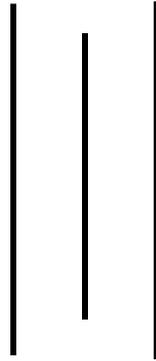


**COMPARATIVE STUDY ON  
RISK AND RETURN ANALYSIS OF SELECTED BANKS  
(BOK, THB, LBL, GBL AND KIST)**

**By:  
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T.U. Regd. No.: 7-2-12-519-2002**



**A thesis Submitted to:  
Office of the Dean  
Faculty of Management  
Tribhuvan University**

***"In partial fulfillment of the requirement for the degree of  
Master of Business Studies (MBS)"***

**Biratnagar, Nepal  
July 2011**



# TRIBHUVAN UNIVERSITY

POST GRADUATE CAMPUS

BIRATNAGAR (NEPAL)

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## RECOMMENDATION

This is to certify that the thesis :

**Submitted by :**

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COMPARATIVE STUDY ON

RISK AND RETURN ANALYSIS OF SELECTED BANKS

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## VIVA-VOCE SHEET

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**COMPARATIVE STUDY ON  
RISK AND RETURN ANALYSIS OF SELECTED BANKS**

And found the thesis to be the original work of the student and written  
according to the prescribed format. We recommend the thesis to be  
accepted as partial fulfillment of the requirement for the degree of

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# **DECLARATION**

I hereby declare that the work reported in this thesis entitled "COMPARATIVE STUDY ON RISK AND RETURN ANALYSIS OF SELECTED BANKS" submitted to Office of the Dean, Faculty of Management, Tribhuvan University is my original work done in the form of partial fulfillment of the requirement for the degree of Master's of Business Studies (MBS) under the supervision of Prof. Dr. Yadav Raj Koirala of Post Graduate Campus Biratnagar.

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## **ACKNOWLEDGEMENTS**

This thesis is prepared and submitted to the faculty of management as partial fulfillment of the requirements of the master's degree in Business Studies (MBS).

Firstly, I would like to pay thanks to my parents who headed me towards the light of education and path of truth. Due to their non-stopping effort for guidance. Today I come in this position. So I would like to share the credit of my success with them.

I would like to express my deep sense of gratitude to my respect teacher and thesis adviser Prof. Dr. Yadav Raj Koirala of Post graduate campus, Biratnagar. I am indebted to Prof Dr. Khagendra Acharya for his generous help and valuable suggestion .

I would like to express my thankful to campus chief Dr. Harihar Bhandari and Mr. Gopal Prasad Ghiimire, staffs of post Graduate Campus Biratnagar. I would like to deep express Jaibendra Jha, Asis. sir and Owner of Nepal Net Sanchar Mr. Kamlesh Kabra, My friends Gangesh Jha, Lav Prasad Dahal, Yograj shrestha their corporation in primary data collection.

I am equally thanks to Library staff, and my heartily friend Buddhi Subedi. I would like to express deep love to my family member for their continuous support and encouragement in my effort to finish my challenging work in continuing this thesis.

Lastly specially thanks Miss Sangita Kumari Mahato for her encouragement and moral support.

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# ABBREVIATION

<b>B.S.</b>	<b>Bikram Sambat</b>
<b>&amp;</b>	<b>and</b>
<b>C.V.</b>	<b>Coefficient of variance</b>
<b>DPS</b>	<b>Dividend per share</b>
<b>e.g.</b>	<b>example</b>
<b>EPS</b>	<b>Earning per share</b>
<b>etc.</b>	<b>etcetera</b>
<b>i.e.</b>	<b>that is</b>
<b>Ltd.</b>	<b>Limited</b>
<b>MPS</b>	<b>Market Price per share</b>
<b>MVPS</b>	<b>Market Value Per share</b>
<b>GBL</b>	<b>Global Bank Limited</b>
<b>BOK</b>	<b>Bank of Kathmandu</b>
<b>THB</b>	<b>The Himalayan Bank</b>
<b>LBL</b>	<b>Laxmi Bank Limited</b>
<b>No.</b>	<b>Page Number</b>
<b>S.No.</b>	<b>Serial Number</b>
<b>S.D.</b>	<b>Standard Deviation</b>
<b>T.U.</b>	<b>Tribhuvan University</b>
<b>Dr.</b>	<b>Doctor</b>
<b>Prof.</b>	<b>Professor</b>

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# CHAPTER-1

## INTRODUCTION

### 1. General background of the study:-

Federal Democratic Republic of Nepal is a Landlocked sovereign state located in south Asia. It is located in the Himalayas and bordered to the north by the People's Republic of China, and to the south, east and west by the republic of India. The traditional concept of business and commerce is deep rooted in the people and most of them are unaware of modern form of commerce. But after the restoration of democracy in 1990 and universal economic liberalization, Nepal has implemented liberal economic policy. As a result, many more companies are established in different sectors such as industrial, tourism, transportation, trade and mostly in the financial sector whose contribution in economy has great significance. Nepal is a country trying to develop its economy through global trend and of course with country suited economic liberalization development in the financial terms is the efficient flow and generation of the funds in the most productive sectors. The nation having effective fund collection from the nook and corners of the country and investing there in the productive areas are the economic heroes at the present scenario.

Among these circumstances, capital market and its extensity also play great roles. Capital market generates and liquidates the securities per the requirement. But unfortunately, Nepalese capital market has not efficient communication network even today. It has made capital market less efficient and inefficiency in result the risk. Even though, it is hoped that Nepalese capital market will be moving towards efficiency in the days to come.

The history of securities market began with the share flotation of Biratnagar jute mills limited and Nepal bank limited in 1937. Introduction of company Act in 1951, the first issue of government bond in 1964 and the establishment of securities exchange center ltd. In 1976 was other significant development in the field of the capital market. Securities

exchange center ltd. Was established with an objective of facilitating and promoting the growth of capital market. Before conversion into stock exchange it was the only capital markets Institution under taking the job of brokering, underwriting , managing public issue , market making for government bonds and other financial services.

When securities exchange (NEPSE) in 1993, the objectives of this institution was to import free marketability, and liquidity to the government and corporate securities by facilitating transactions in its only trading floor through market intermediaries i.e. brokers as well as markets makers. Nepal stock exchange, in short NEPSE, is a non profit organization, operating under securities exchange act, 1993 NEPSE opened its trading floor on 13th January 1994. Members of NEPSE are permitted to act as intermediaries in buying and selling of government bonds and listed corporate securities. At present, there are 27 member brokers and two market makers, who operate on the trading floor as per the securities exchange act 1983, rules and by laws. If a company has surplus, it can buy back outstanding number of shares, which is known as repurchase of shares. In the developed capital market, corporations are allowed to buy shares back for better utilization of their unused cash. However, Nepalese economy acts 1997, section 47 has prohibited company from purchasing its own shares. It states that no company shall purchase its own shares and supply loans against the security of its own shares.

One of the major reason, people invest their hard money on the shares of any company is for dividend. The amount, which is distributed as dividend should be adequate to meet the normal expectations of the shareholders. To these objectives, firms distribute the earning to their shareholders. Earning is that amount which remains after deducting or submitting all operational and non- operational expenses. Stockholder's expectations may vary with their investment priorities; some participate in capital market in order to have some dividend as return where as some hope for capital appreciation of stocks. In fact, primary intention in investing on stock is to earn dividend but in the Nepalese context people are interested in investing with the views and expectation of more capital appreciation of stocks but there are not any consistency and regular practices of dividend announcement in different firms. Similarly in the secondary market the declaration of the dividend or the dividend policy of the firm changes the market price of the shares.

Therefore, it is expected that there is some impact of dividend policy over the market price of the stock.

People visit present study is carried out to analysis the risk and return of sock. Why they are important and how to minimize the risk. The risk side of investment requires knowing why a stock should be purchased what will be the expected return of his/her investment? What is the risk and how to minimize it?

Thus the present study is carried out to analysis the risk and return of sock. Why they are important and how to minimize the risk. The risk side of investment can not be decided. But most of investors are risk averter, they do not like risk and they every activity to avoid or minimize the risk.

“Risk is defined as the variability of returns of a period greater variability of return risk investment. Risk can be defined as the chance of loss. Assets having greater chance of loss are viewed as more risky those with lesser chances of loss of more formally the term risk is used inter changeable with uncertainty to refers to the variability of returns associated with given assets” (Lawrence, 2061:237)

Financial risk management is the quality control of finance. It's a broad term used for different senses for different businesses or things but basically it involves identification, analyzing, and taking measures To reduce or eliminate the exposures to loss by an organization or individual. The practice of risk

Management includes some techniques such as insurance, hedge, derivative contracts, auditing, Swaps. etc and some popular risk measuring methodologies like VaR to manage a wide variety of risks. Every business faces risk, some are predictable and under management's control and some are Unpredictable and hence uncontrolled. We can take risks as an opportunity to get higher returns because higher risks are associated with higher returns. The climate of world's economy and markets can be affected very quickly by changes in exchange rates, interest rates, and commodity prices. Counterparties can apidly become problematic. For instance, it is important to ensure financial risks are identified and managed appropriately.

Banking sector plays an important role in the economic development of the country. Commercial Banks are one of the vital aspects of this sector, which deals in the process of mobilizing the available resources in the needed sector. It is the intermediary between the deficit and surplus of financial institutions and non depository financial institutions. Commercial Banks a Finance Companies (in Nepalese context) are the examples of depository financial institutions whereas Employment Provident Fund, Development Banks, Insurance Companies etc. Are the examples of non- depository financial institutions. All the economic activities are directly or indirectly channelled through these banks. People keep their surplus money as deposits in the banks and hence banks can provide such funds to finance the industrial activities in the form of loans and advances.

Financial institutions play a major role in the proper functioning of an economy. These institutions act as an intermediary between the individuals who lend and who borrow. These institutions accept deposits and in turn lend it to people who are in need of financial resources. These institutions make the flow of investment easier. So we cannot deny the role a bank plays in developing an economy. It pools the funds scattered in the economy and mobilizes them to the productive sector. Bust these institutions inherent a large amount of risk. Which cannot be, denied either. If a bank behaves irresponsibility, the costs borne by the economy are enormous. A larger amount of depositor's money is at stake.

Bank came into existence mainly with the objectives of collecting the idle funds, mobilizing them into productive sector and causing an overall economic development. The bankers have the responsibility of safeguarding the interest of the depositors, the shareholders and the society they are serving.

Commercial Banks are directly related with the people and institution so it is an important bank whose functions are very attractive for people. Although these banks are truly inspired with the objectives of gaining profit, these commercial banks are established to accelerate common people's economic welfare and facilities, to make available loan to the agriculture, industry and commerce and to provide the banking services to the public and the state. Commercial Bank, primarily being profit making

organization try to use every rupee they own in such a way that it yields something which is sufficient to meet the entire expenses and some profit from. However, at the same time due to some statutory as social obligations, they are bound to maintain a certain level of liquidity and to extend certain amount of unproductive credit yielding come returns indeed. CBs are directly with the people and institutions, which is to improve the economic condition of the country.

Nepal is predominantly an agricultural country due to the topographical feature. Ninth development plans have been already executed since 1956 A.D. for the development of country and the eight plans is operative from the fiscal year 1992/93 A.D. However, the central issue of the development in Nepal even today, continues to be the eradication of poverty. Since 82% of the population, are dependent upon agriculture, the sector is unable full employment to the rural labour force. The economic development of the country heavily depends upon the improvement of the agricultural sector. To support this view, Sapkota had mentioned that, “here exist a great need for agricultural financial institute to provide the loans because the main problems on economic development are related to agriculture sector and lack of adequate credit facilities” (Sapkota; 1979). In spite of the huge investment in the past 40 years, a low saving rate, heavy dependence on external assistance , a low export base, a low level of industrialization, vulnerability in agricultural productions high population growth are some constraints that the country presently faces in its quest for sound and sustainable development.

To overcome this economic situation, government has to formulate and implement strategies focusing overall industrialization of the nation and development of a sound banking system is necessary for the rapid industrial development. Dr. Shrestha says “Financial infrastructure of an economy consists of financial intermediation, financial institution and financial market” (Shrestha; 1990/91). Therefore the financial institution plays a great role in the overall development of the country. In this aspect “Bank” is a financial institution which plays a great in facilitating the growth of the trade and industry.

Bank is also a resource for economic development which maintains the self- confidence of various segments of the society and extends credit to people. It is assumed that the word “ Bank” has been originated through the Italian word ”Bank” which refers to the meaning of accumulation of money or stock (i.e. Share Capital).

Similarly the word bank has also been derived from German word “Bench” which signifies heap or mound.

## **Development of Banking Industry in Nepal**

In the country, the development of banking is relatively recent. The record of banking system in Nepal gives detail account of mixture of slow and steady evolution in the financial and global economy of Nepalese life. Involvement of landlords, rich merchants, shopkeepers and other individual money lenders has acted as fence to institutional credit in presence of unorganized money market.

Though establishment of banking industry was very recent, some crude bank operations were in practice even in the ancient times. In Nepalese Chronicle, it was recorded that the new era known as Nepal Sambat was introduced by Shakhadhar, a Sudra merchant of Kantipur in 879 or 880 A.D. after having paid all the outstanding debts in the country. This shows the basic of money lending practice in ancient Nepal. Towards the End of 8th century, Gunkam Dev had borrowed money to rebuild the Kathmandu valley. In 11th century, during Malla regime there was an evidence of professional moneylenders and bankers. It is further believed that money lending business, particularly for financing the foreign trade with Tibet, became quite popular during regime of Mallas. However, in the absence of any regulatory measures, the unscrupulous moneylenders were known to have charged exorbitant rates of interest and other extra dues on loans advanced.

Like other countries goldsmith, merchants and money lenders were the ancient bankers of Nepal. Tejrath Adda established during the tenure of the then Prime Minister Ranoddip Singh during the year 1877 A.D. (1933 B.S.) was the first step towards the institutional

development of banking in Nepal. Tejrath Adda did not collect deposits from the public but gave loans to employees and public against the bullion. Tejrath Adda was fully subscribed by the Government of Kathmandu valley, which played a vital role in the banking system. This establishment helped the general public to provide credit facilities at a very low rate of 5 percent. The Tejrath Adda distributed credit facilities to the public especially on the collateral of gold and silver. Several branches were opened in different part of the country. Hence the establishment of Tejrath Adda could be regarded as pioneer foundation of banking in Nepal. “Tejrath Adda” was running smoothly for flow decades.

The main defects of this institutions sougheed as there was no other financial institution set-up and there was not effort to expand the services. Above all of the defects, this institution did not accept any deposits from the public. In the absence of saving mobilization the “Adda” faced financial problems making it impossible to Carter to the credit and service need of the general population throughout the country. After that again, for a long time, several unorganized bankers and indigenous moneylender continued to flourish as the sole provider of the credit and services to the general public.

At the same time, the government started trade with India and Tibet. And the various indigenous bankers handled even the trade, because transfer of the money could be safely made only through these bankers in the absence of modern banking institutions. Hence, the need of banking intuition was realized. This was even strongly supported by the situation caused during 1934 AD” earthquake where there was a need of finance for the reconstruction of works. Reviewing these situations the “Udyog Parishad” (Industrial Development Board) was constituted in 1936 A.D. One year after its formulation, it formulated the “Company Act “and “Nepal Bank Act “in 1937.

Banking in modern sense started with the inception of Nepal bank Limited (NBL) on B.S. 1994. Nepal Bank Limited had a Herculean responsibility of attracting people toward banking sector from pre-dominant money lenders” net and of expanding banking services. Being a commercial bank, it was natural that NBL paid more attention to profit generating business and preferred opening branches at urban centers.

Government however had onus of stretching banking services to the nook and corner of the country and also managing financial system in a proper way. Thus, Nepal Rastra Bank (NRB) was set up on B.S. 2013.01.14 as a Central Bank under functioning as the Government's bank and has contributed to the growth of financial sector. The major challenge before NRB today is to ensure the robust health of financial institutions. Accordingly, NRB has been trying to change them and has introduced a host of prudential measures to safeguard the interest of the public. NRB is yet to do a lot to prove them an efficient supervisor. NRB really requires strengthening their policy making, supervision and inspection mechanism.

Integrated and speedy development of the country is possible only when competitive banking service reaches nooks and corners of the country. Keeping this in mind, government set up Rastriya Banijya Bank (RBB) in B.S. 2022.10.10 as a fully government owned commercial bank.

As the name suggest, commercial banks are to carry out commercial transaction only. But commercial banks had to carry out the functions of all types of financial institutions. Hence, Industrial Development Centre (IDC) was set up in 2013 for industrial development. In 2016, IDC was converted to Nepal Industrial Development Corporation (NIDC). Similarly, Agriculture Development Bank (ADB) was established in B.S. 2024.10.07 to provide finance for agricultural produces so that agricultural productivity could be enhance by introducing modern agricultural techniques. Moreover, Security Exchange Centre was established in 1976 to enhance capital market activities. Securities Exchange Centre was renamed Nepal Stock Exchange (NEPSE) in 1993. NEPSE opened its trading floor on 13 January 1994.

With the establishment of RBB and ADB, banking service spread to both the urban and rural areas. NRB also gave incentive to NBL to expand their branches to rural areas. This helped the common people reduce their burden of paying higher rate of interest to money lenders and absolved them from kowtowing before money lenders. It is natural expectations of customers keep on increasing. Once they got banking services they were expecting improvement and efficiency. However, excess political and bureaucratic

interference and absence of modern managerial concept in these institutions was hurdle in this regard. Banking service to the satisfaction of customers was a far cry.

## **1.2 Focus of the study**

Financial institutions are pillars of nation's economy. They are required as store house of country's wealth as well as reservoirs as of source for economic development. The main focus of their study is the risk and return analysis of the common stock investment of listed commercial bank of Nepal. Various kinds of financial decision, deposit, acceptance enhancing loan and investment decision are most important one. When the term investment is pronounced two fundamental aspect risk and return are associated with it. Since an investors always analysis the risk and return thoroughly before investing their wealth. Thus the study is focused on the risk and return analysis sounds to be familiar, the conceptual meaning of risk and return are varying for investors to investor.

The main purpose of the study is to analyze how one can get sustainable profit by minimizing the risk. People prefers less risk to more return i.e., they try to ignore risk which is not possible for this purpose. Expected return, total risk, systematic risk and unsystematic risk are analyzed to give an idea to get sustainable profit by divesting the risk to avoid future loss of the common stock investment. The analysis of the risk and return is very significant in investment in decision as well as financial decision. It influences the risk and return of the share holders consequently. The risk and return analysis influence the market price of the stock. So before making an investment decision a person must analysis the risk and return from the particulars stock as well as they can make good risk minimizing portfolio between their investments in the stock.

In context of Nepal, the capital market is growing very slowly, the market is not sufficient. Here are lack of magazines and related documents of capital market without any proper knowledge and information. This study will gave information about Nepalese capital market by analyzing risk and return will definitely contribute to increase the analytical power of the investor in capital market. The study may be the matter of interest

for , academicians, student, teacher and researcher in the field of finance because study is not only fulfill the requirement of the master degree in business but also provide some knowledge about the Nepalese stock market development.

## **1.2 Statement of Problem**

It is true that after the establishment of Nepal stock exchange, the capital market has grow rapidly with in very short period. However, the attitude thoughts and knowledge of most investors in not changed. Most of the investors are least familiars with the financial activities. They don't have idea of risk and return, without having theoretical knowledge of risk associated with investment; most of the investors are making investment on stock which is very wrong and bad trend.

In context of Nepal, the capital market is growing very slowly, the market is not sufficient. Here are lack of magazines and related documents of capital market without any proper knowledge and information. This study will give information about Nepalese capital market regarding transaction of the stock. Therefore, stock price in Nepal is determine more other fact or than the financial performance of the concerned company.

## **1.3 Objective of the study**

The main objective of the study is analyze the risk and return and other relevant variables of common stock investment of commercial bank that help in marketing decisions about investment on securities of the banks. The specified objectives of the study are as follows:

- To provide suggestion, some practical ideas and recommendation based on analysis of data for investment of common stock of commercial bank.
- To know the required rate of return (SML equation) of a stock.

- Measures systematic and unsystematic risk of the commercial banks.
- To identify the co- variance and correlation on between the return of common stock of joint venture bank.
- To identify the risk and return position of the financial instruction.
- To test the statistical significance of the calculated ratio.
- To find out the rate of return of various common stock.

### **1.5 To test the statistical significance of the calculation ratio.**

This study give correct information about Nepalese stock market by analyzing risk and return and definitely contribute to increase the analytical power of the investors in stock market in Nepalese context very few studies are made and there are no specific magazines and articles on the topic so , the study will be more significant for exploring and increasing stock investment.

Objectives are desired outcomes. Without any fixed objective, there is no meaning of any type of study. So this study also has some objectives. The main objectives of the study is analyze the risk return and other relevant variables of common stock investment of commercial bank that help in making decision about investment of commercial bank that help in making decision about investment on securities of the banks . The specified objectives of the study are as follows:

by analyzing risk and return and will definitely contribute to increase the analytical power of the investors in capital market. The study may be the matter of interest for academicians; student, teacher and researcher in the field of finance because study is not only fulfill the requirement of the master degree in business but also provide some knowledge about the Nepalese stock market development. It suggested to the policy makers to make necessary policies to attract private sector investment in the productive sector and reforms in policies related to stock trade. It is believed that this study will help

in many investors to know how they should use their money while investing the financial securities.

- To measure systematic and unsystematic risk of the commercial banks.
- To find the over price, under price and correct price of common stock of joint venture banks.
- To identify the co-variance and correlation between the return of common stock of joint venture bank.
- To identify the risk and return position of the financial instrument.
- To test the statistical significance of the calculated ratio.
- To find out the rate of return of various common stock.
- To know the required rate of return (SML equation) of a stock.
- To provide suggestion, some practical ideas and recommendation based on analysis of data investment of common stock of commercial bank.
- To know the portfolio analysis

## **1.5 Risk - Return Relationship**

The relationship between risk and return is a fundamental financial relationship that affects expected rates of return on every existing asset investment. The Risk-Return relationship is characterized as being a "positive" or "direct" relationship meaning that if there are expectations of higher levels of risk associated with a particular investment then greater returns are required as compensation for that higher expected risk. Alternatively, if an investment has relatively lower levels of expected risk then investors are satisfied with relatively lower returns.

This risk-return relationship holds for individual investors and business managers. Greater degrees of risk must be compensated for with greater returns on investment. Since investment returns reflects the degree of risk involved with the investment, investors need to be able to determine how much of a return is appropriate for a given level of risk. This process is referred to as "pricing the risk". In order to price the risk, we must first be able to measure the risk (or quantify the risk) and then we must be able to decide an appropriate price for the risk we are being asked to bear.

This module provides the student with an understanding of various forms of risk that allow the incorporation of risk adjustments into financial management decision making and the asset pricing processes. In the introductory discussions, different types of risk are defined and explored. At more advanced levels, various definitions of risk are quantified and with the help of financial theory, appropriate risk adjusted returns are identified.

## **1.6 Significant of the study**

The performance of business in every sector is critical to the attainment of capital market development. The stock market's role as source of cheap funds is reinforced when the companies that comprise the stock market are able to go with the direction of the stock market and strengthens it in the process.

