce by 43.28% and will be only 16.28% which is the considerable reduction in risk.

Portfolio Construction 2: (NIBL & NBBL)

Table 4.22

Calculation of covariance of return on C.S. of NIBL & NBBL (R_B R_F)

Year	R_B-$\bar{R}_B$	R_F-$\bar{R}_F$	(R_B-$\bar{R}_B$) (R_F-$\bar{R}_F$)
2001/02	0	0	0
2002/03	0.3688	-0.1041	-0.0384
2003/04	0.53	-0.0201	-0.0107
2004/05	0.1348	0.3812	0.0514
2005/06	-1.0336	-0.2571	0.2657
	Total		**0.2681**

$$COV\,(R_B R_F) = \frac{\sum (R_B - \overline{R}_B)(R_F - \overline{R}_F)}{n-1} = \frac{0.2681}{4-1} = 0.0894$$

Portfolio of NIBL and NBBL (B & F):

To minimize the risk, the proportion of C.S. of stock B in the portfolio is given as;

$$W_B = \frac{\pm_F{}^2 - COV\,(R_B R_F)}{\pm_B{}^2 + \pm_F{}^2 - 2COV\,(R_B R_F)} = \frac{(0.2724)^2 - (0.0894)}{(0.7079)^2 + (0.2724)^2 - 2(0.0894)} = -0.0383$$

W_B = -0.0383 or -3.83%

$W_F = 1 - W_B$ = 1-(-0.0383) = 1.0383 or 103.83%

The Portfolio Return of NIBL & NBBL will be:

= -0.0383x (0.2039) + 1.0383x (-0.1743)

= -0.0145 or -1.45%

The Portfolio Risk of NIBL & NBBL will be:

$$= \sqrt{(-0.0383)^2(0.7079)^2 + (1.0383)^2(0.2724)^2 + 2 \times 0.0894 \times -0.0383 \times 1.0383}$$

= 0.2760 or 27.60%

Comparative analysis:

Making investment diversification, we can reduce the risk (S.D.) of portfolio (NIBL and NBBL). Before the diversification the risk of NIBL and NBBL was 70.79% & 27.24% respectively and average risk was 49.01%. But after diversification the risk of portfolio reduce by 21.41% and will be only 27.60 % which is the considerable reduction in risk without loosing return.

Chapter – Five

5. Summary Conclusion and Recommendation:

5.1 Summary:

In this concluding chapter we have divided in the three sections. Firstly summarize the whole findings. Secondly concluded the obtained result of study and lastly some practical recommendation are suggested to solve the problems observed on the basis of findings.

The main objective of the study is to analyze the risk and return in common stock investment of Nepalese stock market. The study is focused on the common stocks of six commercial banks listed in the Nepal Stock Exchange Limited; they are NABIL Bank Ltd, Nepal Investment Bank Ltd, Standard Charted Bank Ltd. Himalayan Bank Ltd, SBI Bank Ltd. and Nepal Bangladesh Bank Ltd. For the purpose of the study the necessary data were collected for the period 2002-2006 from the NEPSE Trading Reports and web sites, Periodicals and Journals of NRB, Annual Reports of SEBON and other related journals and annual reports of banks

Scientific methods are used in data analysis. To make result more clear the data are separately presented in Tables, Graphs, Diagrams and Chart. Both quantitative and qualitative analysis has performed by using statistical tools.

Analysis of risk and return on common stock is the most important and essential tool in the area of investment because by using risk and return analysis, investor can find the less risky higher profitable investment of the different investment alternatives from the security market. There is deep relationship between risk and return. The relationship between risk and return is described by investor's perception about risk and their demand for compensation. No investors will like to invest in risky assets unless he/she is assured of adequate compensation for the acceptance of risk. Hence, risk plays a central role in the analysis of investment on common stocks.