This study give correct information about Nepalese stock market by analyzing risk and return and definitely contribute to increase the analytical power of the investors in stock market in Nepalese context very few studies are made and there are no specify magazines and articles on the topic so, the study will be more significant for exploring and increasing stock investment. The main significant of this study are:

- It will be helpful taking right decision.
- It will be a interest matter for academicians, student and researcher.
- It provide the financial information to the investor

- It help to identify risk and return trade off their investment

This study will also be useful for management to point out the loopholes and suggest the remedies regarding the dividend policy as well as for stockbrokers, financial agencies, scholars, policy makers and other stockholders.

## **1.7 Research Hypothesis**

The investigator must not currently know the outcome of a test or that it remains reasonably under continuing investigation. Only in such cases does the experiment, test or study potentially increase the probability of showing the truth of a hypothesis. If the researcher already knows the outcome, it counts as a "consequence" — and the researcher should have already considered this while formulating the hypothesis. If one cannot assess the predictions by observation or by experience the hypothesis classes as not yet useful, and must wait for others who might come afterward to make possible the needed observations.

Hypothesis is a statement which if proved becomes a theory. Each contains two hypotheses and other is being alternative hypothesis. Since there only one test carried out in this study. They are:

- What is the source of risk?
- How the return calculated?
- How to earn higher profit?
- How to reduce risk?
- What is the correlation among the return of the commercial banks?
- What are the comparative risk and return position of these sectors?

Hypothesis applied for the test

Ho: there is significant relationship between expected return and beta coefficient of selected commercial banks

Ho: there is no significant relationship between expected return and beta coefficient of selected commercial banks

Test of statistical F. test

$$F = \frac{\frac{df_1 \cdot s_1^2}{\sigma_1^2} / df_1}{\frac{df_2 \cdot s_2^2}{\sigma_2^2} / df_2}$$

The calculated value less than its critical value i.e. Ho or null hypothesis accepted otherwise H1 is accepted.

## 1.8 Methodology

Research is systematic and organized effort to investigate specific problem that needs a solution. This process of investigation involves a series of well thought activities of gathering, recording, analyzing and interpreting the data with the purpose of finding of problem is called research. Research is a structured enquiry that utilizes acceptable scientific methodology to solve problems and create new knowledge that is generally applicable. Scientific methods consist of systematic observation, classification and interpretation of data.

Although we engage in such process in our daily life, the difference between our

Casual day- to-day generalization and the conclusions usually recognized as scientific method lies in the degree of formality, rigorousness, verifiability and general validity of later.

### **1.8.1 Research Design**

Research design is different from the method by which data are collected. Many research methods texts confuse research designs with Methods. It is not uncommon to see research design treated as a mode of data collection rather than as a logical structure of the inquiry. But there is nothing intrinsic about any research design that requires a particular Method of data collection?. Although cross-sectional surveys are frequently equated with questionnaires and case studies are often equated with participant observation (e.g. White's Street Corner Society, 1943), Data for any design can be collected with any data collection method

### **1.8.2 Nature and Source of data**

The study is primarily based on the secondary sources of data. Data obtained from Nepal stock exchange, security board of Nepal, annual report of commercial banks and financial statement are also taken for respective bank, during the study informal opinion survey has also been taken with individual investor and bank officers.

### **1.8.3 Population and sampling Method**

This study based on commercial banks listed in the NEPSE. The commercial bank listed in Nepal stock exchange for the purpose of study. Only 5 commercial banks are taken as sample.

## **1.9 Limitation of the Study**

This study is not free from limitation. There will be some limitation while making analysis such as shortage of time, reliability of statistical tools and lack of research experience. Basically, this study has following limitation:-

- a) The study is based on secondary data. So the relevancy of the study is affected by reliability of secondary data collected and correctness of analysis entirely depends on the truthfulness of the secondary data.
- b) This study covers the data of five year only.
- c) Time, budget and frame for the study.
- d) This study is simply the portion of requirement of MBS Program of the Tribhuvan University.
- e) Commercial bank activities are mainly includes.

## **1.10 Organization of the study**

There are five chapter organized, each chapter deals some important factors risk and return. The contents of each chapter describe briefly. The title of these chapters are listed below:

### **Chapter 1: Introduction**

This chapter includes focus of the study, statement of the problem objective of the study, significance of the study, research hypothesis research methodology, limitation of the study, organization of the study and relationship between risk and return of the study.

### **Chapter 2: Review of literature**

This chapter deals with review of literature in regard to the theoretical analysis and review of the books, articles and thesis related to the study field.

### **Chapter 3: Research Methodology**

This chapter of the research methodology is the part of the study includes research design population and sample nature and types of data sources of data collection procedures.

### **Chapter 4: Presentation and analysis of data**

In this part of the study all the data are presented in the tabular and graphical form as per the requirement of the study. After this the interpretation and analysis are done.

### **Chapter 5: Summary, Conclusion and Recommendation**

The last chapter of the study comprises of summary, conclusion and recommendation includes the summary of the whole study like wise. The conclusion is derived on the basis of interpretation of conclusion derived from the study.

# **CHAPTER-2**

## **LITERATURE REVIEW**

A literature review is a critical and in depth evaluation of previous research. It is a summary and synopsis of a particular area of research, allowing anybody reading the paper to establish why you are pursuing this particular research program. A good literature review expands upon the reasons behind selecting a particular research question.

The purpose of the literature review is thus to find out research studies have been conducted in one's chosen field of the study and what remains to be done. It provides the foundation for developing a comprehensive theoretical frame work from which hypothesis can be developed for testing literature review is basically a "stock taking" of available literature in one fields of research is a continuous process and hence the procedures and the finding may change due to survey provides.

Some Nepalese and foreign books journals and magazines are reviewed and the findings have presented on the topic "risk and Return." Besides, the study not only focus on risk and return of commercial bank and market but the study considered the theories of risk and return followed by portfolio.

### **2.1 Conceptual Framework**

Various writers have been defined the theoretical aspects of risk and return in various ways which are taken into consideration in this chapter and main focus has given to the implication of risk and return trade/ in the investment on common stock.

#### **2.1.1 Investment Return and Risk**

Investment may be defined as the purchased by an individual or institution investment financial or real assets that produces a return proportional to the risk assumed over future

investment. Fund used to get additional income is an investment it is done to increase the value of property or to wait time to get something return from it. Each investor has to determine the level of investment risk that is appropriate for them in terms of risk tolerance, financial condition and life situation, with life situation largely determining financial needs. Obviously, a balance needs to be established between risk tolerance and the other factors. Unless you are very well off or have a darned good pension, you can't afford to keep all of your assets in CDs or a laddered portfolio of Treasury bonds, so you will have to accept a little more risk. Getting a feel for the risks you may be exposed to as an investor is the first step toward establishing the balance that is right for you. Financial assets are piece of paper representing an indirect claim to real assets held by someone else. These prices of paper represent debt or equity and stock certificate. Return is total gain or loss experienced on an investment over period of time. It is commonly measured as the change in value plus the annual income receives, usually expressed as of the beginning of period investment value.

### **2.1.2 Common Stock**

This stock is important source of long term capital. A security that represents the Ownership in a corporation. Holders of common stock exercise control by electing a board of directors and voting on corporate policy. Common stockholders are on the bottom of the priority ladder for ownership structure. In the event of liquidation, common shareholders have rights to a company's assets only after bondholders, preferred shareholders and other debt holders have been paid in full. "Equity stock is a certificate of ownership in a corporation a residual claims against both assets and earning of a business firm."(Peters Roses.)

In Nepal, as per the provision of Nepal Company Act 2053, the par value of share should be Rs.10 or Rs.100. all the shares with the exception of preference share are recharged as equity shares common stock. The risk is the highest with common stock investment because in bankruptcy common stock holders are in principal, entitled to assets remaining

after all prior claimants have been satisfied and dividend can be received if there is residual profit.

### **2.1.3 Return on common stock**

The investors very much interested to earn profit from purchase of shares in the capital market. The main purpose of investment on common stock is to get return from dividend and price appreciation of share and to get the control on the company. Return is the main target of investment. A measure of the return that a firm's management is able to earn on common stockholders' investment. Return on common stock equity is calculated by dividing the net income minus preferred dividends by the owners' equity minus the par value of any preferred stock outstanding. For firms with no preferred stock, return on common stock equity is identical to return on equity. The increased in the value is capital appreciation and direct cash payment is dividend income. There are following types of return calculated on common stock.

#### **a) Holding Period Return**

The return earned from the act of holding an asset over a given period. The return is equal to the income and other gains (such as appreciation) earned from the asset, divided by the original cost of the asset. The holding period return can be calculated for any asset, including a bond, an individual stock, or a complete portfolio. if investors purchase a stock of any company and hold it for certain period, we get return two ways.

- capital appreciation (gain) capital depreciation (loss)
- cash receipt (in the firm of dividend or coupon)

If the investment is sold in more than purchased price investors get capital gain and if it is sold less than purchase price, investors gets capital loss. So rate of return of is the profit or less through the change or assets or regular income from the sales of assets. The total return received from holding an asset or portfolio of assets. Holding period return/yield is calculated as the sum of all income and capital growth divided by the value at the beginning of the period being measured.

$$\text{Holding Period Return} = \frac{\text{Income} + (\text{End of Period Value} - \text{Initial Value})}{\text{Initial Value}}$$

To calculate holding period return/yield over multiple years we calculate the annualized holding period return:

$$\text{Annualized HPR} = \left( \frac{\text{Income} + (\text{End of Period Value} - \text{Initial Value})}{\text{Initial Value}} \right)^{\frac{1}{\text{Years}}} - 1$$

HPR mentioned about is useful with an investment horizon of one years on less for longer period, it is better to calculate rate of return as an investment yield. There are two ways to calculate analyzed rate of return: one is simply the arithmetic returns and second is average of geometry mean return.

The simple arithmetic mean return

$$\overline{HPR} = \frac{\sum_t (HPR_t)}{n}$$

The geometric mean return,

$$\overline{HPR} = \pi_t^n = 1 + (HPR_t)^{\frac{1}{n}} - 1$$

$$\text{or, G.M.} = [(1 + HPR_1) \dots \dots \dots (1 + HPR_n)]^{\frac{1}{n}} - 1$$

Where,

HPR = Holding Period Return

G.M. = Geometric Mean

$\Sigma$  = Sign of Summation or total

$\pi$  = Sign of product or multiplication

N = No of periods

The arithmetic means  $\overline{HPR}$  and geometric mean  $\overline{HPR}_g$  is different and G.M. is better because it consider time value of money and consistent with assumption of reinvesting income when it is received.

**b) Expected Rate of return**

Expected rate of return is the average rate of return which can be earned in the future. If the future return of assets and the possibility of the expected return is given, average multiplied from their factor is actually the expected rate of return. “The weight average of possible return, with the weight being the probabilities of occurrence is called expected return.” The ex- post return can be average for calculating. The future expected return and probability for distribution could be used to forest the future rate of return using ex- post returns,

$$\text{Expected rate of return } (\bar{R}) = \frac{\sum t^n = HPR_t}{n}$$

Using probability,

$$\text{Expected return } (\bar{R}) = \sum_i^n P_i R_i$$

Where,

$R_t$  = Return for 1<sup>st</sup> possibilities

$P_t$  = Probability of that return

N = No. of possibilities

The expected rate of return on an investment should be greater than required rate of return (i.e. security should be under priced) for an acceptable and good investment.

### c) Required Rate of Return (RR)

The required rate of return in a discounted cash flow analysis, above which an investment makes sense and below which it does not. Often, this is based on the firm's cost of capital or weighted average cost of capital, plus or minus a risk premium to reflect the project's specific risk characteristics. Also called hurdle rate.

The required rate of return is the function of real rate of return and risk. It is the minimum return that investors expect as least no. to suffer from loss. It means if investor gets the return below the required rate of return investor suffer from loss. Security market (SML) gives the RR as follows:

$$E(R_i) = R_f + \beta_i(E(R_m) - R_f)$$

Where,

$E(R_j)$  = Required rate of return

$R_f$  = Risk free rate of return

—

$R_m$  = Expected return for assets

$\beta_j$  = Beta

The formula can be used to calculate both return on individual investment and portfolio investment.

### **2.1.7 The Risk On common stock**

Risk is defined as the chance that the actual outcome from an investment will differ from expected outcome risk is a chance of loss or possibility of loss and variability of return. Greater the variability of return, riskier the project. Risk and return go together in investment and finance. It is not sensible to talk about return without taking about risk because investment decision involves a risk return trade off. Risk is the unlooked and unwanted event in future. Some one has said that risk was sugar and salt of life.

Investment on common stock is a risk investment. So, the uncertainties of risk on common stock are the facts of life to the common stock holders .uncertainty and risk are treated separately in financial analysis. Uncertainty in transplanted into a mathematical value by calculating the expected value of possible uncertain outcome. The risk is measured using standard deviation on the expected value of certain outcome. The risk is a completed subject and need to be properly analyzed. The risk return relationship is described by the investors perceptions about risk and their demand for compensation. After making a concept about the adequate complementation for the assumption of risk. The investor like to invest in risky assets such as common stock. There are many risks that accompany common stock. You have market risk (which can be further split into two components: systematic versus isolated/nonsystematic risk). You also are liquidity risk, interest rate risk, and inflation risk. There is also the risk that other investors will not like your stock and thus it will fall out of favor and drop in price, even if the company itself is doing fine. There is a risk of buying an over-priced stock in a heated market, in that the stock could then drop down to a more reasonable price and you lose money in the process. However, the biggest risk is not investing at all, thus losing out on the long-term benefits of stock ownership.

Risk is a chance of occurring some unfavorable event of danger of losing some value. “the risk as the term with reference to investment decision may be defined as the variability in the working life in relation estimation return as forecast at the end of time of initial capital budgeting decision.

Range is defined as the maximum value less the minimum value. The risk and return of common stock can be measured by range.

Range = maximum return – Minimum return.

The range is known as one of the traditional ways of measuring risk. It simply shows the difference between the best possible return and worst possible returns but does not provide information about the distribution of the rates of the return between the extremes. Advance approach for measuring risk is standard deviation. Standard deviation is a statistically measure of the variability of distribution of risk of the deviation of return from their mean value. On the other hand, the main disadvantage of is that it considers possible return about the expected value to be risky as return below the expected value. The greater standard deviation is greater the risk for the investment. Standard deviation is most common statistical indicator of an assets risk (common stock) . The symbol of the standard deviation is (σ) “sigma”.

In finance, standard deviation is a representation of the risk associated with a given security (stocks, bonds, property, etc.), or the risk of a portfolio of securities (actively managed mutual funds, index mutual funds, or ETFs). Risk is an important factor in determining how to efficiently manage a portfolio of investments because it determines the variation in returns on the asset and/or portfolio and gives investors a mathematical basis for investment decisions (known as mean-variance optimization). The overall concept of risk is that as it increases, the expected return on the asset will increase as a result of the risk premium earned – in other words, investors should expect a higher return on an investment when said investment carries a higher level of risk, or uncertainty of that return. When evaluating investments, investors should estimate both the expected return and the uncertainty of future returns. Standard deviation provides a quantified estimate of the uncertainty of future returns.

The standard deviation and variance is calculated as:

$$\delta = \sqrt{\sum_{t=1}^n \frac{1}{n} (HPR_j - \overline{HPR})^2}$$

Where Variance (  $\delta$  ) =  $\sqrt{\sum_{t=1}^n (HPR_j - \overline{HPR_j})^2 p_j}$

HPRJ = Holding period return for investment j

$\overline{HPRJ}$  = expected rate of return for investment.

### 2.1.8 Portfolio analysis

The foundation of modern portfolio theory (MPT) was introduced by Harry Markowitz in 1952. Thirty-eight years later, Harry Markowitz, Merton Miller and William Sharpe were awarded Nobel Prize for what has become a broad theory for portfolio selection. Modern portfolio theory (commonly referred as mean variance analysis) established a whole new terminology which became a norm among investment managers. (Gupta, Francis Markowitz, Fabozzi, Frank. 2002) It has wide application in different areas of financial management such as: asset allocation through mean variance optimization, bond portfolio immunization, optimal investment trust or manager selection, international asset allocation decisions, portfolio risk management and hedging strategies.

The core concept of the Portfolio Theory is based on asset diversification and directly relies on the conventional wisdom which advice to avoid putting all eggs in one basket (Papers4you.com, 2006). In its simplest form MPT provides a framework to construct efficient portfolios by selection of the investment assets, considering risk appetite of the investor. MPT employs statistical measures such as correlation and co variation to quantify the effect of the diversification on the performance of portfolio. In it is an essence MPT attempt to analysis how different investments are interrelated to each other. What happens if one investment goes broke? Does it mean that all other investments will go broke as well? How to minimize the negative effect of the downfall in one particular investment asset?

According to Markowitz (1952) investors should focus on selecting portfolios based on their overall risk-reward characteristics instead of merely compiling portfolios from

securities that each individually has attractive risk-reward characteristics. In a nutshell, investors should select portfolios not individual securities. (Risk glossary) While the theory behind MPT is quite straightforward, the implementation of efficient asset allocation can become quite complicated. The model employs a wide range of different factors such as security returns, volatilities and correlation between asset classes for constructing efficient mean variance frontier. The frontier is considered to be efficient because every point on this frontier is a portfolio that gives the greatest possible return for certain risk level. (Gupta, et al, 2002) Since asset allocation decisions are so important, majority of the financial advisors determine optimal portfolios for their clients, both institutional and private.

While the implementation of the mean variance analysis requires specific skill and knowledge, the main concepts are relatively easy and can be easily presented to the wide audience (Papers4you.com, 2006). Surprisingly, MPT has wide implications in everyday life as well, since all of us are somehow involved into investment decisions. Everyone has to think about securing funds for the future education or pension, investing into property or buying a new car, and allocating some money for the coming vacation. How to justify these decisions, what would be the optimal solution? Familiarity with portfolio theory allows bringing up the ideas employed by professional investors into everyday life.

#### **a) Return On Portfolio**

The expected return of a portfolio is simply a weighted average of the expected returns of the securities comprising that portfolio. The weights are the proportions of total funds invested in each security and the sum of weights equal to 100%.

The formula for calculating the return on portfolio is.

$$E(R_p) = \sum_i w_i E(R_i)$$

Where,

$W_j$  = Proportion or weight of total funds invested in securities.

$R_p$  = expected return for security.

$M$  = Total no. of different securities in the portfolio.

For the investment on two assets the formula can be desired as.

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

Where,

$\bar{R}_A$  = expected return on security  $A_1$

$\bar{R}_B$  = expected return on security  $B_1$

$W_A$  = weight return on security A

$W_B$  = weight return on security B

By investing in a portfolio investors can earn average return of the securities comprising that portfolio and we also assumed the minimum risk on such portfolio.

## **b) Risk on a Portfolio**

Risk on a portfolio is not the weighted average of the standard deviation of specific securities comprising the portfolio. It rather depends upon the co- movement risk among the security as well as. Thus interactive risk is measured by covariance which is absolute measurement and by correlated which is a relative measurement the correlation is the variable such as securities return moves together. if investor has invest only in one security, then the risk involved can be easily measured in term of standard deviation or coefficient of variation of the expected return from that investment. Mathematically,

$$\delta_P = \sqrt{\sum_{J=1}^N W_J W_K COV_{JK}}$$

Where,

N = Total no. of different securities in the portfolio

$W_j$  = Proportion of total funds invested in securities J.

$W_k$  = Porportion of total funds invested in security k .

$COV_{jk}$  = Covariance between the possible return of security J and K.

The co-variance of the possible return of two securities is measured of the extent to which they are expected to vary together rather independently of each other. The covariance in the above can be written as:

$$COV_{jk} = \delta_j \delta_k \rho_{jk}$$

Where,

$\rho_{jk}$  = The correlation between possible returns for securities j and k.

$\delta_j$  = Standard deviation (S.D) of security K

$\delta_k$  = Standard deviation (S.D) of security J

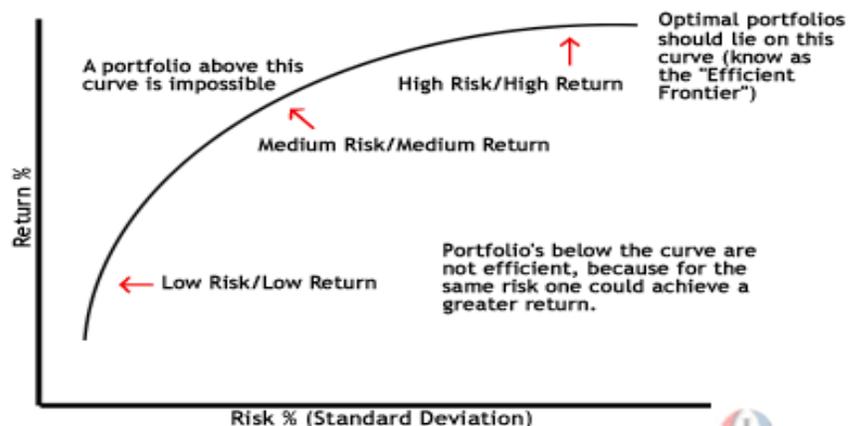
The correlation coefficient, which is significant in portfolio construction, is standard statistical measure of the linear relationship between two variable it range from -1 to +1 i.e. perfect negative correlation to perfect positive correlation between securities is negative.

### c) **Markowitz Efficient of frontier**

Efficient frontier is the combination of all possible portfolios called the attainable set on investment opportunities. It is the locus of investment graphed in the risk return space which has the maximum expected rate of return in their risk class or the minimum risk are what ever rate of return is selected. According to Markowitz, investor should seek a portfolio of securities that lies on the efficient frontier set.

A graphical representation of the set of portfolios giving the highest level of expected return at different levels of risk. Harry Markowitz theorized that each level of risk contains one combination of assets giving the highest expected return. An efficient set of portfolios is represented as a line on a graph with risk as the x-axis and expected return as the y-axis; this representation is the Markowitz efficient frontier.

In Markowitz Portfolio Theory, the assumption that, under a given set of circumstances, all investors will want the same thing. Specifically, when presented with plans having different returns at a given risk, an investor will choose the plan with the highest return. Likewise, when presented plans with different risks at a given return, the investor will pick the plan with the lowest risk. While few researchers believe the assumption holds entirely true, many defend it as holding "approximately" in a given situation. Developed in the 1950s and 1960s, the homogenous expectations assumption is important to capital asset pricing models.



#### d) Systematic and Unsystematic Risk

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

The portion of the total risk that can be diversified away. It is also called market risk or avoidable risk or company specific risk or diversifiable risk. It is caused by events particular to the firm.

So far it discussed that when securities are combined into portfolio, risk is reduced. Diversification reduces risk when the return of securities does not exactly vary in the same direction. But the important question is that can diversification reduce all risk in securities? A part of the risk arises from the uncertainties which are unique to individual securities are combined to form well diversified portfolio.

The other part of risk is caused by market factors that simultaneously affect the prices of all securities. It can't be diversified away. It is also called market risk or unavoidable risk or non-diversifiable risk or beta risk. Thus, the total risk can be divided in two parts.

Total Risk = Systematic risk + Unsystematic Risk

$$\begin{aligned}\delta_{2j} &= \text{Var}(B_j \text{ } rm) + \text{Var}(e) \\ &= B_j^2 \text{Var}(r_m) + \delta_{ej}^2\end{aligned}$$

Where,

$B_j^2 \text{Var}(r_m)$  = Market Risk or Systematic Risk of security

$\delta_{ej}^2$  = Unsystematic Risk or unique Risk of the security

Market risk as the product of beta square of the individual security and the market variance is related to the movement of market portfolio.

#### e) Review from assets pricing model

In 1952 A. D. Harry Markowitz proposed his portfolio theory which is concerned with the selection of an optimal portfolio by a risk-averse investor. A risk-averse investor is

an investor who selects a portfolio that maximizes expected return for any given level of risk or minimizes risk? For any given level of expected returns. A risk-averse investor will select only efficient portfolios.

Portfolio theory can be used to determine the combination of these securities that will create a set of efficient portfolios. The selection of the optimal portfolio depends on the investor's preferences Regarding risk and return.

Portfolio investment refers to an investment that combines several assets the modern portfolio theory explains the relationship between assets risk and return. The theory is founded on the mechanics of measuring the effect of an asset on the risk and return of a portfolio. Portfolio investment assumes that the mean and variance of returns are the only two factors about which the investor cares. Based on this assumption, we can say that rational investor always prefers the highest possible mean return for a given level of risk or the lowest possible level of risk for a given Amount of return. Such a portfolio, technically known as an efficient portfolio, is a superior portfolio. The efficient portfolio is a function of not only the risk and return of the individual assets included, but also the effect of the relationship among the assets on the sum total of the portfolio risk and return. The portfolio return is a weighted average of the variances of return of the individual assets. The portfolio risk is affected by the variance of return as well as the covariance between the return of individual assets included in the portfolio and their respective weights (Pradhan, 1992 : 295).

Markowitz suggests that the investment decisions should be based on the total risk, and price of assets should be determined on the basis of total risk. However, this theory did not cover all the aspects of risk and return of securities. To resolve this problem, William Sharpe developed a simplified variant of the Markowitz model known as the Capital Assets Pricing Model (CAPM). Capital assets are the long-term financial as well as real assets and CAPM is based on the pricing of these assets. The CAPM suggests that any investor can create a portfolio of assets that will eliminate virtually all diversifiable risk ; the only relevant risk is non-diversifiable risk. Therefore, the investment decision and the pricing of capital assets should be based on the un-diversifiable risk. This is the primary

importance of selecting assets with the most desired risk and return characteristics. The CAPM further suggests that the price of capital assets should be determined in a way that compensates for the systematic risk. According to the CAPM (Sharpe 1964), the expected return of a risky asset  $[E(R_i)]$  is equal to the return of a risk-free asset ( $R_f$ ) plus a risk premium equal to the expected return of the market portfolio in excess of the risk-free rate  $[E(R_m) - R_f]$  multiplied by the relative risk (or beta coefficient) of that asset ( $\beta_i$ )

$$\bar{r}_a = r_f + \beta_a(\bar{r}_m - r_f)$$

Where:

$r_f$  = Risk free rate

$\beta_a$  = Beta of the security

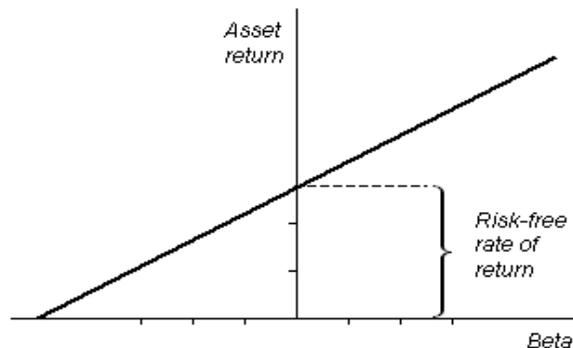
$\bar{r}_m$  = Expected market return

The general idea behind CAPM is that investors need to be compensated in two ways: time value of money and risk. The time value of money is represented by the risk-free (rf) rate in the formula and compensates the investors for placing money in any investment over a period of time. The other half of the formula represents risk and calculates the amount of compensation the investor needs for taking on additional risk. This is calculated by taking a risk measure (beta) that compares the returns of the asset to the market over a period of time and to the market premium ( $R_m - r_f$ ).

As with any model there are assumption to be made CAPM is based on a number of assumptions, the most important assumption is

- The capital market is efficient. The capital market efficiency implies that share price reflect all available information.
- Investors are risk average. They evaluate a securities return and risk in terms of higher expected returns for a given level of risk.
- All investors have the same expectation about the expected and risk of the period.
- All investor's decision are based on single time period.
- Taxes and transaction cost are irrelevant

- If everyone holds market portfolio risk premium demanded investment is proportion to is beta



In the above figures in equilibrium on stock can lie the security market line . for instead of buying stock , an investor would prefer to lend part of their money and put the balance in the market portfolio and instead of buying stock.

They would prefer to borrow and invest in the market portfolio. The market reward-to-risk ratio is effectively the market risk premium and by rearranging the above equation and solving for  $E(R_i)$ , we obtain the Capital Asset Pricing Model (CAPM).

$$E(R_i) = R_f + \beta_i(E(R_m) - R_f)$$

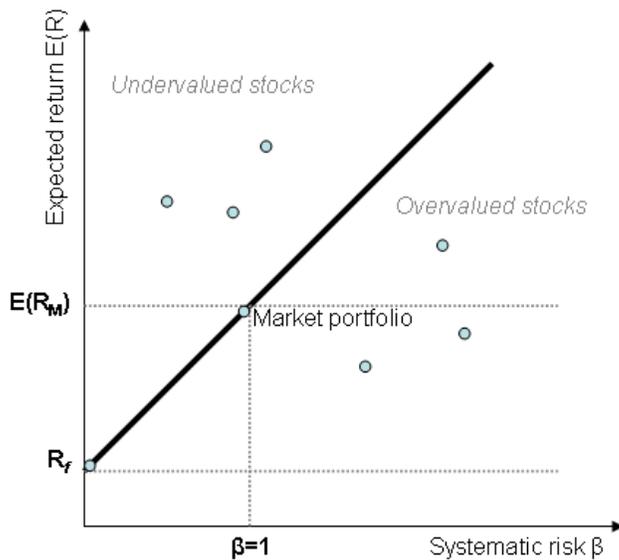
Where:

- $E(R_i)$  is the expected return on the capital asset
- $R_f$  is the risk-free rate of interest such as interest arising from government bonds
- $\beta_i$  (the beta) is the sensitivity of the expected excess asset returns to the expected excess market returns, or also

The security market line is a useful tool in determining whether an asset being considered for a portfolio offers a reasonable expected return for risk. Individual securities are plotted on the SML graph. If the security's risk versus expected return is plotted above the SML, it is undervalued because the investor can expect a greater return for the

inherent risk. A security plotted below the SML is overvalued because the investor would be accepting less return for the amount of risk assumed.

Security market line is the graphical representation of the CAPM. It shows the relationship between risk and required rate of return with the help of SML the over priced and under priced of stock can be located “SML is the line that shows the relationship between risk as measured by beta the required rate of return for individual securities.”



The SML essentially graphs the results from the capital asset pricing model (CAPM) formula. The x-axis represents the risk (beta), and the y-axis represents the expected return. The market risk premium is determined from the slope of the SML.

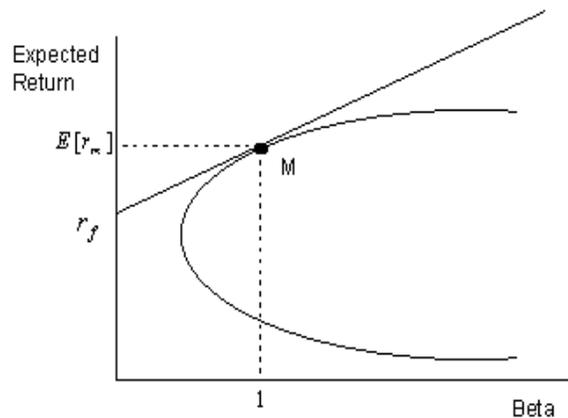
Reward to risk Ratio : as an investor moves out of the risk free assets towards riskier assets, the beta increased. At the same time, the expected return also increased, the reward to risk ratio can be found as follows:

$$\text{Reward to risk ratio} = \frac{E(R_i) - R_f}{\beta_i} = E(R_M) - R_f.$$

The capital market line (CML) and security market line (SML) are merely different picture of the same market equilibrium. The CML may be used for determining the required return only for those efficient portfolios that are perfectly correlated with the market portfolio because they fall on the CML , but the SML may be used to explain the

whether they are efficient or not. The CML is derived by drawing a tangent line from the intercept point on the efficient frontier to the point where the expected return equals the risk-free rate of return.

The CML is considered to be superior to the efficient frontier since it takes into account the inclusion of a risk-free asset in the portfolio. The capital asset pricing model (CAPM) demonstrates that the market portfolio is essentially the efficient frontier. This is achieved visually through the security market line (SML).



Figures: compression of the CML and the SML

In the equilibrium all securities must be price so that they all the SML. Assets A, B, C and D in figure (a) all have different variance but the same expected return. The fact that they have different total risk is relevant for determining their expected return because total risk contains o diversification component which is not priced in market equilibrium. Differences between CML and SML

- ***Capital market line measures risk by standard deviation, or total risk***
- ***Security market line measures risk by beta to find the security's risk contribution to portfolio M***
- ***CML graphs only defines efficient portfolios***
- ***SML graphs efficient and no efficient portfolios***

- *CML eliminates diversifiable risk for portfolios*
- *SML includes all portfolios that lie on or below the CML, but only as a part of M, and the relevant risk is the security's contribution to M's risk*
- *Firm specific risk is irrelevant to each, but for different reasons*

“The capital market line represents the equilibrium relationship between the expected return and standard deviation efficient portfolio. Individual risk securities will always plot below the line because of single risky security when held by itself an inefficient portfolio.”

Even though the assumption on which the CAPM is based limits the generality of the model, it still is widely used. Among them the most important uses are:

- To estimate the cost of equity capital using  $R_j = R_f + (R_m - R_f)B_j$
- To evaluate securities of the expected return of large then

$$E(R) = R_f + (R_m - R_f) B_j \text{ the security is bargain.}$$

If security has large expected return than the return indicates by CAPM all investor buy it and vice versa. “CAPM is a model describing the relationship between risk and expected return at which a security's expected required return is the risk free rate plus premium based on the systematic risk of the security.”

### **2.1.9 Beta**

The Beta ( $\beta$ ) of a stock or portfolio is a number describing the relation of its returns with those of the financial market as a whole.

An asset has a Beta of zero if its returns change independently of changes in the market's returns. A positive beta means that the asset's returns generally follow the market's returns, in the sense that they both tend to be above their respective averages together, or both tend to be below their respective averages together. A negative beta means that the asset's returns generally move opposite the market's returns: one will tend to be above its average when the other is below its average. The beta coefficient is a key parameter in the capital asset pricing model (CAPM). It measures the part of the asset's statistical variance that cannot be removed by the diversification provided by the portfolio of many risky assets, because of the correlation of its returns with the returns of the other assets that are in the portfolio. Beta can be estimated for individual companies using regression analysis against a stock market index. The formula for the beta of an asset within a portfolio is

$$B_j = \frac{r_{jm} \delta_j \delta_m}{\delta_m^2}$$

$r_{jm} \delta_j \delta_m$  = covariance of returns for security j with those of the market.

$r_{jm}$  = Expected correlation between possible returns for security j and the markets.

Where  $r_a$  measures the rate of return of the asset,  $r_p$  measures the rate of return of the portfolio, and  $\text{cov}(r_a, r_p)$  is the covariance between the rates of return. The portfolio of interest in the CAPM formulation is the market portfolio that contains all risky assets, and so the  $r_p$  terms in the formula are replaced by  $r_m$ , the rate of return of the market.

Beta is also referred to as financial elasticity or correlated relative volatility, and can be referred to as a measure of the sensitivity of the asset's returns to market returns, its non-diversifiable risk, its systematic risk, or market risk. On an individual asset level, measuring beta can give clues to volatility and liquidity in the marketplace. In fund management, measuring beta is thought to separate a manager's skill from his or her willingness to take risk.

Beta is commonly missing explained as asset volatility relative to market volatility. If that were the case it should simply be the ratio of these volatilities. In fact, the standard estimation uses the slope of the least squares regression line—this gives a slope which is less than the volatility ratio. Specifically it gives the volatility ratio multiplied by the correlation of the plotted data. To take an extreme example, something may have a beta of zero even though it is highly volatile, provided it is uncorrelated with the market.

## **2.2. Reviews from Journals**

Computer media has become to the most easily accessible medium gain information in any subject matter. In the study period different books and radicals have been consulted.

In the context of our country there are very financial researcher based journals. There are very limited business magazines which hardly publish the topic related to risk and return. So some foreign journals are taken into account to review the risk and return topic.

The journal of finance, published bimonthly by an American finance association for many decades is considered in August 1999. An article entitled “local return factor and turnover in emerging stock market” by K. greet Rouwen Horst was published which is received here.” The performance of hedge fund: risk return and investives” by Carl Ackrmanr shared me E mally and David Ravenscazft has been also relesed here.” These hedge funds concluded that the flexible investment option employed by hedge fund make it difficult to classify hedge funds identify the correct benchmark, and thus measure relative performance standard deviation of return measure of total risk may not fug capture the complex risk taking from of hedge founds dynamic highly reserved strategic monthly incentive fee. Therefore, contain an unknown reporting basic that may be as important as depreciation rate, common cast allocation and transfer pricing issues in accounting profits”

(carl Ackerman, Richard Mc. Emally and David)

The performance of hedge funds” risks return and incentive – 850-87)

There is an article “the theoretical relationship between systematic risk and financial variable” by Robert G. Bowmen. The purpose of the study was to examine the relationship between risk and financial variables. Systematic risk of the same firm without leverage. There is no direct relationship between earning variability and market risk systematic risk is directly related to the accounting beta. There is no theoretical basis for relationship of dividend payout and beta. There is not only theoretical relationship between dividend and systematic risk.

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

(Brown, Robert G. (the theoretical relationship between systematic risk and financial variable” p. 617.628).

There is another one article “Characteristic of risk and return is risk arbitrage, By Mark Mitcheel and Todd Puolviob. To determine whether the returns to risk arbitrage reflects markets in efficiencies or rewards for bearing rare event over the 163 time period.

Using a comprehensive sample of cash and stock for stock mergers, we examine return generated from risk arbitrage for constraints merger an investment in any merger cannot exceed 10 percent of total capital size are limited by the liquidity of the underlying securities. The index fund must have an adequate amount of cash reserve to undertake the investment.

In most market environment risk arbitrage return are uncorrelated with market return. However, during market downturns, the correlation between market returns and risk arbitrage returns are similar to those obtained from writing uncovered index put option. Risk arbitrage may be better evaluated using a contingent claims analysis rather than a linear assets pricing model such as CAPM. However, this analysis shows that measuring excess returns, the error associated with CAMP is significant only when the non linearity in returns is severe. These tend to be the case in time the time period when cash in time period when cash rather than stock is predominant from merger consideration. Although

linear assets pricing models markets the true risk arbitrage. They do not result in large error when measuring returns.

Another statement of portfolio diversification reduces the risk is also tested by Wanger P Lau(1971). They dividend a sample of 206 NYSE stock of June 1960. the result as the no. of securities in the portfolio increase the standard deviation of portfolio returns decree , but at decreasing rate, with future reduction in risk returns decrease, but at decreasing rate , with future reduction in risk being relatively small after about 10 securities are included in the portfolio.

### **2.2.1 Review From Nepalese Studies**

The available independent studies which are related to the Nepalese stock market about shareholders democracy, view expressed by different persons in their articles regarding risk and return of common stock of commercial banks are presented of reviewed here in the topic.

Mr. R. S Pradhan in 1993 carried out a study entitled “ stock market behavior on small capital market. A case study in Nepal.” This study was based on the data collected for seventeen enterprises from 1998 to 1990. one of the major objectives, which are related to this study, was to assess the stock market behavior in Nepal. Mr. Pradhan has given following findings.

- DPS AND MPS are positively correlated
- Higher the earning on stock, larger the ratio of dividend as per share to MPS.
- There are positively relationship between dividend payout and liquidity.

A study conducted by Prof. Dr. Radhav Shyam Pradhan and Mr. Surya N. Balmpaki in the topic of fundamental of stock returns in Nepal in 2004 is taken into consideration. This study is helpful to analyze the stock’s return from different aspects.

“This study is based on period of course sectional data of 40 listed companies in NEPSE Ltd. and traded in the stock market. The study examines if dividend yield, capital gain yield and total yield are related to earning yield, book to market ratio and cash flow yield.

- Earning yield and cash flow yield have significant positive impact on dividend yield and a significant impact on book to market value. Whereas, size has negative impact on dividends yield in the case of earning yield and cash flow yield, cash flow yield has been found to be more information than earning yield.
- Similarly total is positively determined by earning yield and size, whereas the same is negatively determined by book to market value has been found to be more information than other variables.
- The positive relationship exists among earning yield, book to market value and cash flow yield. However, the size is negatively related to these three variables.

Similarly another study was carried out by Narayan Prasad Poudel in the topic of “investment in shares in commercial bank in Nepal. An assessment of risk and return elements” has come up with the conclusion that risk return characteristic does not seem to be the same for all share reviewed. Most of the shares fall under the category of defensive stock.

The study of Chhatkuli KIRAN on “An Examination of the Relationship between Risk and Return in the Nepalese Stock Market” We analyzed the relationship between average return and risk of portfolios of common stocks traded on the Nepal Stock Exchange. We found that the CAPM does not provide a valid framework to predict common stock returns on the NEPSE for the total sample period of 1998 to 2008. In a monthly basis analysis, we showed a small number of months with a significant relationship between average return and risk, only about 32%. In a yearly basis analysis, there was a significant relationship between risk and return only in the years 2004 and 2008. The remaining 9 years showed no such relationship, indicating that CAPM fails to predict common stock returns in the NEPSE. Similarly, the goodness of fit measure  $R^2$  for the entire sample period is approximately 0.0039, which shows very weak fitness in the findings. This

value of  $R^*$  indicates that changes in the portfolio beta explain only a very small part of the variation in average portfolio returns. We conclude that the risk-return relationship in the NEPSE is very weak and that the CAPM does not provide sufficient explanations for the risk-returns behavior in Nepal. Finally, we can conclude that our results show that the risk-return relationship is very weak in NEPSE and the two-parameter portfolio model does not provide powerful explanations for the risk returns behavior in NEPSE. Therefore, it is clear that beta and average return are simply not correlated and only beta is not sufficient to explain the relation with average return. The above findings can be taken as evidence that there must be need to applied with modified version of model such as conditional risk-return relationship (penttengill et al. (1995) and three-factor model (Fama and French (1992) in the NEPSE.

And study by Yogendra Timisina on capital market development and stock price behavior in Nepal has come with the conclusion that the market price of share depends on EPS as well as on DPS, but DPS is more price sensitive and it will have direct and immediate response in the market. However , market values of shares computed on the basis of EPS are near to the observed values. Therefore the observed market price of equity share reveals that the stock market is not inconsistent.

Future he adds the relationship the ups and down of stock market those of economic variables. To put in his own wards, upwards swings in the economy would help to push up the market value of shares. On the other hand, the downwards swing in the economy would suppliers the market value of shares.

Moreover not only domestic factors that things upon the world economy in the globalization world, but also external factors to larger extent play major role affect on the stock price.

### **2.2.3 Review From Thesis**

There are some studies related to the topic “risk and return” has been conducted as a thesis for the partial fulfillment of master Degree in T.U. which are reviewed here. These are some studies related to this topic.

The study concluded by Mr, Prasuram Neupane in 2003 entitled “risk and return analysis with reference to listed commercial banks” is also related to this study. In this study has been taken six listed commercial banks on account and has given following conclusion.

“The return is the income received on a stock investment, which is usually expressed in percentage expected return on the common stock of SCBML is maximum (i.e. 128.60%) which is very high rate of return. In reality this exists only to the effect of unrealistic annual return because of the issue of bonus share and increase in share price. Similarly expected return of the C.S of the Himalayan banks ltd is found minimum (i.e.28.4%). About the risk he has concluded “risk is the variability of return which is measured in terms of standard deviation. On the basis of S.D common stock of NBBL is most risky because of its lowest S.D on the other hand we know the coefficient of variation (CV) is more rational basis of investment decision which measures the risk per unit of return on the basis of CV common stock of NABIL is he best among all banks, NABIL has 0.86 unit return ( i.e.2729) .

He has recommended the Following points.

- NEPSE need to initiate to develop different programs for private investors such as investor’s meeting and seminars in different subject matter like “ trading rules and regulation” etc on the other hand, NEPSE is following “operator system” of trading even in the age digital technology it should be modernized. It needs to develop efficient and effective information channel and to provide up to date data.
- Government needs to amend the rule and regulation regarding stock market in time to make the policy that protects the individual investor’s right.
- The corporate firms should communicate the real financial statements value of assets and liabilities should not be manipulated to report the under or over profitability. Every decision of the corporation should be made to maximize the value of the firms and value per share.

- Mr. Sapkota, in this study, has concluded that “common stock is the most risky security and life blood of stock market because of the higher expected return. C.S 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 stock market is in emerging state. Its development is accelerating since the political change in 1990 in effect of opening and liberalization in national economy. But lack of information and poor knowledge Nepalese private investors cannot analyze the securities as well as market properly.

Mr. Sapkota has recommendation following points:

**a) recommended to the private sectors :**

- stock market investment is a risky job. Although there is a chance of more return than of expected there is also a chance of heavy loss. So it should really only investment money in the stock market that it need for other communities. The stock market is undoubtedly risk in the short term and investor needs to be prepared for it.
- Private investors should try and work out their attitude towards the risk of various investment strategies.
- Investors need to diversify their funds to reduce risk proper construction of portfolio never takes any considerable loss.

**b) Recommended to the government**

- HMG needs to manage the trading of government securities in NEPSE in spite of Nepal Rastra Bank (NRB) government securities are assumed as risk free securities and trading of these securities at the same place to investors so that they can

diversity their funds properly to construct optimal portfolio. This will also increase the strength of stock market and more especially as well.

- Government needs amendment of rules and regulation regarding stocks market in time to time without implementation of rules and regulation. it is meaningless to do anything . There are serious problem in implementation.

Hence: HMG needs to monitors to make active to all components of stock as well as capita market properly.

Anoter study by Mr. Jeet Bahadur sapkota in 2000. entitled “risk and return analysis in a common stock investment” includes eight commercial banks is very closely study in this study.

“The main objectives 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 bank” in this study sapkota found that “Banking industry is the biggest one in terms of market capitalization and turnover. Expected rate of return of on the common stock of Nepal SBI bank ltd. Is found minimum. In this regards C.S on NBL is most risky and C.S of NSB is less risky. In the context of industries expected return of finance and insurance industry is found highest expected return of banking industry 60.83%.

Anjani’s study :

A thesis “ share market in Nepal” written in 1990 throws some light on dividend performance of some companies she concludes that

- Many companies were paying less the expected cash dividend per share of the investors. Some of them were paying higher than average while some other were paying regular dividend.
- The expected percentage of dividend was not matching with the actual percentage.

Majority of the companies displaying lower price earning ratio indicates the erosion of the beliefs of investors on the shares of listed companies. As result, market price of the share is highly skewed. There were mismatch between the calculated price and quoted price of share. It clearly signals over pricing of the shares and market prices were guided by technical factors.

The thesis review above shows that the thesis Mr. Prasuram Neupane is focused of the analysis of risk and return of commercial bank listed in NEPSE index. The thesis of Jeet Bahadur sapkota is focused on the risk and return of joint venture commercial banks.