Common stock is the most risky security and life blood of stock market. Because of higher expected return an investment in common stock of a corporate firm neither ensures an annual return nor ensures the return of principal. Therefore investment in the common stock is very sensitive on the ground of risk. Dividends to common stock holders are paid only if the firm makes an operative profit after tax and preference dividend.

5.2 Findings and Conclusion:

This analysis is based on financial data obtained from the NEPSE Trading Reports and web sites, Periodicals and Journals of NRB, Annual Reports of SEBON and annual reports of banks. Thus it possesses all the inherent limitations of financial data. Unavailability of required data in this short period the whole period of the study has restricted the size of the 6 companies. Therefore the limitations of the small sample are also very much prevalent in this study. Nepalese stock market is in immerging stage. This study will enable investors to know about stock market and process of choosing the common stock or creating them into a portfolio. The openness and liberalization in national is followed by the nation since the political change in 1990. Nepalese stock market has been developing gradually. However, due to the poor knowledge and inadequate information about stock market, the Nepalese investors are not able to analyze the risk and return on common stocks properly.

In this ground reality, this study has covered common stocks of six listed commercial banks, which is from the largest sector of Nepalese stock market of commercial banking industry. This study might be helpful for investors to know about the stock market, process of choosing the common stock by analyzing risk and return and creating portfolio from them to reduce risk without loosing considerable return.

Although this study has certain limited objectives, in accordance with these objectives data has collected, presented and analyzed. On the study period the major findings of the data analyzed are stated below.

- Among the selected commercial banks the SCBNL has highest market capitalization (30%).It indicates the size of the stock market of SCBNL is greater one.
- Among the selected commercial banks the highest expected return on common stock of SCBNL is 45.44% and the lowest is of NBBL-17.43%.It indicates the investment in SCNBL will earn best return.
- Among the selected banks the highest C.V on common stock of NIBL is 3.4718 and lowest C.V on common stock of NBBL is-1.5628. It indicates NABIL stock is more risky and SCNBL stock is less risky than others.
- Among the selected banks the beta coefficient of SCBNL is highest (i.e. 3.5121) and the beta coefficient of NIBL is lowest (i.e.-2.9897) it indicates C.S of SCBNL is most aggressive stock and C.S of NIBL is most defensive stock than other. The beta coefficient on NABIL, HBL and NBBL are less than one so their common stocks are defensive.
- Market price of all the selected banks is under priced except market price of NBBL. It indicates still almost banks have more opportunity to invest and it Encourages to investor to make investment in common stock of those banks.
- The correlation between NIBL and SBI is in negative. It indicates making Portfolio investment in these two stocks will minimize risk without loosing Considerable return.
- Among the whole sector wise industry, categorized by NEPSE, other industry sector has highest expected return on common stock. Other industry includes hydro power sector as well so the hydro power companies contributed significantly to generate highest expected return. Despite of this result the general people and other professional investor is still attracted in common stock investment of financial sector mostly attracted in banking sector.
- The practice of share allotment and investment in the primary market of common stock the single investor (mostly stock broker) apply for huge share

investment in dummy name and other relatives name without prior information to them and they are succeed to get more share allotment in own single investment so it affects real investor (general people) and they will be gloominess by such practices.

- General people of the Nepal have invested in common stock without getting sufficient information of invested company. Like as, background of the company, background of promoter, morale character and financial discipline of board of director members, efficiency of executing body etc. and they are making investment without analysis financial statement and they are found unable to calculate risk factor of security of the company because of lack of knowledge, and negligence towards making investment decision.

- On the basis of above mentioned findings it is concluded that, general people, who have fund available to invest, consider stock market investment as a blind or black art. They have unrealistically optimistic or pessimistic expectations about stock market investment.

5.3 Recommendation :

The following recommendations are prescribed on the basis of data analysis and major findings of this study.