# **CHAPTER-3**

## **RESEARCH METHODOLOGY**

### **3.1 Concepts :**

Research Methodology describes the method and process applied in the entire aspect of the study, in other word, research methodology refers to the different technique and tools used to make the study significant and efficient. It is the path from which we can solve the research problem systematically. As per opinion of C.R Kithara “Research methodology refers to various sequential steps to adopt by a research in studying problem with certain objectives in view.” Research methodology refers to the overall research process, which is researcher conducts during his/ her study. It includes all the procedures from theoretical under pricing to the collect and analysis of data.

As most of the data are quantitative the research is based on the scientific model. It is composed of the both part of the technical aspect and logical aspect on the basis of the historical data. Research can be conducted on the basis of primary and secondary data. Research is systematic and organized effort to investigate the specific problem that needs solution. This process of investigation involves the series of well thought out activities of gathering researching analyzing and interpreting the data the propose of finding answer to the problems is called research.

Here is the study all the data are secondary and the observed data in analyzed with using appropriate financial and statistical tools outcome are presented in simply way.

### **3.8 Research Design**

Research will not be completed proper research design. The research designer will be required to prepare a design of the research project. The research design refers to the conceptual structure within which the research is conducted. Research design is a

controlling media for the collecting of data and it help to collect the accurate information, which is related to risk and return analysis of common stock investment of Nepalese commercial banks for this study research design is the plan structure and strategy of investigation concerned as to obtain answer to recherché question and control variance.

In this study, the research is based on the recent historical data. So simply it is a historical research and covers the data from the financial year. The analytical as well as descriptive research design has been included in this study. For analytical purpose the annual reports and financial statements of related commercial bank are collected. But this study is more analytical and empirical less descriptive.

### **3.9 Population and Sample:**

The population of the study will be the commercial banks other financial institution listed in Nepal stock exchange center. There are many banks whose shares are traded actively in stock exchange. Study of all these commercial banks is somewhat complex. So the sampling technique issues to generalize the study.

### **3.10 Source of Data**

This study is mainly based on secondary data but while studying individual investor's opinion bank official's advice and opinion from staff of Nepal stock exchange ltd are also taken into consideration. Data related to the market price of stock market capitalization movement of NEPSE financial report of commercial banks are also collected. Besides the secondary data have been acquired from various other sources like

- Annual report of commercial banks
- Trading report published by Nepal stock exchange ltd.
- Material published in paper and magazines

- Related websites. i.e. [www.nepalstock.com](http://www.nepalstock.com) , [www.nepse.com.np](http://www.nepse.com.np)
- Previous study, bulletins and books.

### **3.11 Data collection technique**

The relevant data has collected from the Nepal stock exchange ltd and commercial banks chosen as sample for this study. Similarly the required data have also collected from degree campus library, central library Kirtipur kathmandu. Apart from this informal interviews are conducted with staff of Nepal stock exchange ltd to get generate primary data.

### **3.12 Data Analysis**

Various financial and statistical tools will be used in this study. The analysis of data will do to the pattern of data available mainly the analysis will be done of using financial tools. The relationship between different variables related to study would be drawn out using financial and statistical tools. Brief explanation of the terms is as follows of analysis used in this study are as follows.

#### **3.12.1 Dividend**

Dividend is the rewards for waiting to the investors. Dividend constitutes the main part of the return from common stock investment. Dividends are two types. Cash dividend and stock dividends. if only cashed dividend are paid there will be problem but stock dividend is also paid there will be problem in calculation total gain to the get extra number of shares as dividend and simultaneously price of the stock decline due to increased no of stock.

To get the real amount of the dividend there are no any model formula so the model has been developed considering practical as well as theoretical aspect after several discussion with NEPSE staffs and investors.

$$\text{Total dividend} = \text{cash dividend} + \text{stock dividend\%} + \text{next years MPS}$$

Where, MPS= market price per share.

Generally, the highest DPS creates positive attitude of the shareholders towards the company common stock which consequently helps to increase the market value of share and it also works as the indicator of better performance of the company management.

### 3.12.2 Market price of share (MPS):

Mps is that value of stock can be obtained by a firm from the market. Market value share is on of the variables which are the affected by the dividend per share and earning per share of the firm. If the earning per share and dividend per share is high, the market value share will high. Market value of share may be lower or higher than the book value. If the firm is growing concern and its earning power is greater than cost of capital, the market value of share will be higher than the book value. If the firm earning capacity is over than the cost of capital the MPS will be lower.

### 3.12.3 Holding period Return on common stock

Holding period is sum of dividend income and change in market price of stock expressed as percent of beginning of investment.

Mathematically,

$$R = \frac{D_1 + P_{t+1} - P_1}{P_t}$$

Where, R= holding period rate of return

$D_1$  = cash received dividend at the end of period

$P_1$ = ending price of stock

$P_{t-1}$  = beginning price of stock.

### 3.12.4 Expected Rate of Return on common stock

The study also aims to find out the expected return on the investment in common stock. The expected rate of return is based the expected cash receipt and expected capital appreciation. The expected of return so arithmetic mean.

Mathematically,

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

Where,

$\sum R_j$  = Expected rate of return of stock j

$R_j$  = Return of Stock j

n = Numbers of years that the return is taken

$\sum$  = Sign of summation

### 3.12.5 Standard Deviation(S.D)

Standard deviation is the absolute measures of dispersion. Absolute measures of dispersion or variation of the item around their average value. It is statistical measure of

the variability of the distribution of the return around its means. It is the square root of deviation the return standard deviation is the standard average scatterness of return from mean return. Standard deviation is the measurement of total risk in financial management. Total risk refers on investments S.D is calculated as follows.

When the probability distribution is used.

$$\delta = \sqrt{\sum_{j=1}^n (R_j - \bar{R}_j)^2 p_j}$$

Where,

$\bar{R}_j$  = Expected Rate of Return

$p_j$  = Probability of occurrence of expected return.

$\delta$  = Standard Deviation of returns

$R_j$  = Returns for 1<sup>st</sup> possibility.

### 3.12.6 Coefficient of variation(C.V)

“The coefficient of variation is the relative measures of dispersion comparable across distribution; which is defined as the ratio of standard deviation to the mean define at the ratio of standard deviation to the mean expressed in percentage.” (Levin RI and Rubin Ds” statistic for management,”

### 3.12.7 Market returns(Rm)

It is the average return of overall portfolio. It is obtained by taking difference between the market indices i.e. NEPSE index where market dividend ignored mathematically.

$$R_m = \frac{N_{it} - N_{it-1}}{N_{it-1}}$$

Where,

$N_{it}$  = NEPSE index at time

$N_{it-1}$  = NEPSE index at time

$R_m$  = Return on market

### 3.12.8 Beta ( $\beta$ )

Beta coefficient of any security tell how sensitive in that security return with respect to the return in the market. Beta coefficient is an index that measures the systematic risk of different assets beta coefficient of a particular stock will be less than 1 equal to 1 more than 1.

Mathematically,

$$\beta_j = \frac{\text{cov } rm}{\delta^2 m}$$

Where,

$\beta_j$  = Beta coefficient of stock

$\delta^2 m$  = Variation of market return

$\text{cov } rm$  = covariance between returns on stock J and returns an market m

### 3.12.9 Correlation Coefficient( $\rho_{jm}$ )

Correlation coefficient is a statistical measured of the relationship between two assets. The degree of correlation coefficient which range from +1 to -1. it is relative measurement of co- movement by returns of two stocks. It can be measured by following formula:

There are following cases of correlation and risk condition.

- Perfectly positive correlation ( $\rho_{jm}=+1$ ) if increase or decrease in return of two different assets in positive the relation of return is perfectly positive correlation. Portfolio of such stock would be exactly as risk as the individual stock because risk can not be diversified away by investing in such assets in portfolio.
- Perfectly negative correlation ( $\rho_{jm}=-1$ )

If returns on one assets decreases when return of another increase or vice-versa that kind of relation is perfectly negative correlation risk can be completely eliminated. Negative correlation risk can be completely eliminated. Negative correlation stock cannot be found in the real world.

- Perfectly zero correlation ( $\rho_{jm}=0$ )

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

- Intermediate risk ( $\rho_{jm}=0.5$ )

Most of the stock returns are positively correlated but are not perfectly correlated. On average returns on two stocks would lie on the range of 4 to 75. Under such conditions the portfolio risk and return.

- Portfolio means making investment in more than one alternative at same time. It is also called investment diversification or combination of the investment. The main theory of portfolio is “Never keep egg in a single basket.”

#### a) **Portfolio Risk:**

A portfolio means that risk which is created while investing in more than assets all together. The formula for calculating portfolio risk for two assets case is given below:

$$\delta_p = \sqrt{W_A^2 \delta_A^2 + W_B^2 \delta_B^2 + 2W_A W_B \text{cov}(R_A R_B)}$$

Where,

$\delta_p$  = Total risk

$W_A$  = Weight on security

$W_B$  = Weight on security

$\delta_A$  = Standard deviation on securities

$\delta_B$  = Standard deviation on securities

**b) Portfolio Return:**

While investing more than in one asset, the created expected return is portfolio return. The expected return of portfolio is simply that coverage of the expected return of the securities comprising that portfolio. The weight are the portfolio of total fund invested in each security and sum of weight equal to 100% . Mathematically

$$\overline{Rp} = W_A \overline{HPR}_A + W_B \overline{HPR}_B$$

(for the assets case)

$$W_A + W_B = 1$$

Where,

$\overline{Rp}$  = Expected return on portfolio of stock A and stock B

$W_A$  = Weight of investment on stock A

$W_B$  = Weight of investment on stock B

### 3.12.10 Minimum Variance Portfolio

It is the proportion of stock that minimizes the possible (unsystematic) risk. It can be calculated by finding out the proportion of investment.

Mathematically,

$$W_A = \frac{\delta^2 \text{cov}(R_A, R_B)}{\delta^2 A + \delta^2 B - 2 \text{cov}(R_A, R_B)}$$

### 3.12.11 The coefficient of Correlation (R):

Correlation analysis is the statistical tools that we can use to describe the degree to which one variable is linearly related to another.

The coefficient of the correlation measure the degree of relationship between two set of figures. In this study simple coefficient of correlation is used to determine the relationship of different factors with dividends and other variable. The data related to risk and returns over different years are tabulated and their relationship with each other's is drawing out. In this study, the coefficient of the correlation is calculated to know the relationship of dividend per share and market price per share with earning per share. The data related to dividend over different years are tabulated and their relationship with each other is drawn out.

### 3.12.12 Coefficient of Determination (R<sup>2</sup>)

The coefficient of determination is a measure of the degree of linear association or correlation between two variables, one of which happens to be independent and other being dependent variable. In other word R<sup>2</sup> measures the percentage total variation in

dependent variable explained by independent variables. The coefficient of determination can have value ranging from zero to one. If the regression line is perfect estimate,  $R^2$  will be equal to 1. Thus the value of  $r^2$  is zero, when there is no correlation. If  $R^2$  is equal to .85, which indicates that the independent variables used in regression model explain 85% of the total variation in the dependent variable. In this study, coefficient of the determination is calculated to know the degree of correlating of dividend per share with earning per share and market price per share with earning per share.

#### **3.12.13 T- statistics:**

To test the validity of our assumption, if sample size is less than 30, t-test is used. For applying t-test in the context of small sample, the t value is calculated first and compared with the table value of 't' at a certain level of significance for given degree of freedom (in this study the 't' value are computed with the help of computer and calculation as well. If the calculated value of 't' is less than the concerning table value of 't' the difference is not treated as significant.

### **3.13 Limitation of the Methodology**

Research methodology is the systematic way to solve the research problem. There may be some limitation of the methodology used. Some limitation of the methodology used is described as follows.

- This study is based on the historic figure to forecast the future, the research design for this study historical pattern may be the genesis for future but the past may not happen in future in same manner.
- The total no of sample are only 5 listed commercial banks. So the samples do not include whole of the industry.
- The data analysis tools are based on financial and statistical concept. The value provided such tools be the approximation value only.

# **CHAPTER-4**

## **DATA REPRESENTATION AND ANALYSIS**

### **4. PRESENTATION AND ANALYSIS OF DATA**

This chapter is the main body of study. In this chapter the effort has been made to analyze risk and return analysis of common stock of Nepalese commercial banks which includes detail data of market price of share and dividend of each selected commercial banks their interpretation and analysis with reference to the various reading and their literature review in the preceding chapter effort is made to analyze the recent Nepalese stock market movement to the listed commercial banks. The analysis of data consists of organizing tabulating and assessing financial and statistical result. Different table and diagrams are used to make the result easily understandable.

#### **4.2 Data Presentation And Analysis**

According to Nepal bank rastra bank there are twenty nine commercial banks operating in Nepal. Thus the study has been focused on five listed commercial bank only which are listed in NEPSE. The presentation and analysis of data has been made in order of commercial banks published by NEPSE in the heading of “classification of the listed companies under the listed by law (2053)

1. Bank of Kathmandu (BOK)
2. The Himalayan Bank Limited (THBL)
3. Laxmi Bank Limited (LBL)
- 4 Global Bank Limited (GBL)
- 5 Kist Bank Ltd (KIST)

## ***4.1.1 Bank of Kathmandu***

### **4.1.1.1 Introduction**

Bank of Kathmandu Limited has become a prominent name in the Nepalese banking sector. We would like to express our sincere gratitude to our customers, shareholders, employees and other stakeholders for their support and co-operation for leading the bank to the present height of achievements. We wish to reiterate here that whatever activity we undertake; we put in conscious efforts to glorify our corporate slogan, "We make your life easier".

We would also like to elucidate that Bank of Kathmandu is committed to delivering quality service to customers, generating good return to shareholders, providing attractive incentives to employees and serving the community through stronger corporate social responsibility endeavor.

Bank of Kathmandu Limited (BOK) has today become a landmark in the Nepalese banking sector by being among the few commercial banks which is entirely managed by Nepalese professionals and owned by the general public.

BOK started its operation in March 1995 with the objective to stimulate the Nepalese economy and take it to newer heights. BOK also aims to facilitate the nation's economy and to become more competitive globally.

To become a significant contributor to the economic development of Nepal by distinguishing the Bank as an efficient, competitive, safe and top-quality financial institution.

### ***Mission Statement***

To offer financial services and become the "Bank of Choice" by dedicating the progress and growth of the institution to the community, customers, employees and stockholders by:

- Promoting economic growth and becoming a caring corporate citizen
- Providing excellent customer services by offering personalized quality services and products
- Including modern technologies of banking that add value to customer services
- Following strict risk-control mechanisms
- Enhancing shareholders value
- Providing challenging career and learning opportunities for our employees

**4.1.1.2 The closing MPS, DPS and EPS of Bank of Kathmandu have shown in table no. 1 and year end price movement has shown in diagram 1**

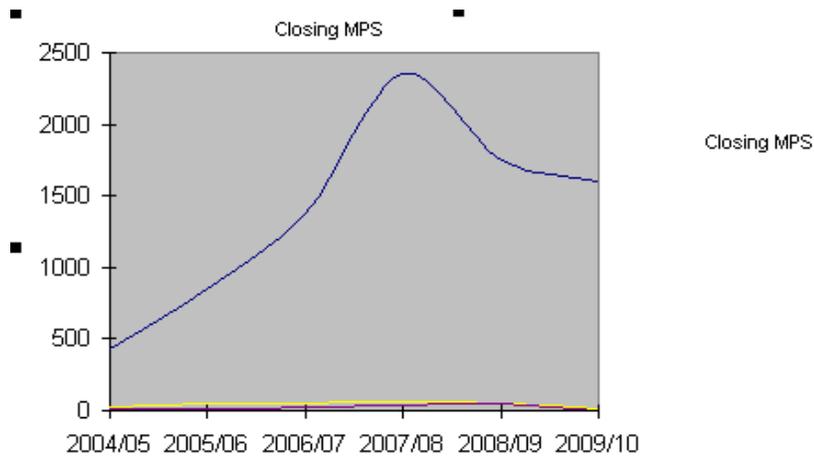
**Table No. 1**

<b>Closing MPS, DPS and EPS of Bank of Kathmandu</b>					
<b>Fiscal year</b>	<b>Closing MPS</b>	<b>DPS</b>	<b>EPS</b>	<b>Stock Dividend</b>	<b>Total Dividend</b>
2004/05	430	15	30.1		15
2005/06	850	18	43.67		18
2006/07	1375	20	43.5		20
2007/08	2350	40	59.94		40
2008/09	1750	47.37	54.68		47.37
2009/10	1605	0	14.25		0

Source: NEPSE and Annual Report

*Note: Total dividend = DPS + Stock Dividend %\* net year MPS. Year end price movement of C.S of BOK*

**Diagram no. 1**



The diagram shows that the price is in the increasing order at fiscal year 2005 /06 to 2008 but decrease in year 2008/09 and maximum price in fiscal year 2007/08 and minimum price in year 2004/05.

**4.1.1.3 Realized Return (R), Standard deviation ( $\delta$ ) Expected Return ( $\bar{R}$ ), Coefficient of variation of common stock of BOK**

**Table No. 2**

**Realized Rate of Return Expected returns and C.S BOK**

Fiscal Year	Closing MPS (Rs.)	Total Dividend	$R = \frac{P_{t+1} + D_{t+1}}{P_t} - 1$	$(R - E(R))^2$
2004/05	430	15		
2005/06	850	18	1.0186	0.366
2006/07	1375	20	0.641	0.0517
2007/08	2350	24	0.7265	0.098
2008/09	1750	47.37	-0.235	0.421
2009/10	1605	0	-0.083	0.246
		Total	2.0681	1.1827

**Source: NEPSE and Annual report.**

We have,

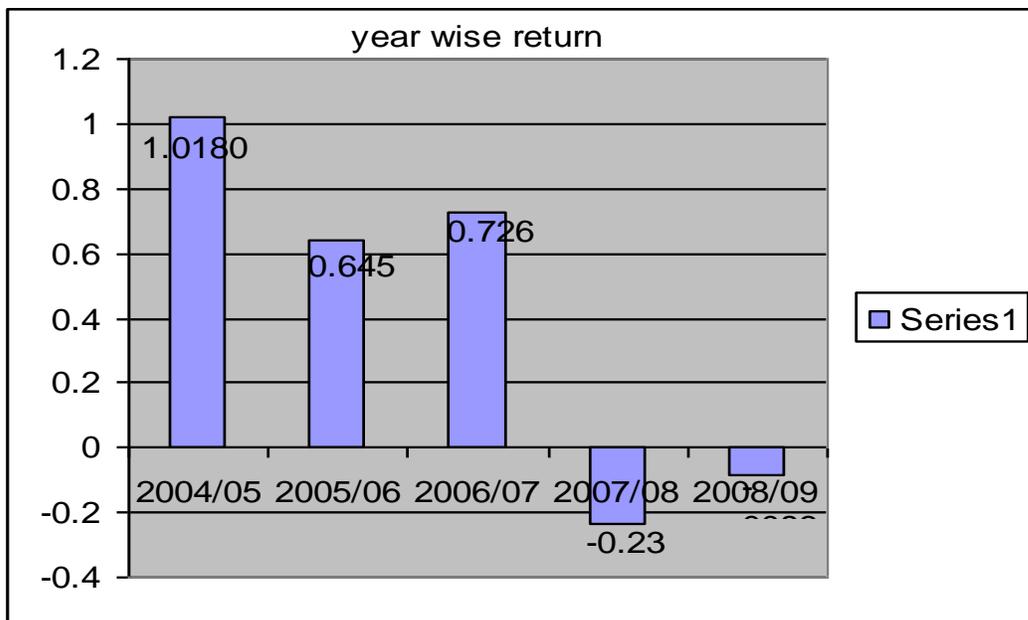
a) Expected return ( $\bar{R}$ ) =  $\sum \frac{R}{N} = \frac{1.9478}{4} = 0.4870$

b) Standard deviation ( $\delta$ ) =  $\sqrt{\sum \frac{(R - \bar{R})^2}{n-1}} = \sqrt{\frac{1.041}{4-1}}$

c) Coefficient of Variation (CV) =  $\frac{\delta}{\bar{R}} = \frac{0.5891}{0.4870} = 1.2097$

**Diagram 2**

**Annual report of the common stock of BOK**



**4.1.2 The Himalayan Bank**

**Introduction**

Himalayan Bank was established in 1993 in joint venture with Habib Bank Limited of Pakistan. Despite the cut-throat competition in the Nepalese Banking sector, Himalayan Bank has been able to maintain a lead in the primary banking activities- Loans and Deposits.

Legacy of Himalayan lives on in an institution that's known throughout Nepal for its innovative approaches to merchandising and customer service. Products such as Premium Savings Account, HBL Proprietary Card and Millionaire Deposit Scheme besides services such as ATMs and Tele-banking were first introduced by HBL. Other financial institutions in the country have been following our lead by introducing similar products and services. Therefore, we stand for the innovations that we bring about in this country to help our Customers besides modernizing the banking sector. With the highest deposit base and loan portfolio amongst private sector banks and extending guarantees to correspondent banks covering exposure of other local banks under our credit standing with foreign correspondent banks, we believe we obviously lead the banking sector of Nepal. The most recent rating of HBL by Bankers' Almanac as country's number 1 Bank easily confirms our claim.

All Branches of HBL are integrated into Globus (developed by Temenos), the single Banking software where the Bank has made substantial investments. This has helped the Bank provide services like 'Any Branch Banking Facility', Internet Banking and SMS Banking. Living up to the expectations and aspirations of the Customers and other stakeholders of being innovative, HBL very recently introduced several new products and services. Millionaire Deposit Scheme, Small Business Enterprises Loan, Pre-paid Visa Card, International Travel Quota Credit Card, Consumer Finance through Credit Card and online TOEFL, SAT, IELTS, etc. fee payment facility are some of the products and services. HBL also has a dedicated offsite 'Disaster Recovery Management System'. Looking at the number of Nepalese workers abroad and their need for formal money transfer channel; HBL has developed exclusive and proprietary online money transfer software- HimalRemitTM. By deputing our own staff with technical tie-ups with local exchange houses and banks, in the Middle East and Gulf region, HBL is the biggest inward remittance handling Bank in Nepal. All this only reflects that HBL has an outside-in rather than inside-out approach where Customers' needs and wants stand first.

HBL is not only a Bank, It is committed Corporate Citizen Corporate Social Responsibility (CSR) holds one of the very important aspects of HBL. Being one of the corporate citizens of the country, HBL has always promoted social activities. Many

activities that do a common good to the society have been undertaken by HBL in the past and this happens as HBL on an ongoing basis. Significant portion of the sponsorship budget of the Bank is committed towards activities that assist the society as large.

### **The Bank's Vision:**

Himalayan Bank Limited holds of a vision to become a Leading Bank of the country by providing premium products and services to the customers, thus ensuring attractive and substantial returns to the stakeholders of the Bank.

### **The Bank's Mission:**

The Bank's mission is to become preferred provider of quality financial services in the country. There are two components in the mission of the Bank; Preferred Provider and Quality Financial Services; therefore we at HBL believe that the mission will be accomplished only by satisfying these two important components with the Customer at focus. The Bank always strives positioning itself in the hearts and minds of the customers.

### **The Bank's Objective:**

#### **4.1.2.2 Data:**

The MPS, DPS and EPS of THB have shown in table no. 3 and year price movement has shown in diagram 3.

**Table no. 3.**

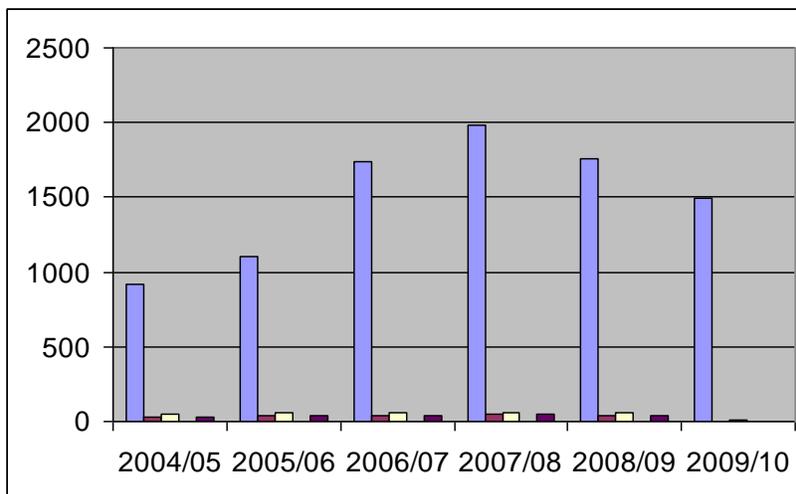
**MPS and Dividend Data of THB**

<b>Closing MPS, DPS and EPS of The Himalayan Bank</b>					
<b>Fiscal year</b>	<b>Closing MPS</b>	<b>DPS</b>	<b>EPS</b>	<b>Stock Dividend</b>	<b>Total Dividend</b>
<b>2004/05</b>	920	31.58	47.91	0	31.58
<b>2005/06</b>	1100	35	59.24	0	35
<b>2006/07</b>	1740	40	60.66	0	40
<b>2007/08</b>	1980	45	62.74	0	45
<b>2008/09</b>	1760	43.56	61.90	0	43.56
<b>2009/10</b>	1495	0	9.46	0	0

**Source: NEPSE and Annual Report**

Note: total Dividend= DPS +stock dividend%+ next year MPS

**Diagram 3**



### Year End price Movement of the C.S of THB

The diagram shows that price is maximum in fiscal year 2007/08 and minimum in fiscal year 2004/05

### 4.1.2.3 Realized return ( $R$ ) Standard Deviation ( $\delta$ ), Expected return ( $\bar{R}$ ) and Coefficient of variation C.V. of common stock of THB

The realized rate of return has calculated by using year end price and total dividend amount. Table 4 shows the calculation mentioned above.

**Table No. 4**

#### Realized Rate of Return, Expected Return and S.D of Returns on C.S THB

Fiscal Year	Closing MPS (Rs.)	Total Dividend	$R = \frac{P_{t+1} - P_t + D_{t+1}}{P_t}$	$R - E(R)$	$(R - E(R))^2$
2004/05	920	31.58			
2005/06	1100	35	0.2336	0.07848	0.00615911
2006/07	1740	40	0.618	0.46288	0.214257894
2007/08	1980	45	0.163	0.00788	0.00006
2008/09	1760	43.56	-0.089	0.24412	0.059594574
2009/10	1495	0	-0.15	0.30512	0.093098214
		Total	0.7756		0.373169794

*Source: NEPSE and Annual Report*

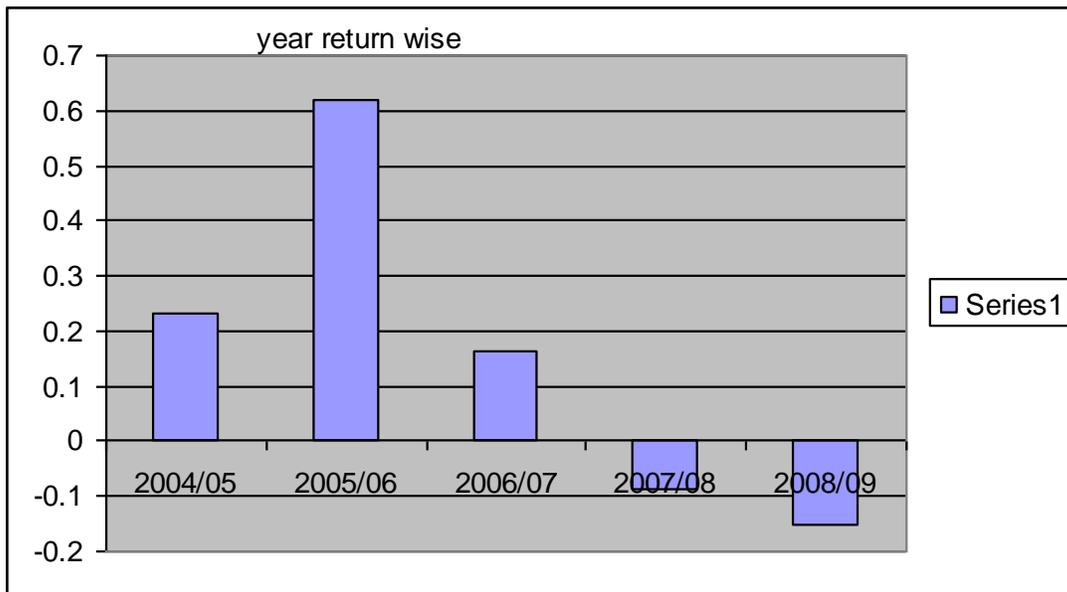
d) Expected return ( $\bar{R}$ ) =  $\sum \frac{R}{N} = \frac{1.9478}{4} = 0.4870$

e) Standard deviation ( $\delta$ ) =  $\sqrt{\sum \frac{(R - \bar{R})^2}{n-1}} = \sqrt{\frac{1.041}{4-1}}$

f) Coefficient of Variation (CV) =  $\frac{\delta}{\bar{R}} = \frac{0.5891}{0.4870} = 1.2097$

**Diagram 4**

**Annual Report of C.S of THB year Return wise**



### 4.1.3 Laxmi Bank Limited (LBL)

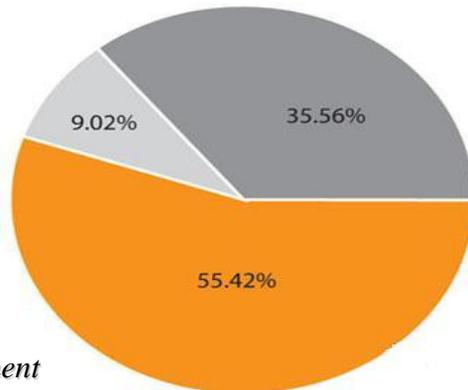
Laxmi Bank was incorporated in April 2002 as the 16th commercial bank in Nepal. In 2004 Laxmi Bank merged with HISEF Finance Limited, a first generation financial company which was the first and ever merger in the Nepali corporate history. Laxmi Bank is a Category ‘A’ Financial Institution and re-registered in 2006 under the “Banks and Financial Institutions Act” of Nepal. The Bank’s shares are listed and actively traded in the Nepal Stock Exchange (NEPSE).

We are a technologically driven progressive Bank with strong risk and corporate governance foundations. We are known for our innovation and claim to many “firsts” in the Nepalese financial market. We have the best asset quality among all financial institutions in the country and our technology has been rated “Highly Secure” by an independent internationally accredited information system auditors.

Laxmi Bank is a Category ‘A’ Financial Institution and re-registered in 2006 under the “Banks and Financial Institutions Act” of Nepal. The Bank’s shares are listed and actively traded in the Nepal Stock Exchange (NEPSE).

#### **OWNERSHIP STRUCTURE**

- **Promoter Group** representing the country’s leading business groups - 55.42%
- **Citizen Investment Trust**, a government of Nepal undertaking - 9.02%
- **General Public** comprising of more than 10,000 shareholders - 35.56%



#### *Mission Statement*

We are committed to excellence in delivery of entire gamut of financial services in order to achieve sound business growth and maximize stakeholder values by embracing team spirit, progressive technology and good corporate governance.

#### *Values*

The bank values are built around high standards of good corporate governance. Transparency, professionalism and high ethical tone at the leadership are foundations on

which our actions are based. Laxmi Bank's Code of Conduct encapsulates international best practices applicable to Nepali context. The level of commitment of our people to take Laxmi Bank to greater heights has been a huge catalyst. The team spirit within the organization is something we are proud of.

### *Vision*

- Provider of most integrated financial services
- Key player and a thought leader in the retail financial services
- A bank with the best asset book
- Best IT capability
- Preferred employer in the financial sector

### **Data**

The MPS, DPS and EPS of LBL have shown in table no. 4.3 and year price movement has shown in diagram 5

**Table 5**

#### **MPS, DPS and EPS of LBL**

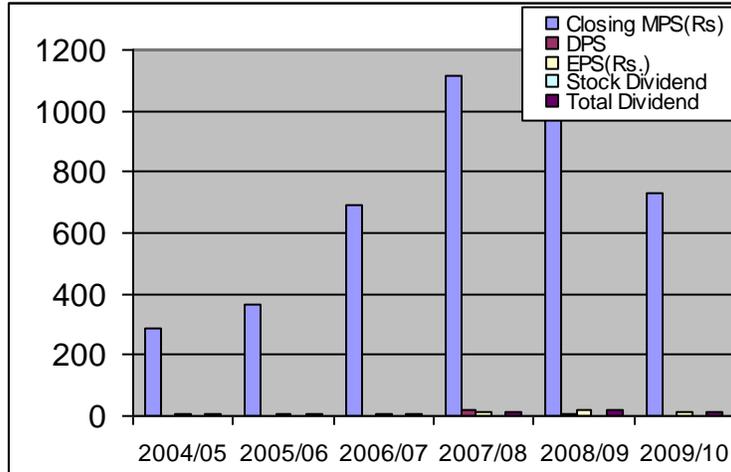
<b>Fiscal year</b>	<b>Closing MPS(Rs)</b>	<b>DPS</b>	<b>EPS(Rs.)</b>	<b>Stock Dividend</b>	<b>Total Dividend</b>
2004/05	285	0	4.34	0	4.34
2005/06	368	0	5.8	0	5.8
2006/07	690	0	8.99	0	8.99
2007/08	1113	21.05	13.14	0	13.14
2008/09	1062	5.26	17.21	0	17.21
2009/10	730	0	10.72	0	10.72

Source: NEPSE and Annual report

**Diagram 5**

**Year End Price Movement of C.S of LBL**

**The Diagram shows that price is maximum in the fiscal year 2007/08.**



**4.1.3.2**

**Realized return (R) Standard Deviation (  $\delta$  ), Expected return (  $\bar{R}$  ), coefficient of variation CV of common stock of LBL.**

The realized rate of return has calculated by using year end price and total dividend amount. Table 6 shows the calculation, mentioned below.

**Table No. 6**

**Realized rate of return, expected returns and SD of return on C.S of LBL**

Fiscal year	Closing MPS(Rs)	Total Dividend	$R = \frac{P_{t+1} - P_t + D_{t+1}}{P_t}$	$R - E(R)$	$(R - E(R))^2$
2004/05	285	4.34			
2005/06	368	5.8	0.3115	0.01	0.00000001
2006/07	690	8.99	0.9	0.598	0.357
2007/08	1113	13.14	0.632	0.331	0.109
2008/09	1062	17.21	-0.0303	-0.33	0.109
2009/10	730	10.72	-0.3	-0.6035	0.3642
			1.5132		0.939

**Source: NEPSE and Annual report**

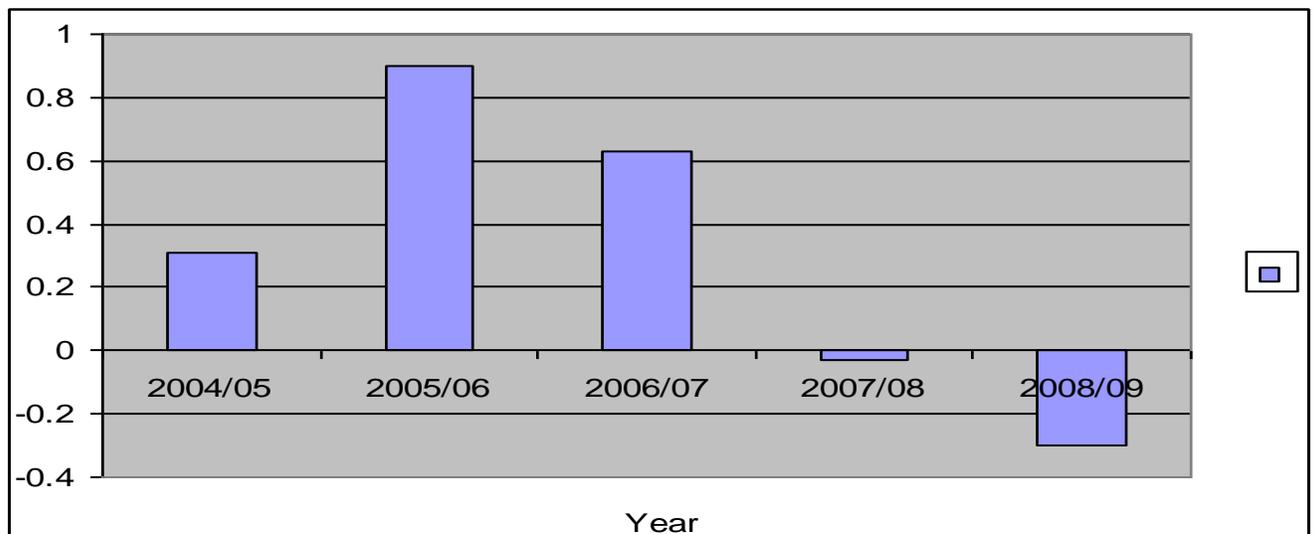
a) Expected return ( $\bar{R}$ ) =  $\sum \frac{R}{N} = \frac{1.9478}{4} = 0.4870$

b) Standard deviation ( $\delta$ ) =  $\sqrt{\sum \frac{(R - \bar{R})^2}{n-1}} = \sqrt{\frac{1.041}{4-1}}$

c) Coefficient of Variation (CV) =  $\frac{\delta}{\bar{R}} = \frac{0.5891}{0.4870} = 1.2097$

**Diagram 6**

**Annual report of return of C.S of LBL year wise**



#### 4.1.4 Global Bank

Global Bank Limited is a national level commercial bank promoted by highly prominent business personalities/ groups and reputed individuals of the country who have excelled in their field of business/profession with very good integrity and social standings.

Under the guidance of reputed Board of Directors and professional and dynamic management team having extensive experience with proven track-record in the banking industry, Global Bank is committed to offer a wide range of banking products and services tailored with the state-of-the-art technology to meet the unique requirements of all the customer/clients and thereby delight them by exceeding their expectations. With a shared vision of "The Bank for All", Global Bank Team is committed to providing the quality products and services to its valued customers with utmost courtesy and care.

We at Global Bank believe that delivery of quality products/services designed/customized to best suit the customer need through continuous research/ development and innovation is the foundation to build-up the trust and enhance the level of confidence between the customer and the bank. Hence, Global Bank Team pledges its commitment to always endeavor for delivery of innovative products/ services to all the customers to best suit their requirements thereby ensuring the optimum benefit and value addition to the customer as well as to all other stake holders.

### **Capital Structure**

Authorized Capital: Rs. 3 Billion

Paid-up Capital : Rs. 1.5 Billion

Share Premium : Rs. 15.03 Million

### **Mission**

To win respectable market share through customer focused quality products and services, innovative business solutions and technology driven banking thereby enhancing the growth and profitability of the bank so as to ensure the optimum benefit to all stake holders at all times.

Teamwork : We believe that essence of success is team work and thus achievement of VMO is possible only when every member of team contributes to their ability. Most importantly we consider all our business partners (clients) as a part of the team with

whom we share our ideas/skills, learn from each other and take the business relations to the greater heights so as to be mutually beneficial which will ultimately lead to the successful relationship.

**Respect and Humility:** We understand that respect and humility are the key factors to motivate and drive every individual towards the organizational goals. We honor the culture, language, ethnicity, social values and entrepreneurial spirit of every individual across the boundaries and draw strength from equal opportunity and diversity thereby enabling the growth of all the stakeholders.

**Professionalism:** Everything we do, we do with the highest standards of professionalism. Research and Development with focus on business partners (clients/customers) is the key to pursue innovation, deployment of imagination and quality functions/characteristics and translate new ideas into reality consistently whereby we can delight the customer/clients by delivering the products/services with outstanding quality so that our relationships with our clients will remain forever.

**Good Governance:** We are committed to ensure the transparency and internal control systems through clear-cut policy guidelines/manuals, procedures, central bank's rules regulations for our own satisfaction and to satisfy the regulators thereby ensuring the Corporate Good Governance.

**Loyalty:** We maintain the highest level of loyalty towards all stakeholders, particularly the business partners (customers/clients) and promise to walk alongside the business partners at difficult times/situations. We will strive to prove that "Bankers are all weather friends" as against the traditional concept of "Fair weather friends" by maintaining the business loyalty at all times.

The MPS, DPS and EPS of LBL have shown in table no. 7 and year price movement has shown in diagram 7

**Table 7**

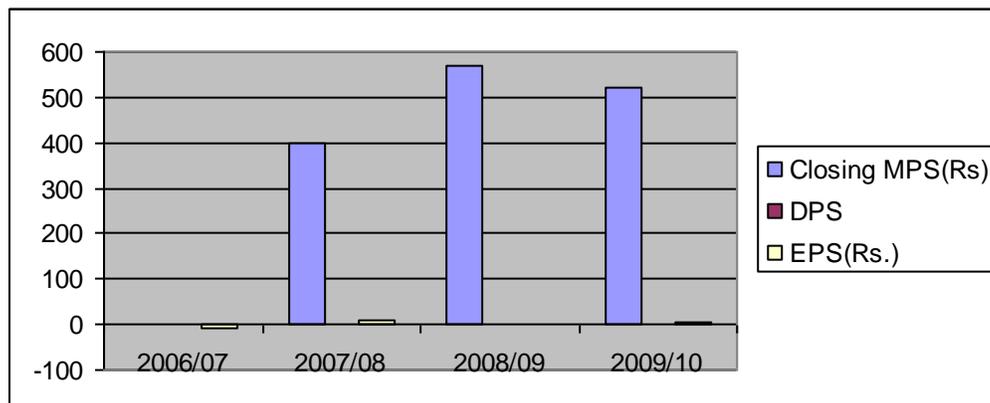
**MPS, DPS and EPS of Global Bank Ltd.**

<b>Fiscal year</b>	<b>Closing MPS(Rs)</b>	<b>DPS</b>	<b>EPS(Rs.)</b>	<b>Stock Dividend</b>	<b>Total Dividend</b>
2006/07	0	0	-7.57	0	8.99
2007/08	400	0	8.75	0	13.14
2008/09	570	0	2.63	0	17.21
2009/10	520	0	4.23	0	10.72

**Source: NEPSE and Annual report**

**The closing stock of fiscal year 2008/09 is Rs. 570**

**Diagram 7**



**Year end price movement of the CS of Global Bank**

The diagram shows that price is maximum in the fiscal year 2008/09 and minimum in fiscal year upto 2007/08.

**4.1.4.4 Realized return ( R ) Standard Deviation (  $\sigma$  ) , Expected return ( R ) , coefficient of variation CV of common stock of Global Bank**

The realized rate of return has calculated by using year end price and total dividend amount. Table4.7 shows the calculation, mentioned below.

**Table 8**

**Realized rate of return, expected returns and SD of return on C.S of Global Bank.**

Fiscal year	Closing MPS(Rs)	Total Dividend	$R = \frac{Pt+1 - Pt + Dt+1}{Pt}$	$(R - \bar{R})$	$(R - \bar{R})^2$
2006/07	0	8.99			
2007/08	400	13.14			
2008/09	570	17.21	0.468	0.337	0.11
2009/10	520	10.72	-0.0689	-0.202	0.040
			0.3991		0.15

**Source: NEPSE and Annual report**

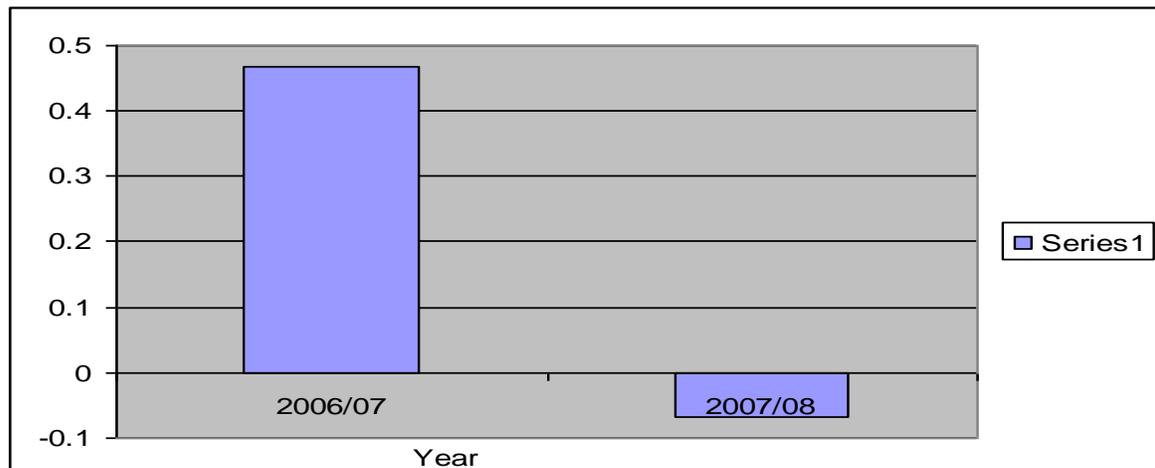
a) Expected return  $(\bar{R}) = \sum \frac{R}{N} = \frac{1.9478}{4} = 0.4870$

b) Standard deviation  $(\delta) = \sqrt{\sum \frac{(R - \bar{R})^2}{n-1}} = \sqrt{\frac{1.041}{4-1}}$

c) Coefficient of Variation (CV)  $= \frac{\delta}{\bar{R}} = \frac{0.5891}{0.4870} = 1.2097$

**Diagram 8**

Annual report of returns of C.S of Global bank year wise.



#### **4.1.5 Kist Bank**

With its vision of becoming the best bank on operational excellence and superior financial performance, Kist Bank was initially incorporated as a 'C' class financial institution in 2003 for undertaking limited banking activities. The Bank started commercial banking activities from May 7, 2009 after complying with all the conditions of Nepal Rastra Bank (Central Bank of Nepal) for becoming a Commercial Bank.

The Bank is a public limited company incorporated under the Bank and Financial Institution Act 2006 and the Companies Act 2006. The Bank is licensed by NRB to undertake commercial banking services and merchant banking activities in the country. The Authorized Capital of the Bank is Rupees 5 Billion and the Issued and Paid-Up Capital is Rupees 2 Billion. 60 Percent of the Paid-Up Capital is held by the promoter and remaining 40% is held by the general public. The shares of the Bank is listed at Nepal Stock Exchange Limited( NEPSE), the only Stock Exchange in the country, as 'A' category share.

The Bank has a seven member Board of Directors (BOD) out of which three represents the promoters' group, two represents the general public and one represents the Professional Director. Till the end of fiscal year 2066/67 (2009/10) the bank has 51 branches across the country.

Kist Bank stands for customers' convenience and support. The Bank is driven by values of efficiency in operations, integrity and a strong focus on catering the needs of every customer by offering high quality and cost effective products and services. The professional management team along with dedicated employees is always looking forward to serve the customers, understand their needs and design tailored products. The Bank operates in highly automated environment in terms of information technologies and communication systems, thus enabling delivery of prompt and quality services. It has put in substantial efforts and investments in acquiring the best technologies available to build necessary banking infrastructures.