- From the analysis of individual common stocks of commercial bank, the investment on common stock of HBL is recommended for individual stock investment because the C.V. of the returns of HBL common stocks is the lowest But if the criteria are market sensitivity, the common stock of NIBL is recommended for investment because it has most defensive and lowest beta
- Analyzing and comparing the industry-wise return, Banking sector industry is better for investment because it has lowest C.V.
- Investors need to diversify their fund to reduce risk. Proper construction of portfolio will reduce considerable potential loss, which can be defined in terms of risk. Most of the Nepalese investors are found to be investing in only single type of common stock through primary issue. Investors should diversify their funds while investing to reduce the unsystematic risk. But portfolio

construction is dynamic and difficult job. For the portfolio construction, the stocks with higher return and negative or near to zero correlation should be selected. The portfolio revision is also necessary at certain interval of time to get best return at lower risk. From the study the portfolio between common stock of NIBL & SBI and NIBL & NBBL is recommended to construct.

- Investors should make their decision on the basis of reliable information (from primary data and data derived by analysis) rather than the imagination and rumors. They should make several analyses like risk & return analysis, ratio analysis etc. It will be better to make discussions with stockbrokers and take consultancy services from experts before reaching at the decision.
- Analysis of the market sensitivity of common stock guides in investing on stock market. It is better to invest the common stock of beta less than one i.e. defensive stock for that investor who does not eager to take high risk. But the higher return can't obtain in such investment. The under priced common stock should be purchased and the overpriced common stock should be sold. This study recommends purchase the common stock of all most banks, except common stock of NBBL. Which are under priced?
- Government needs to amend the rules and regulations regarding stock market in time to time and to make the policies that protect the individual investor's right and also need to follow up the implementation of rules and regulation and to make sure the objectives are achieved. On that regard, HMG needs to monitor and to make active all the components of stock market properly. The government has to implement the rules and regulation strictly other wise it will be meaning less.
- NEPSE needs to provide clear information about the process of investment, trading rules and regulations, etc. Similarly, NEPSE should develop efficient and effective information channel to provide up to date information. The "open cry system" of trading can't help to develop the stock market in the modern age of information technology. It should be modernized. Another recommendation to NEPSE is that it should take steps to establish the stock

market in other main cities of the country. The market is concentrated only in the capital city, which is the main difficulty in development of stock market.

- The financial institutions and companies should provide the real financial statements. The data provided by NEPSE and the company itself are different in some cases. It creates confusion to the potential investors about the actual financial condition of the company. The value of assets and liabilities should not be manipulated by the company to show the under profitability or over profitability. Every decision of the corporation should be make to maximize the value of the firm and value per share.

This study has certain limited objectives. In accordance with these objectives data has collected, presented and analyzed. On the study period the major findings of data analysis are stated below.

- Market price of all the selected banks is under priced except market price of NBBL. It indicates still almost banks have more opportunity to invest and it encourages to investor to make investment in common stock of those banks.
- The correlation between NIBL and SBI is in negative. It indicates making portfolio investment in these two stocks will minimize risk without loosing considerable return.
- Among the whole sector wise industry, categorized by NEPSE, other industry sector has highest expected return on common stock i.e. 14.74%. Other industry includes hydro power sector as well so the hydro power companies contributed significantly to generate highest expected return. Despite of this result the general people and other professional investor is still attracted in common stock investment of financial sector mostly attracted in banking sector.
- The practice of share allotment and investment in the primary market of common stock the single investor (mostly stock broker) apply for huge share investment in dummy name and other relatives name without prior information to them and they are succeed to get more share allotment in own single investment so it affects real investor (general people) and they will be gloominess by such practices.
- General people of the Nepal have invested in common stock without getting sufficient information of invested company. Like as, background of the company, background of

promoter, morale character and financial discipline of board of director members, efficiency of executing body etc. and they are making investment without analysis financial statement and they are found unable to calculate risk factor of security of the company because of lack of knowledge, and negligence towards making investment decision.