## Share Capital

The Authorized Capital of the Bank is Rupees 5 billion and the Issued & Paid-Up Capital is Rupees 2 billion. 60 percent of the Paid-Up Capital is held by the promoter and remaining 40% is held by the general public. The Bank is listed at Nepal Stock Exchange Limited (NEPSE).

### *Authorized Capital*

The authorized capital of the Bank is Rupees 5,000,000,000.00 (Rupees Five billions Only) divided into 50 million equity shares of Rupees 100.00 each.

### *Issued Capital*

The issued capital of the Bank is Rupees 2,000,000,000.00 (Rupees Two billions Only) divided into 20 million equity share of Rupees 100.00 each.

### *Paid-Up Capital*

The Paid up capital of the Bank is Rupees 2,000,000,000.00 (Rupees Two Billion Only) divided into 20 million equity share of Rupees 100.00 each.

The MPS, DPS and EPS of LBL have shown in table no. 9 and year price movement has shown in diagram 9

*Table 9*

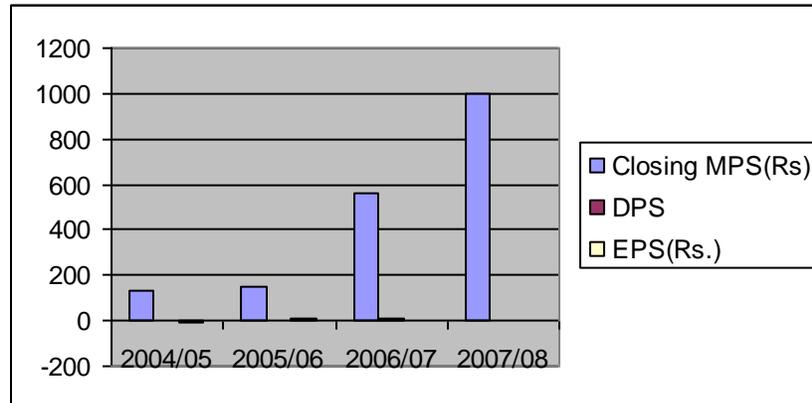
*MPS, DPS and EPS of Kist Bank ltd.*

<b>Fiscal year</b>	<b>Closing MPS(Rs)</b>	<b>DPS</b>	<b>EPS(Rs.)</b>	<b>Stock Dividend</b>	<b>Total Dividend</b>
2004/05	132	0	-7.57	0	0
2005/06	153	0	8.75	0	0
2006/07	560	10	2.63	0	10
2007/08	998	0	4.23	0	0

The closing stock of fiscal year 2007/08 is Rs. 998.

**Diagram 9**

**Year end price movement of the CS of Global Bank**



The diagram shows that price is maximum in the fiscal year 2008/09 and minimum in fiscal year upto 2005/06.

**4.1.5.4** Realized return (R ) Standard Deviation (  $\sigma$  ), Expected return (  $R_e$  ), coefficient of variation CV of common stock of Kist Bank . The realized rate of return has calculated by using year end price and total dividend amount. Table 4.8 shows the calculation, mentioned below

**Table 10**

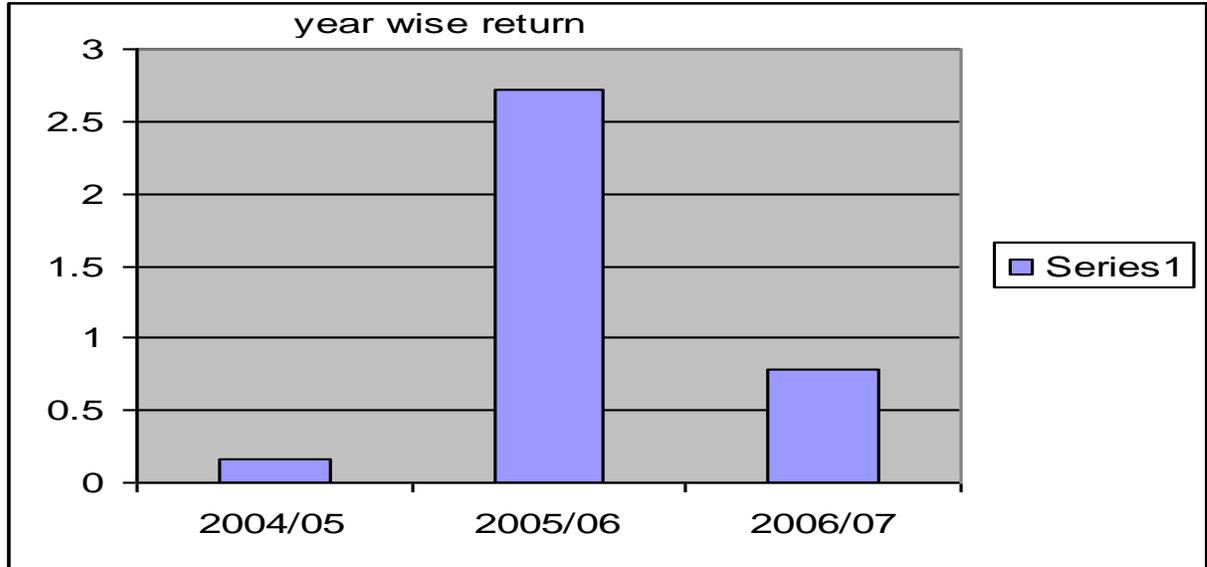
**Realized Rate of Return, Expected Return and S.D of Returns on C.S KIST**

Fiscal year	Closing MPS(Rs)	Total Dividend	$R = \frac{P_{t+1} - P_t + D_{t+1}}{P_t}$	(R-R)	(R-R) <sup>2</sup>
2004/05	132	0			
2005/06	153	0	0.159	-1.04	1.08
2006/07	560	10	2.66	1.46	2.13
2007/08	998	0	0.782	0.418	0.174
			3.601		3.38

**Source: NEPSE and Annual report**

**Diagram 10**

**Annual Report of returns of C.B of KIST year wise return**



#### **4.2 Inter Bank Comparison**

The return and risk of individual banks has calculated in section 4.1. the main purpose of such returns and risk analysis is to set the bank or bank for investment. So on the basis of calculation mentioned above a comparative analysis of return risk is performed here. For the comparative analysis the expected return, S.D of return, coefficient of variation of each banks for the year 2004/05 to 2009/10 are given in table 4.7

**Table 11**

**Expected return, S.D and CV of each banks.**

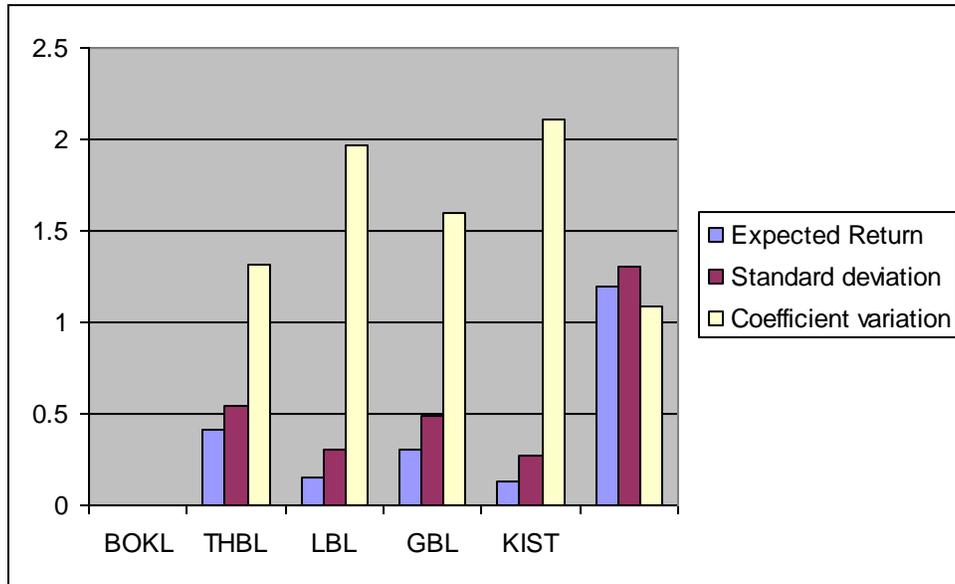
<b>Banks</b>	<b>Expected Return</b>	<b>Standard deviation</b>	<b>Coefficient variation</b>	<b>Remarks</b>
BOKL	0.4138	0.544	1.315	Lowest risk
THBL	0.155	0.305	1.97	Lowest return
LBL	0.301	0.485	1.60	Lowest return
GBL	0.133	0.274	2.11	High risk low return
KIST	1.2	1.3	1.084	High return low risk

**Source: NEPSE and Annual report**

From the above analytical table it can be concluded that investors who have invest on C.S on GBL get lowest return bearing high risk. So based on the historical analysis pf past five year data it can be stated that the investors can get low return from the investment in the S.C of GBL and lowest return form the investment in C.S of LBL in future period. in the same way THB has high risk but low return so that investor first find out the risk and return . for the investment purpose it is first better to select the bank on the basis of c.v. which shows the risk per unit of return . the bank having lowest c.v. should be selected. Lowest c.v means more consistency in return and kist has the lowest c.v, KIST bank is the best bank among all banks on the basis of C.V for making easy to understand the diagram 4.7 representing the statistical tools is presented below.

**Diagram 11**

**Expected Return, S.D and C.V. of returns of each commercial Banks**



The above graph clearly that the investor to invest in KIST bank because return is greater than risk comparatively to other banks.

#### **4.2.1 Market Capitalization**

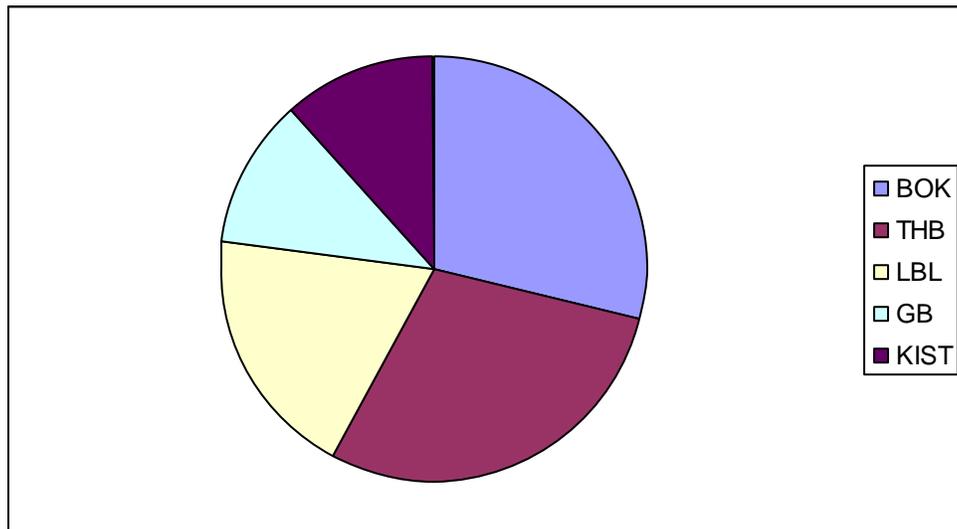
Market capitalization is calculated by multiplying a company's shares outstanding by the current market price of one share. The investment community uses this figure to determining a company's size, as opposed to sales or total asset figures. Company size is a basic determinant of asset allocation and risk-return parameters for stocks and stock mutual funds. The term should not be confused with a company's "capitalization," which is a financial statement term that refers to the sum of a company's shareholders' equity plus long-term debt.

**Table 12**

**Market Capitalization of Listed Banks**

<b>Names of Banks</b>	<b>Market Capitalization</b>	<b>% value</b>
BOK	9930119640	28.94531831
THB	9924314400	28.92839661
LBL	6572045280	19.15686311
GB	3900000000	11.36811494
KIST	3980000000	11.60130704
	34306479320	100

**Diagram 12**



On the basis of market capitalization BOK is largest bank among the listed bank under study. The investment decision can also be taken on the basis of market capitalization and it is better to invest on the C.S of BOK. But it may not be a proper decision market

capitalization shows only the total market rate of the company at a specific time period, which is a theoretical value and could not be realized actually.

#### 4.4.1.1 Movement of market capitalization

Movement of market capitalization shows the changed value of banking company from year to year. It shows the consistent type of company on the basis of market capitalization. Table 4.9 shows the year wise movement of market capitalization.

**Table 13**

#### **Year wise comparative movement of market capitalization**

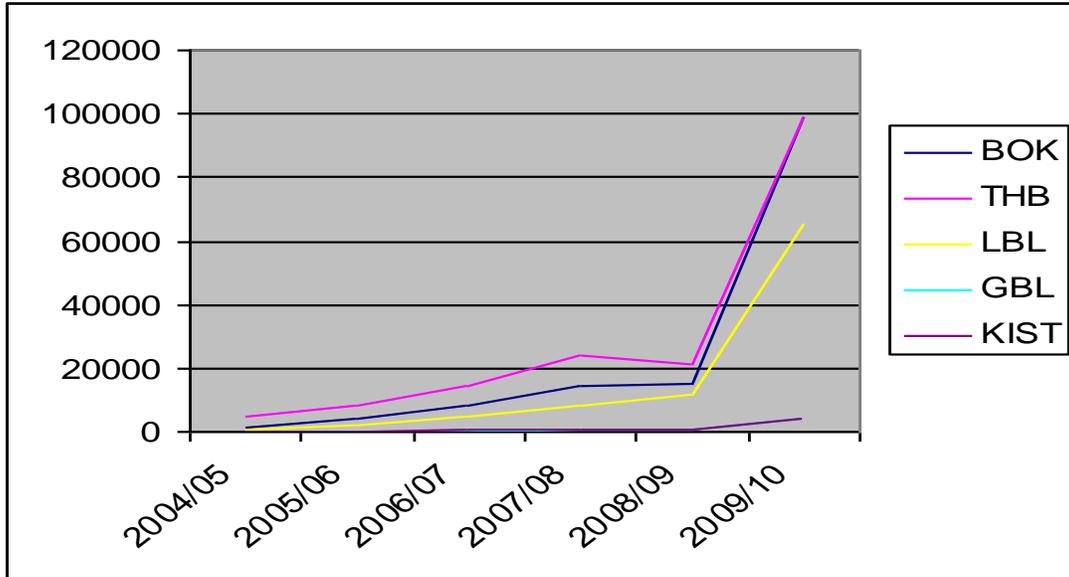
<b>Banks</b>	<b>2004/05</b>	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>
BOK	1451	3940	8293	14173	14776	99301
THB	5067	8494	14270	24081	21405	99243
LBL	951	2244	4860	8147	11661	65720
GBL	0	0	0	390	570	3900
KIST	70	76	560	398	756	3980

**Source: Annual report NEPSE**

To find the consistency of movement of market capitalization the CV of the market capitalization should be calculated. Less CV give the consisted type of company value and appropriate company for investment.

**Diagram 13**

**Year wise comparative movement of market capitalization**



#### 4.5 Inter industry Comparison

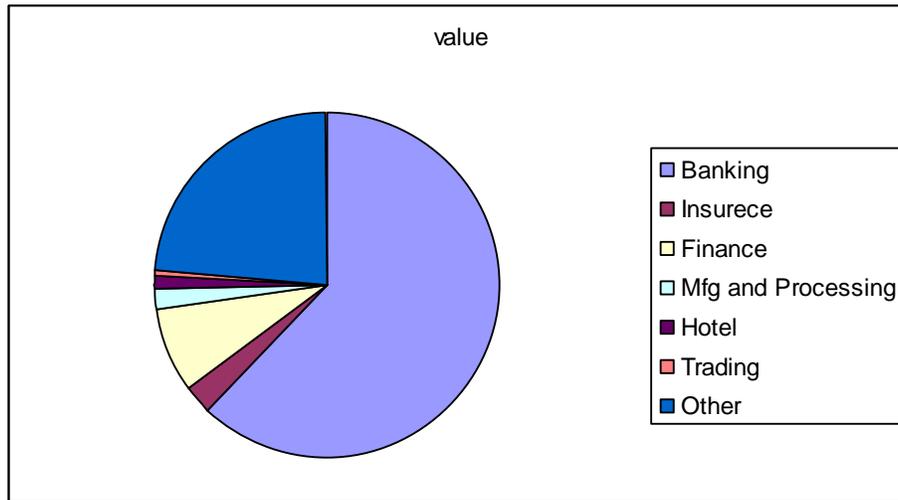
**Table No. 14**

Industries	Market capitalization( Rs. In million)	% value
Banking	233770.00	62.02984
Insurence	9756	2.588712
Finance	29869	7.925608
Mfg and Processing	7592	2.014504
Hotel	5285	1.402351
Trading	1617	0.429064
Other	88978	23.60992
		100

**Source : NEPSE**

The financial market includes different types of company involved in financial activities. The group of same type of companies constitutes one type of industry.

**Diagram 14  
Capitalization**



**Considering the industry market**

Capitalization the investment in common stock of commercial bank industry seems to be appropriate because banking industry having 62.02% value over the total industry wise market capitalization.

**4.6 Industry wise Expected Returns S.D and C.V of return**

On the basis of market capitalization the best industry for investment is banking industry as described on the above but proper method of investment decision is risk and return analysis.

**Table 15**

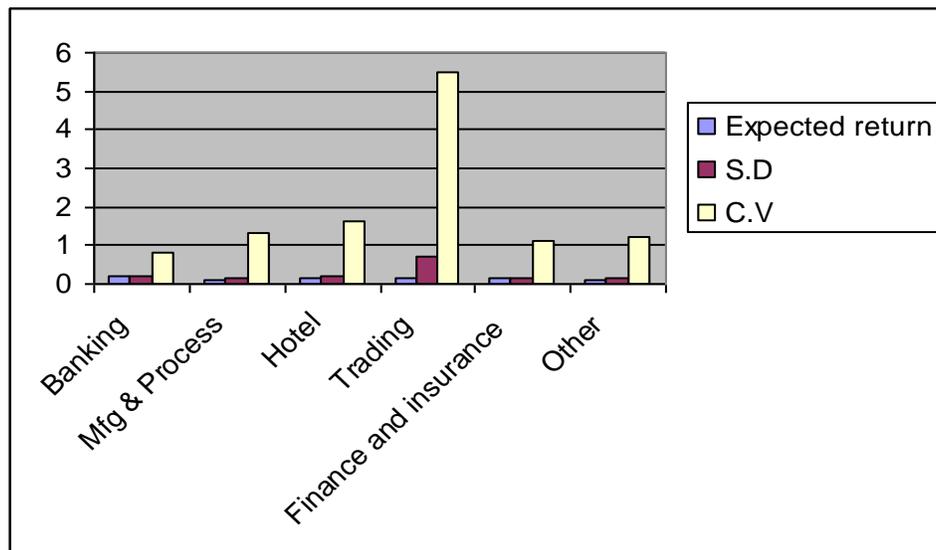
**Industry wise Expected Return SD and CV of Return**

Industry	Expected return	S.D	C.V	Remarks
Banking	0.2243	0.1875	0.8359	High return
Mfg & Process	0.1131	0.1488	1.315	
Hotel	0.1315	0.2113	1.6065	
Trading	0.1329	0.7305	5.4669	High risk
Finance and insurance	0.1506	0.1705	1.1341	
Other	0.1178	0.1445	1.2254	

**Source: Index 1 to 7**

Above the calculation shows that to invest in common stock risk per unit of return i.e. C.V of different presented industry, banking industry is the best to invest in common stock because it has low CV i.e. 0.8359. it shows that for 1 unit of return investor has to bear the 0.8359 unit of risk only. The other industries have more CV which shows that it has high risk to invest. Similarly, average rate of return is more in banking industry than other that of other industry as shows in following.

**Diagram No. 15**



#### 4.5 Comparison of Return and Risk of each Bank with market

The return and risk of market is the average return and risk of all securities available in market. The market assuming the lower risk provides the best return. In this section the industry wise and return is compared with the market risk an return.

#### 4.6.2 Market Risk and Return

The market risk and return has been presented in the following table

**Table 16**

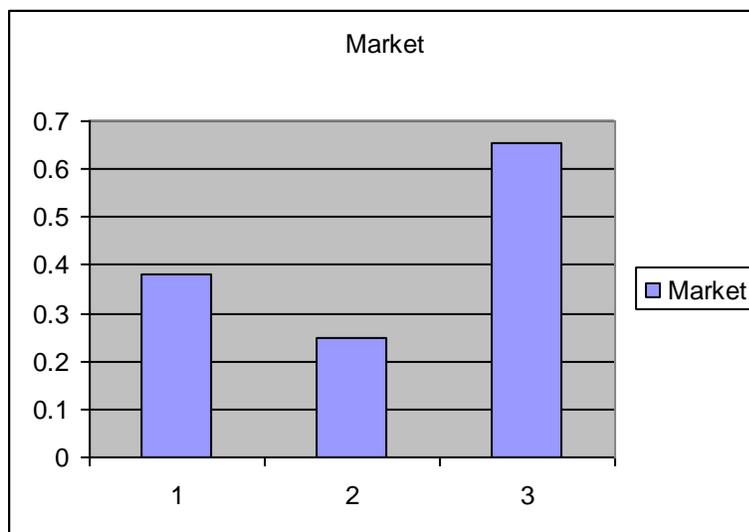
**Average Rate of Return SD and CV of market return**

<b>Statistical tool</b>	<b>Market</b>	<b>BOK</b>	<b>THB</b>	<b>LBL</b>	<b>GBL</b>	<b>KIST</b>
Average return	0.382	0.412	0.155	0.301	0.113	1.2
standard deviation	0.248	0.544	0.305	0.485	0.27	1.3
Coefficient Variation	0.654	1.32	1.97	1.609	2.11	1.084

**Source: NEPSE**

**Diagram 16**

**Comparative movement of market risk**



**The market return is 38.02%, risk is 24.89% and CV is 0.654.**

### 4.6.3 Market sensitivity of common stock

The sensitivity of stock is measured by its beta coefficient s systematic risk measured. The beta of market is always taken as 1. beta of stock more than1 is aggressive (more risky) and beta of stock less than 1 is defensive (less risk).

#### 4.6.3.1 Calculation of Beta of common stock of the bank.

Table No. 17

The beta of common stock of BOK, THB, LBL, GBL and KIST bank is calculated as follows.

Year	(R <sub>K</sub> - E(R <sub>K</sub> ))	(R <sub>H</sub> - E(R <sub>H</sub> ))	(R <sub>I</sub> - E(R <sub>I</sub> ))	(R <sub>G</sub> - E(R <sub>G</sub> ))	(R <sub>KI</sub> - E(R <sub>KI</sub> ))	(R <sub>M</sub> - E(R <sub>M</sub> ))	K*D	H*D	L*D	G*D	KI*D
2004/05						0.2963					
2005/06	0.604	0.078	0.01		-1.04	0.89	0.54	0.07	0.009		-0.93
2006/07	0.27	0.46288	0.598		1.46	0.38	0.08	0.17	0.23		0.55
2007/08	0.3122	0.08	0.33		0.418	0.36	0.12	0.28	0.12		0.15
2008/09	-0.648	-0.244	-0.33	0.337	-	0.6	-0.4	-0.146	0.2	0.20	
2009/10	-0.496	-0.305	-0.6035	-0.202	-						
Total							0.33	0.374	0.23	0.20	0.7

We have,

$$COV_{NM} = \frac{\sum (R_K - \bar{R}_K)(R_M - \bar{R}_M)}{n - 1}$$

$$= \frac{(0.33)}{4 - 1} = (0.11)$$

$$B_N = \frac{COV_{NM}}{\delta^2 m} = \frac{0.11}{(0.2489)^2} = \frac{0.11}{0.062} = 1.77$$

Since beta coefficient of Bank of Kathmandu is (1.77) which is greater than 1. It indicates the stock return of BOK is more volatile than market. So BOK is highly sensitively then 1%. 1% increase in market return than will be (1.77)% risk.