On the basis of above mentioned findings it is concluded that, general people, who have fund available to invest, consider stock market investment as a blind or black art. They have unrealistically optimistic or pessimistic expectations about stock market investment. And they have fear of unknown also. The reason of these expectations and fear is lack of sufficient information about stock market.

After the political change of 1990, the national economy is lead by the openness and liberalization policy. By the effect of this policy, Nepalese stock market has been developing gradually. However, due to the poor knowledge and inadequate information about stock market, the Nepalese investors are not able to analyze the risk and return on common stocks properly.

In this ground reality, this study has covered common stocks of six listed commercial banks, which is from the largest sector of Nepalese stock market of commercial banking industry. This study might be helpful for investors to know about the stock market, process of choosing the common stock by analyzing risk and return and creating portfolio from them to reduce risk without loosing considerable return.

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Appendix

1. Calculation of Expected rate of return, Standard deviation & C.V. of Nabil Bank Ltd.

$$\overline{R} = \frac{\sum R}{n} = \frac{1.49}{4} = 0.3725$$

$$\pm = \sqrt{\frac{\sum (R - \overline{R})^2}{n-1}} = \sqrt{\frac{1.5344}{3}} = 0.7152$$

$$C.V. = \frac{\pm}{\overline{R}} = \frac{0.7152}{0.3725} = 1.92$$

2. Calculation of Expected rate of return, Standard deviation & C.V. of Nepal Investment Bank Ltd.

$$\overline{R} = \frac{\sum R}{n} = \frac{0.8156}{4} = 0.2039$$

$$\pm = \sqrt{\frac{\sum (R - \overline{R})^2}{n-1}} = \sqrt{\frac{1.5034}{3}} = 0.7079$$

$$C.V. = \frac{\pm}{\overline{R}} = \frac{0.7079}{0.2039} = 3.4718$$

3. Calculation of Expected rate of return, Standard deviation & C.V. of Standard Chartered Bank Nepal Ltd.

$$\overline{R} = \frac{\sum R}{n} = \frac{1.8176}{4} = 0.4544$$

4. Calculation of Expected Rate of Return, Standard Deviation & C.V of Himalayan Bank Ltd.

$$\pm = \sqrt{\frac{\sum (R - \overline{R})^2}{n-1}} = \sqrt{\frac{2.1416}{3}} = 0.8449$$

$$C.V. = \frac{\pm}{\overline{R}} = \frac{0.8449}{0.4544} = 1.8594$$

$$C.V. = \frac{\pm}{\overline{R}} = \frac{0.6064}{0.4348} = 1.3947$$

$$\overline{R} = \frac{\sum R}{n} = \frac{1.7391}{4} = 0.4348$$

$$\pm = \sqrt{\frac{\sum (R - \overline{R})^2}{n-1}} = \sqrt{\frac{1.1033}{3}} = 0.6064$$

5. Calculation of Expected Rate of Return, Standard Deviation & C.V.of Nepal SBI Bank Ltd.

$$\overline{R} = \frac{\sum R}{n} = \frac{0.7779}{4} = 0.1945$$

$$\pm = \sqrt{\frac{\sum (R - \overline{R})^2}{n-1}} = \sqrt{\frac{0.7008}{3}} = 0.4833$$

6. Calculation of Expected Rate of return, Standard deviation & C.V. of Nepal Bangladesh Bank Ltd.

$$C.V. = \frac{\pm}{\overline{R}} = \frac{0.4833}{0.1945} = 2.4848$$

$$\overline{R} = \frac{\sum R}{n} = \frac{-0.6974}{4} = -0.1743$$

$$C.V. = \frac{\pm}{\overline{R}} = \frac{0.2724}{-0.1743} = -1.5628$$

$$\pm = \sqrt{\frac{\sum (R - \overline{R})^2}{n-1}} = \sqrt{\frac{0.2227}{3}} = 0.2724$$