Bank Kathmandu is more risk than other bank. Because beta coefficient for bank of Kathmandu is more than 1 it means stock of bank of Kathmandu has more systematic risk than market portfolio.

$$COV_{HM} = \frac{\sum (R_H - \bar{R}_H)(R_M - \bar{R}_M)}{n-1}$$

$$= \frac{(0.374)}{3} = 0.124$$

$$B_H = \frac{COV_{HM}}{\delta^2 m} = \frac{0.124}{(0.2489)^2} = \frac{0.11}{0.062} = 2.010$$

The graphic representation is commonly returned is less volatile than the return on the market portfolio. The Himalayan bank has more volatile than other selected bank. Because of the highest beta is 2.010.

$$COV_{LM} = \frac{\sum (R_L - \bar{R}_L)(R_M - \bar{R}_M)}{n-1}$$

$$= \frac{(0.23)}{3} = 0.076$$

$$B_L = \frac{COV_{LM}}{\delta^2 m} = \frac{0.076}{(0.2489)^2} = \frac{0.076}{0.062} = 1.2$$

The graphic representation is commonly returned is less volatile than the return on the market portfolio. The Laxmi Bank beta has more than 1 so it is also volatile than the return on the market portfolio.

$$COV_{GM} = \frac{\sum (R_G - \bar{R}_G)(R_M - \bar{R}_M)}{n-1}$$

$$= \frac{(0.20)}{3} = 0.066$$

$$B_G = \frac{COV_{GM}}{\delta^2 m} = \frac{0.066}{(0.2489)^2} = \frac{0.066}{0.062} = 1.075$$

The graphic representation is commonly returned is more volatile than the return on the market portfolio. The Global Bank beta has more than 1 so it is also volatile than the return on the market portfolio.

$$COV_{KIM} = \frac{\sum (R_{KI} - \bar{R}_{KI})(R_M - \bar{R}_M)}{n-1}$$

$$= \frac{(0.23)}{3} = 0.766$$

$$B_{KI} = \frac{COV_{KIM}}{\delta^2 m} = \frac{-(0.076)}{(0.2489)^2} = \frac{0.076}{0.062} = -(1.236)$$

Here Kist Bank has no systematic risk. There is relationship between systematic risk and return. If (Bj) is greater the return would also be greater and vice versa.

Where,

$COV_k$  = Covariance between BOK and market

$COV_H$  = Covariance between THB and market

$COV_L$  = Covariance between LBL and market

$COV_G$  = Covariance between GBL and market

$COV_{KI}$  = Covariance between Kist and market

$COV_M$  = Covariance between Market

**Table No. 18**

<b>Bank</b>	<b>Beta Coefficient</b>	<b>Remarks</b>
<b>BOK</b>	1.77	Aggressive
<b>THB</b>	2.01	Aggressive
<b>LBL</b>	1.2	Aggressive
<b>GBL</b>	1.074	Aggressive
<b>Kist</b>	-1.236	Defensive

The beta coefficient of THB is the higher and is more than one. So common stock of THB it the most aggressive stock. The beta coefficient of the other bank is more. But the Kist Bank defensive because of low beta less than 1, so it is defensive.

#### **4.6.3.2 Price Evaluation of Stock**

Price evaluation determines the over price, correctly price and under price stocks. The comparison of required rate of return and expected rate of return given the result of over price correctly price and under priced stocks.

There are conditions of price evaluation which are,

Expected rate of return required > rate of return = under priced

Expected rate of return required < rate of return = Over priced

Expected rate of return required = rate of return = correctly priced

For, the price evaluation the calculation required rate of return are

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

Where,

$R_f$  = Risk free rate of return

$E(R_m)$  = expected market rate of return

In the above equation the risk free rate of return is needed to determine. The interest rate of Treasury bill issued by NRB, the interest rate of 91 days Treasury bill converted to 364 days duration some approximately to 7% at current period.

**Table No. 19**

<b>Bank</b>	<b>Beta</b>	$E(R_j) = R_f + [E(R_M) - R_f](B_j)$	<b>Expected</b>	<b>Price valuation</b>
BOK	1.77	0.62	0.41	Over Price
THB	2.01	0.69	0.15	Over Price
LBL	1.2	0.44	0.30	Over Price
GBL	1.075	0.40	0.13	Over Price
Kist	-1.236	-0.313	1.2	Under Price

Data Sources : NEPSE

From the above table the Bank of Katmandu, THB, LBL and GBL have overpriced so that it will be rejected because expected rate or return is less than required rate of return. But Kist Bank has lower value than expected return so their the investor should invest in bank.

The investors can give from buying the under price. But the price of stocks will increase only up to the required rate or return similarly, the price of stock of Kist desired up to the equilibrium state.

#### **4.7 Portfolio Analysis**

The fundamental concept behind MPT is that the assets in an investment portfolio should not be selected individually, each on their own merits. Rather, it is important to consider how each asset changes in price relative to how every other asset in the portfolio changes in price.

Investing is a tradeoff between risk and expected return. In general, assets with higher expected returns are riskier. For a given amount of risk, MPT describes how to select a portfolio with the highest possible expected return. Or, for a given expected return, MPT explains how to select a portfolio with the lowest possible risk (the targeted expected return cannot be more than the highest-returning available security, of course, unless

negative holdings of assets are possible. The above analysis describes optimal behavior of an individual investor. Asset pricing theory builds on this analysis in the following way. Since everyone holds the risky assets in identical proportions to each other—namely in the proportions given by the tangency portfolio—in market equilibrium the risky assets' prices, and therefore their expected returns, will adjust so that the ratios in the tangency portfolio are the same as the ratios in which the risky assets are supplied to the market. Thus relative supplies will equal relative demands. MPT derives the required expected return for a correctly priced asset in this context.

In a very simple way, we can understand it is not keeping all eggs in a single basket. By diversification total funds in different securities the risk of individual security can be reduced. The main aim of portfolio is reduction of systematic risk from which investor can take a more benefits by making efficient.

#### 4.7.1 Diversification of risk by investing into a portfolio

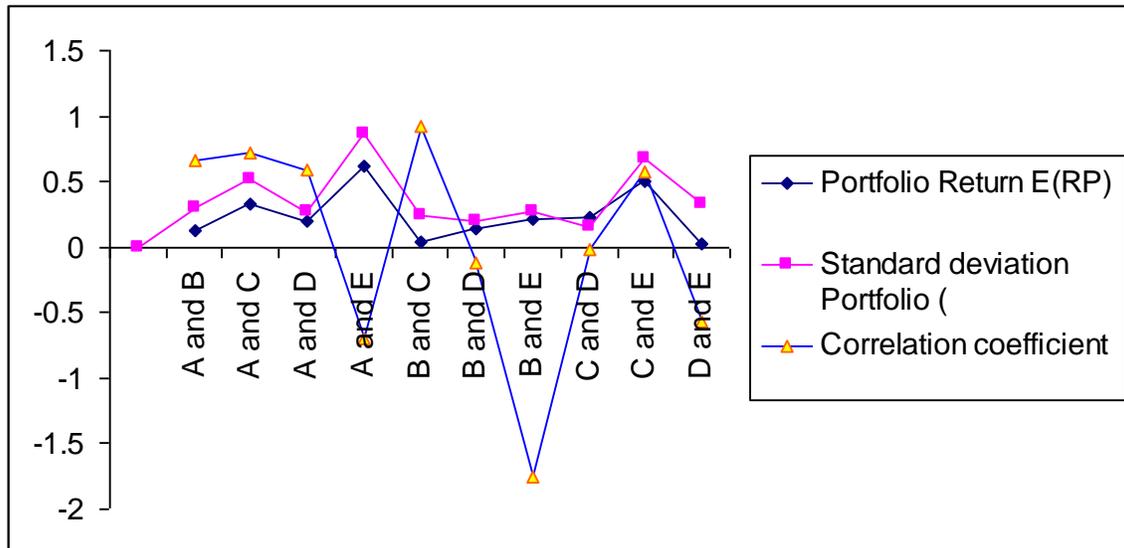
Investing common stock of various banks can do the risk diversification by due to limitation of data processing and difficulties. We can analysis two assets and three assets case... The tool for analysis has described in research methodology chapter of this study. Here portfolio of common stock of BOK say stock A, THB say stock B, LBL say stock C, GBL say stock D and KIST say stock E.

**Table No. 20**

**Portfolio of Common Stock**

<b>Bank</b>	<b>Portfolio Return <math>E(R_p)</math></b>	<b>Standard deviation Portfolio (<math>\delta_p</math>)</b>	<b>Correlation coefficient</b>
A and B	12.9%	30.13%	0.66
A and C	33.47%	51.1%	0.72
A and D	20%	26.57%	0.59
A and E	62%	87%	-0.7
B and C	3.9%	24%	0.92
B and D	14.29%	19.7%	-0.12
B and E	20.72%	27%	-1.76
C and D	23.25%	15.9%	-0.02
C and E	50.82%	67%	0.57
D and E	2.63%	33%	-0.57

Diagram No. 17



From the above summary conclusion shows that Bank of Kathmandu has highest risk and highest portfolio. There is most negative correlation between stock of different Banks.

The portfolio Risk is influenced by three elements. The first is the individual risks of the assets involves in portfolio, the second is weighted of every assets and the third one is the co-movement between the return of the invested assets. So, portfolio risk is only the weighted average of risk and weighted of investment. The degree of correlation measured by the correlation coefficients, which range from +1 perfectly positive correlated series to (-1) for negative correlated series

Perfect negative correlation one asset decrease when return of another increase or vice-versa, that kinds of relation is perfect negative correlation. In perfect positive correlation increase or decrease in return of new different assets in positive, the relation of return is perfect positive correlation. the correlation coefficient reflects the extent to which there is a linear relationship between two variables

# CHAPTER-5

## SUMMARY, CONCLUSION AND RECOMMENDATION

The present study has been carried out with the objective of analyzing the risk and return of the selected companies. According relevant literature was received and the study was carried out following a suitable methodology. A brief explanation of all procedures and efforts has been summarized up in this chapter along with conclusion drawn and suggestion recommended.

### 5.1 Summary

The risk and return is being central focus of finance. Before investment on any security the risk and return analysis is performed, being the speculative nature. Common stock is taken for analyzing risk and return.

There is a deep relationship risk and return. Risk and return plays a vita role in the process of investment. However, the relationship between risk and return is described by investor's perception about risk and their demand for compensation. The investor will invest in risky assets only when he is sufficient common stock for attracting Nepalese investors.

The common stock is the most risky security. An investment in common stock of a company can not insure the annual return and the return of principal. Dividend is paid to the stock holders only if there will be earning available to equity share holders. In Nepal there are not various types of securities but due to development of banking industry and manufacturing industry, there is sufficient common stock for attracting Nepalese investors.

The main objective of this study is to analyzed the risk and return on common stock investment of Nepalese stock market and it is focused on common stock of five commercial banks listed in Nepal stock exchange limited in the course of this study,

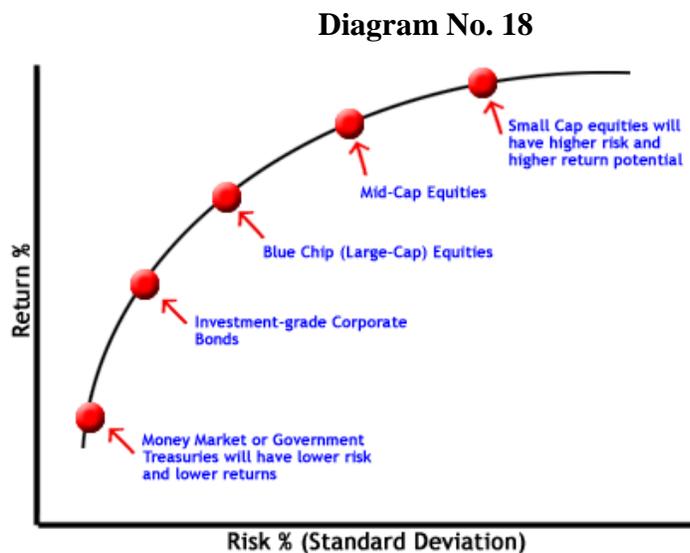
briefly review of related studies has been performed. The collected secondary data has analyzed by using scientific methods and the table graph, diagram have used to present the data more clearly. The secondary data are collected from the NEPSE websites (WWW. Nepal stock. Com) Nepal.

Rastra Bank websites (WWW.nrb.org.np) security board of Nepal (SEBO), journal and related banks. Both quantitative and qualitative analysis has been made to derive the conclusion. A finding of analysis is summarized and conclusions are drawn as follows:

Diversification can help an investor manage risk and reduce the volatility of an asset's price movements. Remember though, that no matter how diversified your portfolio is, risk can never be eliminated completely. You can reduce risk associated with individual stocks, but general market risks affect nearly every stock, so it is important to diversify also among different asset classes. The key is to find a medium between risk and return; this ensures that you achieve your financial goals while still getting a good night's rest.

### Maximizing Return While Minimizing Risk

The main goal of allocating your assets among various asset classes is to maximize return for your chosen level of risk, or stated another way, to minimize risk given a certain expected level of return. Of course to maximize return and minimize risk, you need to know the risk-return characteristics of the various asset classes. Figure 1 compares the risk and potential return of some of the more popular ones:



Equities have the highest potential return, but also the highest risk. On the other hand, Treasury bills have the lowest risk since they are backed by the government, but they also provide the lowest potential return.

Figure 1 also demonstrates that when you choose investments with higher risk, your expected returns also increase proportionately. But this is simply the result of the [risk-return tradeoff](#). They will often have high volatility and are therefore suited for investors who have a high [risk tolerance](#) (can stomach wide fluctuations in value), and who have a longer time horizon.

It's because of the risk-return tradeoff - which says you can seek high returns only if you are willing to take losses - that diversification through asset allocation is important. Since different assets have varying risks and experience different market fluctuations, proper asset allocation insulates your entire portfolio from the ups and downs of one single class of securities. So, while part of your portfolio may contain more volatile securities - which you've chosen for their potential of higher returns - the other part of your portfolio devoted to other assets remains stable. Because of the protection it offers, asset allocation is the key to maximizing returns while minimizing risk.

## **DIVERSIFICATION OF RISK**

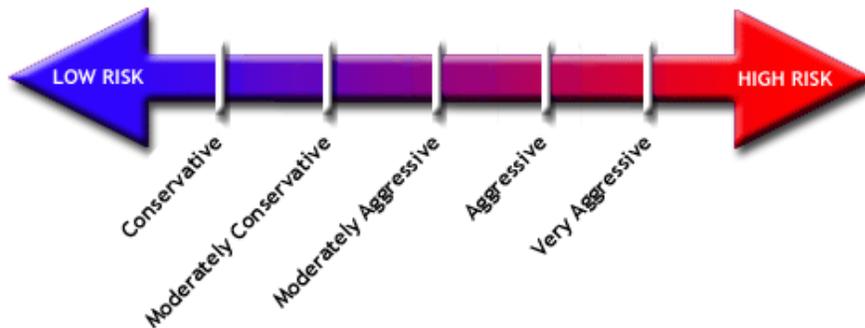
Diversification is a technique that reduces risk by allocating investments among various financial instruments, industries and other categories. It aims to maximize return by investing in different areas that would each react differently to the same event. Most investment professionals agree that, although it does not guarantee against loss, diversification is the most important component of reaching long-range financial goals while minimizing risk. Here we look at why this is true, and how to accomplish

### **Deciding What's Right for You?**

As each asset class has varying levels of return for a certain risk, your risk tolerance, investment objectives, time horizon and available capital will provide the basis for the asset composition of your portfolio.

To make the asset allocation process easier for clients, many investment companies create a series of model portfolios, each comprising different proportions of asset classes. These portfolios of different proportions satisfy a particular level of investor risk tolerance. In general, these model portfolios range from conservative to very aggressive:

**Diagram No. 19**



Conservative model portfolios generally allocate a large percent of the total portfolio to lower-risk securities such as fixed-income and money market securities.

## 5.2 Conclusion

Nepal stock is in emerging state. But its development is accelerating rapidly. The political changes in 1990 have affected the openers and liberalization in national economy. But due to the lack of information and proper knowledge, Nepalese individually can not analyze the security market properly.

- Emprial research suggests that while beta has an important bearing on returns, the capital assets pricing model dose not fully capture the asset pricing process. Beta however, remains one of the most powerful developments in models finance.
- The risk of assets can be measured quantitatively using statistic standard deviation and coefficient of variance. That can be used to measure the variability of assets return standard deviation is the strong statistical device of measurable total risk involve in an investment that consist & of both market risk and diversifiable risk.

More over it is expected that standard deviation and coefficient of variation denotes the volatility rate of return there, total investment risk and associated with common stock investment of difference selected banks are 54.4%, 30.5%, 48.5%, 27.4%, 130% of BOK, THB, LBL, GBL and Kist respectively.

- From the calculation of market sensitivity of the common stock of the commercial banks, common stock of THB has more volatile because it has highest beta coefficient (i.e. 2.01) which shows the change in market by % bring the change in return on common stock of THB 2.01. The beta coefficient of BOK, GLB, LBL has also aggressive but Kist has defensive. Stock having high rate coefficient is compensated more. The beta of market portfolio is always equal to 1 the asset or stock that has beta less than 1 is trended as defensive assets (less risky than market). The assets that has beta higher than 1 is trended as aggressive assets (more risky than market).

On the above commercial bank BOK, THB, LBL and GBL is aggressive because that greater than 11.7, 2.01, 1.2, 1.075). The Kist bank is considered to be defensive or less risk and return than market portfolio.

- On the basis of market copatalization the commercial banking sectors has the highest position ( 62.02%) than other sectors. It shows the commercial banking sector have covered the maximum are in the market in comparison with other sectors.
- On the basic of under and over pricing security said to be in equilibrium and the securities are said to be correctly price otherwise the securities are either over priced or under priced. The BOK, THB, LBL, GBL (i.e  $0.62 > 0.41$ ,  $0.69 > 0.15$ ,  $0.44 > 0.30$ ,  $0.40 > 0.13$ ). One over priced or the required rate of return is greater than expected rate of return. Overvalue will be rejected. The Kist bank has under price so that in will be accepted. The investor will desire to sell the stock, when the required rate of return is greater than expected return, there will also be a tendency for the price to decline investor will try to purchase share of the stock.

When expected rate of return is greater than required rate of return, therefore this will derive the price upward.

### **5.3 Recommendation**

Actually, this study is made for the partial fulfillment of master of business studies (MBS) level. However this study may be helpful for the individual investors the following recommendation is prescribed on the basis of data analysis and major finding of this study.

- The proper analysis of the individual stock the industry and whole market is essential to taken investment decision. The general knowledge about general economic condition, government tax policy, peace and politician situation of nation is necessary which affect the price of share.
- There is no of dual conflict with NEPSE for providing the true information to the investor about stock market. The stock market of Nepal is emerging state and possible investors afraid of investing in secondary market. NEPSE helps to investors by giving clear information. But recommendation to NEPSE is that it should takes steps to established the stock market in other main cities of the countries like Biratnagar, Dharan, Birgunj etc the market is concentrated only in the capital city which is the main difficulty in development of stock market.
- Analysis is the whole industry, banking industry is the better industry to investment. It has lowest C.V. (i.e. 0.835) then other industry among the above listed 5 commercial banks. The investment on CV of the Kist is recommended to individual stock investor because the CV of the return of the Kist common stock is lowest but the basis of market sensitively common stock of Kist is recommended for investment because is defensive type of stock.
- The market sensitively of common stock also helps to invest the funds. It is better the common stock of beta less then 1 (i.e. defensive stock), so that the investors to invest in Kist bank comparatively to BOK, THB, LBL and GBL. Because of

when overpriced the investors to sell the stock or there will also be a tendency for the price to decline. In the same way the expected rate return is greater than required rate of return. Investors will try to purchase share of the stock there will drive the price upward. The equilibrium price, where the expected rate of return and required rate or return are equal, there will the stock be stable.

- The financial institution and companies should provide the real financial statements. The data provided by NEPSE and Company it is different is some cases. It created confusion to the financial condition of the company. The value of assets and liabilities should not be manipulated by the company to show the under profitability at over profitability.
- Any industry can not develop and raise their business in the disturbance condition and instability condition of political situation of the country and also unfavorable rule and regulation of government. So the government should monitor the activities of stock market and also manipulating stock holders. The rule and regulation regarding stock market should be amended in time to time and making various polities to implementation to the rule and regulations.

Therefore the peace and political stability and positive rule regarding stock market area the main element to growth of stock market. So recommended to the government for making peace and stable political in this blazing situation of nation.

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**Index No : 1**

**Computation of Expected Return, S.D. and C.V. of return of Commercial Banks**

Year	NI	$R_B = NI_T - NI_{T-1} / NI_{T-1}$	$(R_B - \bar{R}_B)$	$(R_B - \bar{R}_B)^2$
2003/04	349.56			
2004/05	365.24	0.0449	-0.1794	0.322
2005/06	427.59	0.1707	-0.6536	0.0029
2006/07	421.72	-0.0137	-0.238	0.5666
2007/08	427.91	0.2518	0.275	0.0008
2008/09	462.13	0.8974		0.1400

Data Sources : NEPSE

We have,

a) Expected return  $(\bar{R}_B) = \frac{\bar{R}_B}{n} = \frac{0.8974}{4} = 0.2243 = 22.23\%$

b) Standard deviation  $(\delta) = \sqrt{\frac{\sum (\bar{R}_B - \bar{R}_B)^2}{n-1}} = \sqrt{\frac{0.1406}{5-1}} = 0.1875$  or 18.75%

c) Coefficient of variation (c.v.) =  $\frac{\delta_B}{R_B} = \frac{0.1875}{0.2243} = 0.8359$

**Index No : 2**

**Computation of Expected Return, S.D. and C.V. of return of mfg and processing industry.**

Year	NI	$R_{MP} (NI_{t+1} - NI_T) / NI_T$	$(R_{MP} - \bar{R}_{MP})$	$(R_{MP} - \bar{R}_{MP})^2$
2003/04	264.06	-		
2004/05	245.16	-0.0716	-0.1847	0.322
2005/06	310.25	0.2655	0.1524	0.0232
2006/07	339.19	0.0933	-0.0198	0.0004
2007/08	345.08	0.0173	-0.0957	0.0092
2008/09	334.90	0.2603	0.1472	0.0217
Total				0.0886

Data Sources : NEPSE

We have,

a) Expected return  $(\bar{R}_{MP}) = \frac{\sum R}{n} = \frac{0.5653}{5} = 0.1131$  or 11.31%

b) Standard deviation  $(\delta) = \sqrt{\frac{\sum (\bar{R}_{MP} - \bar{R}_{MP})^2}{n-1}} = \sqrt{\frac{0.0886}{5-1}} = 0.1488$  or 14.88%

c) Coefficient of variation (c.v.) =  $\frac{\delta_B}{R_B} = \frac{0.1488}{0.1131} = 0.3156$

**Index No : 3**

**Computation of Expected Return, S.D. and C.V. of return of Hotel**

Year	NI	$R_H (NI_{t+1} - NI_T) / NI_T$	$(R_H - \bar{R}_H)$	$(R_H - \bar{R}_H)^2$
2003/04	210.53	-	-	-
2004/05	235.17	0.1170	-0.0145	0.0062
2005/06	208.65	0.1125	-0.2440	0.0595
2006/07	204.07	-0.220	-0.1535	0.0236
2007/08	258.18	0.2652	0.1337	0.0179
2008/09	363.95	0.4097	0.2782	0.7714
Total		0.6574	0.2782	0.0744

**Data Sources : NEPSE**

We have,

a) Expected return  $(\bar{R}_H) = \frac{\sum R_H}{n} = \frac{0.6574}{5} = 0.1315$  or 13.15%

b) Standard deviation  $(\delta) = \sqrt{\frac{\sum (\bar{R}_{t-1} - \bar{R}_{t-1})^2}{n-1}} = \sqrt{\frac{0.1786}{5-1}} = 0.2113$  or 21.13%

c) Coefficient of variation (c.v.) =  $\frac{\delta_H}{R_H} = \frac{0.2113}{0.1315} = 1.6068$

**Index No : 4**

**Computation of Expected Return, S.D. and C.V. of return of Hotel**

Year	NI	$R_t (NI - NI_T) / NI_{t-1}$	$(R_t - \bar{R}_T)$	$(R_t - \bar{R}_T)^2$
2003/04	133.09	-	-	-
2004/05	315.98	1.3742	1.2413	1.5408
2005/06	165.55	-0.4761	-0.6090	0.3709
2006/07	112.20	-0.3223	-0.4552	0.2072
2007/08	116.08	0.6346	-0.0983	0.0097
2008/09	122	0.0543	-0.0786	0.0062
Total		0.6647		2.1348

**Data Sources : NEPSE**

We have,

a) Expected return  $(\bar{R}_T) = \frac{\sum R_T}{n} = \frac{0.6647}{5} = 0.1329$  or 13.29%

b) Standard deviation  $(\delta) = \sqrt{\frac{\sum (\bar{R}_H - \bar{R}_H)^2}{n-1}} = \sqrt{\frac{2.1348}{5-1}} = 0.7305$  or 73.05%

c) Coefficient of variation (c.v.) =  $\frac{\delta_T}{R_T} = \frac{0.7305}{0.1329} = 5.4960$

**Index No : 5**

**Computation of Expected Return. S.D. and C.V. of return of Finance and insurance industry.**

Year	NI	$R_F(NI - NI_{T-1})/NI_{t-1}$	$(R_F - \bar{R}_F)$	$(R_F - \bar{R}_F)^2$
2003/04	302.61	-	-	-
2004/05	365.72	0.2086	-0.0118	0.001
2005/06	408.39	0.1167	0.2215	0.0491
2006/07	389.24	-0.0469	0.1853	0.343
2007/08	415.21	0.0667	-0.0111	0.0001
2008/09	584.63	0.4080	-0.0100	0.0001
Total		0.7531		0.0837

**Data Sources : NEPSE**

We have,

$$d) \text{ Expected return } (\bar{R}_F) = \frac{\sum R_F}{n} = \frac{0.7531}{5} = 0.1506 \text{ or } 15.06\%$$

$$e) \text{ Standard deviation } (\delta) = \sqrt{\frac{\sum (\bar{R}_F - R_F)^2}{n-1}} = \sqrt{\frac{0.1167}{5-1}} = 0.1767 \text{ or } 17.08\%$$

$$\text{Coefficient of variation (c.v.)} = \frac{\delta_F}{R_F} = \frac{0.1708}{0.1506} = 1.1342$$

**Index No : 6**

**Computation of Expected Return. S.D. and C.V. of return of other Industry**

Year	NI	$R_F(NI - NI_{T-1})/NI_{t-1}$	$(R_o - \bar{R}_o)$	$(R_o - \bar{R}_o)^2$
2003/04	212.69	-	-	-
2004/05	235.23	0.1060	-0.0118	0.001
2005/06	315.04	0.3393	0.2215	0.0491
2006/07	293.76	0.0675	0.1853	0.343
2007/08	325.1	0.1067	-0.0111	0.0001
2008/09	359.11	0.1046	-0.0100	0.0001
Total		0.5891		0.0831

**Data Sources : NEPSE**

We have,

$$f) \text{ Expected return } (\bar{R}_o) = \frac{\sum R_o}{n} = \frac{0.5891}{5} = 0.1178 \text{ or } 11.78\%$$

$$g) \text{ Standard deviation } (\delta) = \sqrt{\frac{\sum (\bar{R}_o - R_o)^2}{n-1}} = \sqrt{\frac{0.0837}{5-1}} = 0.1447 \text{ or } 14.47\%$$

$$\text{Coefficient of variation (c.v.)} = \frac{\delta_o}{R_o} = \frac{0.1447}{0.1178} = 1.2284$$

**Index No : 7**

**Computation of Expected Return, S.D. and C.V. of return of Market Industry**

Year	NI	$R_F(NI - NI_{T-1})/NI_{t-1}$	$(R_M - \bar{R}_M)$	$(R_M - \bar{R}_M)^2$
2003/04	204.86	-	-	-
2004/05	222.04	0.0839	-0.2963	0.0878
2005/06	286.67	0.2911	-0.891	0.878
2006/07	386.67	0.3494	-0.0308	0.0009
2007/08	684.00	0.7682	0.3880	0.1505
2008/09	963.39	0.4085	0.0283	0.0008
Total		0.9011		0.2479

**Data Sources : NEPSE**

We have,

h) Expected return  $(\bar{R}_M) = \frac{\sum R_M}{n} = \frac{1.9011}{5} = 0.3862$  or 38.02%

i) Standard deviation  $(\delta) = \sqrt{\frac{\sum (\bar{R}_M - \bar{R}_M)^2}{n-1}} = \sqrt{\frac{0.2479}{5-4}} = 0.2489$  or 24.89%

Coefficient of variation (c.v.) =  $\frac{\delta_M}{R_M} = \frac{0.2489}{0.3802} = 0.6547$

**Nepal Stock Exchange Ltd.**  
Singhdubar Plaza, Kathmandu

**Some Key Figures of B/S And P/L Account with brief financial indicator of Bank of Kathmandu Ltd**

		Audited	Audited	Audited	Audited	Audited	Unaudited
		2061/62	2062/63	2063/64	2064/65	2065/66	2066/67
		2004/2005	2005/2006	2006/2007	2007/08	2008/09	2009/10
Brief Financial Indicators	Networth Per Share	155.47	181.14	162.81	222.51	206.25	220.50
	Earning Per Share	30.10	43.67	43.50	59.94	54.68	14.25
	Dividend Per share	15.00	18.00	20.00	40.00	47.37	0.00
	ROA	1.41%	1.65%	1.80%	2.04%	2.25%	0.54%
	Earning Yield	7.00%	5.14%	3.16%	2.55%	3.12%	0.89%
	Price Earning Ratio (In	14.29	19.46	31.61	39.21	32.00	112.64
	Market Price	430	850	1375	2350	1750	1605
	ROE	19.36%	24.11%	26.72%	26.94%	26.51%	6.46%
		Rs. In	Rs. In	Rs. In	Rs. In	Rs. In	Rs. In
Capital Structure	Authorised Capital	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00
	Issued Capital	500.00	500.00	606.17	606.17	844.40	844.40
Liabilities	Issued and Paid up	463.58	463.58	603.14	603.14	844.40	844.40
	Reserve & Surplus	257.16	376.15	378.84	738.93	897.19	1017.51
	Debenture	0.00	200.00	200.00	200.00	200.00	200.00
	Borrowings	6.00	553.18	730.00	100.00	100.00	100.00
	Deposits	8975.78	10485.36	12388.93	15833.74	18083.98	19186.95
	Others	186.01	200.06	269.19	246.11	370.44	754.06
	<b>Total</b>	<b>9,888.53</b>	<b>12,278.33</b>	<b>14,570.10</b>	<b>17,721.93</b>	<b>20,496.01</b>	<b>22,102.92</b>
Assets	Cash & Bank Balance	579.34	533.32	1102.54	1142.80	1889.17	1660.70
	Investment	3088.31	4164.14	3465.08	3574.42	3319.89	4589.79
	Loan, advances &	5912.58	7259.08	9399.33	12462.64	14647.30	15116.25
	Fixed Assets	95.23	110.75	320.85	387.27	417.04	478.64
	Others	213.07	211.05	282.31	154.80	222.61	257.53
	<b>Total</b>	<b>9888.53</b>	<b>12278.33</b>	<b>14570.10</b>	<b>17721.93</b>	<b>20496.01</b>	<b>22102.92</b>
Profit and Loss Account	Interest Income	607.10	718.12	819.00	1034.16	1347.76	388.50
	Other operating income	148.93	166.70	197.26	246.35	330.18	93.66
	Non operating income	-0.47	9.76	34.74	17.25	26.48	0.00
	<b>Total Income</b>	<b>755.56</b>	<b>894.58</b>	<b>1051.00</b>	<b>1297.75</b>	<b>1704.42</b>	<b>482.16</b>
Expenditures:	Interest Expenses	241.64	308.16	339.18	417.54	563.11	182.16
	Overhead	53.82	59.12	69.74	90.60	146.49	43.56
	Other Operating	99.19	117.59	138.43	170.48	233.67	61.95
	Loan loss provision	133.92	78.38	81.89	38.44	33.75	5.43

	<b>Total Expenditure</b>	<b>528.57</b>	<b>563.25</b>	<b>629.25</b>	<b>717.06</b>	<b>977.02</b>	<b>293.09</b>
	Profit before tax	226.99	331.33	421.75	580.69	727.40	189.07
	Provision for bonus	22.70	30.12	38.34	52.79	66.13	17.19
	Tax provision	64.76	98.77	121.02	166.40	199.53	51.57
	<b>Net profit after tax</b>	<b>139.53</b>	<b>202.44</b>	<b>262.39</b>	<b>361.50</b>	<b>461.73</b>	<b>120.32</b>

**Nepal Stock Exchange Ltd.**  
Singhdubar Plaza, Kathmandu

**Some Key Figures of B/S And P/L Account with brief financial indicator of Global Bank Ltd.**

		Audited	Audited	Audited	Unaudited
		2063/64	2064/65	2065/66	2066/67
		2006/2007	2007/08	2008/09	2009/10
Brief Financial Indicators	Networth Per Share	92.43	103.23	104.89	105.48
	Earning Per Share	-7.57	8.75	2.63	4.23
	Dividend Per share	0.00	0.00	0.00	0.00
	ROA	-1.09%	0.74%	0.21%	0.31%
	Earning Yield (EPS/MPS)	0.00%	0.00%	0.46%	0.83%
	Price Earning Ratio (In case of old co)	0.00	0.00	216.69	120.54
	Market Price			570	510
	ROE	-8.19%	8.47%	2.51%	4.01%
		Rs. In Million	Rs. In Million	Rs. In Million	Rs. In Million
Capital Structure	Authorised Capital	2000.00	2000.00	2000.00	2000.00
	Issued Capital	510.00	1000.00	1000.00	1000.00
Liabilities	Issued and Paid up capital	510.00	700.00	1000.00	1000.00
	Reserve & Surplus	-38.61	22.62	48.93	54.82
	Debenture	0.00	0.00	0.00	0.00
	Borrowings	30.00	100.00	499.46	723.90
	Deposits	3023.62	7319.70	10932.98	11437.02
	Others	11.71	123.39	145.10	346.44
	<b>Total</b>	<b>3,536.72</b>	<b>8,265.72</b>	<b>12,626.47</b>	<b>13,562.18</b>
Assets	Cash & Bank Balance	473.04	1267.98	1382.14	1465.27
	Investment	389.48	1645.18	1656.76	1536.41
	Loan, advances & overdraft	2564.14	5084.73	9063.09	9935.75
	Fixed Assets	52.51	105.39	224.35	319.93
	Others	57.55	162.44	300.12	304.82
	<b>Total</b>	<b>3536.72</b>	<b>8265.72</b>	<b>12626.47</b>	<b>13562.18</b>
Profit and Loss Account	Interest Income	65.10	357.91	683.93	280.35
	Other operating income	12.53	55.20	110.07	34.53
	Non operating income (Net)	0.00	0.00	0.00	0.00
	<b>Total Income</b>	<b>77.64</b>	<b>413.11</b>	<b>794.00</b>	<b>314.89</b>
Expenditures:	Interest Expenses	40.32	218.95	459.78	184.38
	Overhead Expenses(Employees)	12.71	41.96	66.32	25.39

	Other operating expenses	24.79	60.11	132.89	29.88
	Loan loss provision	38.42	16.92	70.22	8.75
	<b>Total Expenditure</b>	<b>116.25</b>	<b>337.93</b>	<b>729.22</b>	<b>248.40</b>
	Profit before tax	-38.61	75.18	64.79	66.49
	Provision for bonus	0.00	6.83	5.89	6.04
	Tax provision	0.00	7.11	32.59	18.13
	<b>Net profit after tax</b>	<b>-38.61</b>	<b>61.23</b>	<b>26.30</b>	<b>42.31</b>

**Nepal Stock Exchange Ltd.**  
Singhdubar Plaza, Kathmandu

**Some Key Figures of B/S And P/L Account with brief financial indicator of Himalayan Bank Ltd.**

		Audited	Audited	Audited	Audited	Audited	Unaudited
		2061/62	2062/63	2063/64	2064/65	2065/66	2066/67
		2004/2005	2005/2006	2006/2007	2007/08	2008/09	2009/10
Brief Financial Indicators	Networth Per Share	239.59	228.72	264.74	247.95	256.52	277.98
	Earning Per Share	47.91	59.24	60.66	62.74	61.90	9.46
	Dividend Per share (with bonus share)	31.58	35.00	40.00	45.00	43.56	0.00
	ROA	1.12%	1.55%	1.47%	1.76%	1.91%	0.27%
	Earning Yield (EPS / MPS)	5.21%	5.39%	3.49%	3.17%	3.52%	0.63%
	Price Earning Ratio (In case of old co)	19.20	18.57	28.69	31.56	28.43	158.08
	Market Price	920	1100	1740	1980	1760	1495
	ROE	20.00%	25.90%	22.91%	25.30%	24.13%	3.40%
		Rs. In Million					
Capital Structure	Authorised Capital	1000.00	1000.00	1000.00	2000.00	2000.00	2000.00
	Issued Capital	650.00	772.20	810.81	1013.51	1216.22	1216.22
Liabilities	Issued and Paid up capital	643.50	772.20	810.81	1013.51	1216.22	1216.22
	Reserve & Surplus	898.25	993.98	1335.69	1499.48	1903.67	2164.63
	Debenture	360.00	360.00	360.00	860.00	500.00	500.00
	Borrowings	146.05	144.62	235.97	83.18	0.00	570.00
	Deposits	24814.01	26490.85	30048.42	31842.79	34681.35	37979.91
	Others	556.35	698.74	728.26	876.57	1019.10	772.08
	<b>Total</b>	<b>27,418.16</b>	<b>29,460.39</b>	<b>33,519.14</b>	<b>36,175.53</b>	<b>39,320.32</b>	<b>43,202.84</b>
Assets	Cash & Bank Balance	2014.47	1717.35	1757.34	1448.14	3048.53	3937.15
	Investment	12133.42	11894.31	13533.01	13858.71	9881.48	11235.74
	Loan, advances & overdraft	12424.52	14642.56	16998.00	19497.52	24793.16	26262.49
	Fixed Assets	295.82	540.82	574.06	726.07	952.20	977.81
	Others	549.92	665.34	656.73	645.09	644.96	789.65
	<b>Total</b>	<b>27418.16</b>	<b>29460.39</b>	<b>33519.14</b>	<b>36175.53</b>	<b>39320.32</b>	<b>43202.84</b>
Profit and Loss	Interest Income	1446.47	1626.47	1775.58	1963.65	2342.20	648.02

Account	Other operating income	311.42	415.90	385.19	457.59	580.63	148.09
	Non operating income (Net)	-85.46	55.55	100.26	141.19	13.32	4.92
<b>Total Income</b>		<b>1672.43</b>	<b>2097.92</b>	<b>2261.03</b>	<b>2562.43</b>	<b>2936.15</b>	<b>801.04</b>
Expenditures:	Interest Expenses	561.96	648.84	767.41	823.74	934.78	331.74
	Overhead Expenses(Employees)	178.59	234.59	272.23	307.53	360.98	96.34
	Other Operating expenses	277.38	329.70	341.56	329.01	398.32	102.23
	Loan loss provision	73.90	145.15	90.69	58.43	68.81	89.99
<b>Total Expenditure</b>		<b>1091.83</b>	<b>1358.28</b>	<b>1471.89</b>	<b>1518.71</b>	<b>1762.88</b>	<b>620.29</b>
	Profit before tax	580.60	739.64	789.14	1043.72	1173.27	180.74
	Provision for bonus	58.06	67.24	71.74	94.88	106.66	16.43
	Tax provision	214.27	214.94	225.58	312.97	313.77	49.29
	<b>Net profit after tax</b>	<b>308.28</b>	<b>457.46</b>	<b>491.82</b>	<b>635.87</b>	<b>752.83</b>	<b>115.02</b>

### Nepal Stock Exchange Ltd.

Singhdubar Plaza, Kathmandu

#### Some Key Figures of B/S And P/L Account with brief financial indicator of Kist Banking and Finance Ltd

		Audited 2061/62	Audited 2062/63	Audited 2063/64	Unaudited 2064/65
		2004/2005	2005/2006	2006/2007	2007/08
Brief Financial Indicators	Networth Per Share	114.03	114.60	109.53	108.09
	Earning Per Share	18.52	18.55	13.03	5.71
	Dividend Per share	0	0.00	10.00	0.00
	NPA %	0.00%	0.00%	0.00%	0.00%
	Earning Yield	16.24%	16.18%	11.90%	5.28%
	Price Earning Ratio (In case of old co)	7.13	8.25	42.98	174.70
	Market Price	132	153	560	998
	Current Markt Price ( July-17, 2008)	1011			
		Rs. In Million	Rs. In Million	Rs. In Million	Rs. In Million
Capital Structure	Authorised Capital	90.00	200.00	400.00	400.00
	Issued Capital	50.00	100.00	320.00	320.00
Liabilities	Issued and Paid up capital	50.00	89.00	200.00	800.00
	Reserve & Surplus	7.01	12.99	19.05	64.75
	Debenture	0.00	0.00	0.00	0.00
	Borrowings	0.02	93.53	262.15	248.60
	Deposits	450.13	656.51	1178.79	2745.75
	Others	24.82	44.17	80.44	163.32
<b>Total</b>		531.98	896.19	1,740.43	4,022.42
Assets	Cash & Bank Balance	12.46	20.54	115.28	964.36
	Investment	168.91	157.26	402.41	282.78
	Loan, advances & overdraft	337.53	651.58	1097.20	2488.29
	Fixed Assets	3.88	49.63	80.45	129.52
	Others	9.20	17.19	45.08	157.48
<b>Total</b>		531.98	896.19	1740.43	4022.42
Profit and Loss Account	Interest Income	47.06	79.19	136.04	235.85
	Other operating income	6.44	11.24	13.69	28.54

	Non operating income (Net)	1.17	0.00	4.38	11.21
	Total Income	54.68	90.43	154.12	275.61
Expenditures:	Interest Expenses	27.31	44.37	78.26	139.86
	Overhead Expenses(Employees)	2.90	4.42	7.28	15.14
	Operating expenses(office mgmt,)	6.47	6.03	17.65	34.32
	Loan loss provision	3.22	9.10	9.08	12.90
	Provision for bonus	1.34	2.41	3.80	6.67
Others	Total Expenditure	41.25	66.33	116.08	208.89
	Profit before tax	13.43	24.10	38.04	66.72
	Tax provision	4.17	7.59	11.98	21.02
	Net profit after tax (PAT)	9.26	16.51	26.06	45.70

### Nepal Stock Exchange Ltd.

Singhdubar Plaza, Kathmandu

#### Some Key Figures of B/S And P/L Account with brief financial indicator of Laxmi Bank Ltd

		Audited 2061/62	Audited 2062/63	Audited 2063/64	Audited 2064/65	Audited 2065/66
		2004/2005	2005/2006	2006/2007	2007/08	2008/09
<b>Brief Financial Indicators</b>	Networth Per Share	105.53	111.33	118.46	126.63	134.81
	Earning Per Share	4.34	5.80	8.99	13.14	17.29
	Dividend Per share	0.00	0.00	0.00	21.05	42.10
	ROA	0.69%	0.68%	0.76%	0.95%	1.23%
	Earning Yield (EPS / MPS)	1.52%	1.58%	1.30%	1.18%	1.06%
	Price Earning Ratio (In case of old co)	65.67	63.43	76.78	84.68	96.52
	Market Price	285	368	690	1113	1516
	ROE	4.11%	5.21%	7.59%	10.38%	14.02%
		Rs. In Million				
<b>Capital Structure</b>	Authorised Capital	1000.00	1000.00	1000.00	1000.00	1600.00
	Issued Capital	610.00	610.00	800.00	800.00	1090.00
<b>Liabilities</b>	Issued and Paid up capital	609.84	609.92	729.70	913.20	1090.00
	Reserve & Surplus	33.73	69.12	134.70	243.18	243.18
	Debenture	0.00	0.00	0.00	0.00	35.00
	Borrowings	18.69	29.76	0.00	450.00	450.00
	Deposits	3051.76	4444.35	7611.65	10917.23	16050.00
	Others	95.76	52.05	106.64	171.41	190.00
<b>Total</b>		<b>3,809.78</b>	<b>5,205.19</b>	<b>8,582.69</b>	<b>12,695.02</b>	<b>18,386.00</b>
<b>Assets</b>	Cash & Bank Balance	469.54	225.12	469.72	1238.16	1830.00
	Investment	468.44	569.31	1450.20	1492.78	2880.00
	Loan, advances & overdraft	2657.96	4202.36	6437.45	9680.95	13310.00
	Fixed Assets	124.38	125.17	140.02	204.40	240.00
	Others	89.44	83.22	85.30	78.74	100.00
<b>Total</b>		<b>3809.78</b>	<b>5205.19</b>	<b>8582.69</b>	<b>12695.02</b>	<b>18386.00</b>
<b>Profit and Loss Account</b>	Interest Income	214.13	319.25	470.49	711.01	1090.00
	Other operating income	21.45	34.25	51.77	93.06	150.00
	Non operating income (Net)	8.59	-3.83	-1.70	-3.82	-
	<b>Total Income</b>	<b>244.18</b>	<b>349.68</b>	<b>520.56</b>	<b>800.25</b>	<b>1240.00</b>
<b>Expenditures:</b>	Interest Expenses	118.44	190.59	280.28	421.87	710.00
	Overhead Expenses(Employees)	29.93	37.64	48.79	63.99	80.00

	Operating expenses(office mgmt)	37.12	50.12	63.55	83.85	111.12
	Loan loss provision	18.23	15.63	22.76	36.41	44.83
	<b>Total Expenditure</b>	<b>203.72</b>	<b>293.98</b>	<b>415.37</b>	<b>606.12</b>	<b>953.78</b>
	Profit before tax	40.46	55.70	105.19	194.12	299.46
	Provision for bonus	3.68	5.06	9.56	17.65	25.35
	Tax provision	10.31	15.25	30.05	56.44	71.05
	<b>Net profit after tax</b>	<b>26.46</b>	<b>35.39</b>	<b>65.58</b>	<b>120.03</b>	<b>189.01</b>