RISK AND RETURN ANALYSIS ON COMMON STOCK INVESTMENT OF COMMERCIAL BANKS

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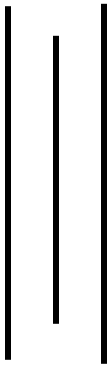

In partial fulfillment of the requirement for the Degree of
Master of Business Studies (M.B.S)

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RECOMMENDATION

This is to certify that the thesis

Submitted by:
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Entitled:

RISK AND RETURN ANALYSIS ON COMMON STOCK INVESTMENT OF COMMERCIAL BANKS

Has been prepared as approved by this department in the prescribed format of the Faculty of Management. This thesis is forwarded for examination.

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And found 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 worked reported in this thesis entitled **"RISK AND RETURN ANALYSIS ON COMMON STOCK INVESTMENT OF COMMERCIAL BANKS"** submitted to Padmakanya Multiple Campus, faculty of management, Tribhuvan University, is my original work done in the partial fulfillment of the requirement for the degree of Master of Business Studies (M.B.S) under the guidance and supervision of thesis supervisor Lecturer **Neera shrestha**. This work has not been published anywhere.

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I have tried to cover all the possible matters that I felt, important to sum up the *"Risk and Return analysis on Common Stock investment of Commercial Banks. (With Reference to EBL, KBL and NIBL)"*. I am hopeful that this task will be helpful to the students of business studies and to those who want to make further researchers under this topic.

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LIST OF ACRONYMS

EBL	:	Everest Bank Limited
NIBL	:	Nepal Investment Bank Limited
KBL	:	Kumari Bank Limited
NYSE	:	New York Stock Exchange
CBT	:	Chicago Board of Trade
AMEX	:	American Stock Exchange
BOD	:	Board of Director
AGM	:	Annual general Meeting
CAPM	:	Capital Assets pricing Model
CPI	:	Consumer price Index
CS	:	Common Stock
CV	:	Coefficient of Variation
JV	:	Joint Venture
MPS	:	Market Price Per share
NBL	:	Nepal Bank Ltd.
NEPSE	:	Nepal Stock Exchange Ltd.
NRB	:	Nepal Rastra Bank
OTC	:	Over the Counter
SD	:	Standard Deviation
SE	:	Stock Exchange
SEBON	:	Security Exchange Board of Nepal
SML	:	Security Market Line

Chapter- 1
Introduction

1.1 Background of the study

The source of finance is the most essential element for the establishment and operation of any profit and non-profit institution. Profit oriented institution usually obtain these sources through ownership capital, public capital, through the issue of shares and through financial intuitions such as banks in the form of credits, overdrafts etc. In every country outset the economic development is quite different but there is no debate about the significant role of banking sector for the economic development of countries they are considered as the main sources of finance.

Nepal is developing country and without the development of sound commercial banking it is impossible to join the rank of developed countries. Commercial banks play a vital role for the economic development and growth of the country. It helps in business expansions, promote the capital formation, and promote trade and industry, encouragement to the right type of industries, transfer of surplus found needy regions.

This study will occupy and important role in the development of stock market. In the market stock price can be effected by interested rate, inflation and strength of the dollar. The risk of a stock can be measured by its price volatility and its beta, banking sector is the most dynamic part of the economy, which collects unused funds and mobilizes it in needed sector. It is the heart of trade, commerce and industry. In Nepal foreign joint venture commercial bank perform better than other Nepalese commercial bank because of their higher management efficiency and capacity of proper risk management. Now days there are number of commercial banks growing in the country. However this study of risk and return will be basically focused on Everest bank (EBL), Nepal Investment bank (NIBL) and Kumari commercial banks (KBL) of Nepal. This study will also analyze the risk and return associated with investment among these banks on the basics of market price of stock and dividend.

Becoming a successful investor takes time and effort. The first and foremost act is settings and investment objective. Investment objective is to increase systematically the individuals' wealth. Investing requires that an individual invest money in asset that will generate the desired wealth when it is needed for retirement, children's education or other financial goals. The higher the level of desired wealth, the higher the return that must be received. Therefore an investor seeking higher returns must be willing to face higher levels of risk. Thus an investment objective is not static, rather it vary from person to person, from time to time and from one circumstance to another circumstance.

There are two categories of investment. Financial Investment and Real Investment.

Financial Investment: Investment in financial assets like common stock, bond etc. is called financial investment. Financial assets represent financial claim. It is an asset that is usually documented by some forms of legal representation. Financial assets are also called paper assets.

Real Investment: A real assets represent actual tangible assets that may be seen, felt, held or collected. Example real estate, gold etc. Investment in such tangible assets is called real investment.

When current income exceeds current consumption desired, people tend to save the excess. They can do any of several things with these saving. One possibility is to put the

money under a mattress or burry it in the ground (our ancestors used to do) until some future time when consumption desires exceeds current income. When they retrieve their savings from the mattress or ground, they have the same amount they saved because money does not multiply itself. The buried money even fails to preserve its value against the ongoing (prevailing) inflation. Therefore the saving can be employed in such a way that its value is preserved and some additional income can be generated at a future date.

Investment is the current commitment of the savings that compensates for the time involved, the expected rate of inflation and uncertainty involved. In other words an Investment is any vehicle into which funds can be placed with the expectation that will generate positive return and their value will be preserved or increased.

Let's see what the well-known scholars and experts have to say regarding the term investment.

According to F. Amling. "Investment may be defined as the purchase by an individual or institutional investor of a financial or real asset that produces a return proportional to the risk assumed over some future investment period."

According to Sharpe, Alexander & Bailey, "Investment, in its broadest sense means the sacrifice of current dollars for future dollars. Two different attributes are generally involved: time and risk. The sacrifice takes place in the present and is certain. The reward comes later, if at all, and the magnitude is generally uncertain."

An analysis of the above definitions makes us clear that 'investment' has the following attributes,

(i) Anticipation of return
(ii) Involvement of risk
(iii) Time dimension

An environment is the context on which firms operate and which impact on firms operation, Investment environment refers to the financial structure in which investors operate, it consists all kinds of marketable securities available for purchase of sale and how and where these securities are bought and sold. To state differently, investment environment refers to all the internal as well as external forces that have a bearing on the functioning of investment decisions.

Investment environment encompasses securities, security markets and intermediaries.

A security market (or financial market) can be defined as a mechanism bringing together buyers and sellers of financial assets in order to facilitate trading. Alternatively, security market is a place or places where securities are bought and sold, the facilities and people engaged in such transactions, the demand for and availability of securities to be traded, and the willingness of buyers and sellers to reach agreement on sales. Over-the-counter markets (OTC), the New York Stock Exchange (NYSE), the Chicago Board of Trade (CBT), the American Stock Exchange (AMEX) and Nepal Stock Exchange (NEPSE) are the example of security markets.

Function of Security (Financial Markets)

Security markets provide three economic functions.

Price Discovery

The Provision of Liquidity

The Minimization of Trading Costs or Transaction Costs

1.1.1 Nepal Stock Exchange:

Nepal Stock Exchange, in short NEPSE, is established under the company act, operating under Securities Exchange Act, 1983. The basic objective of NEPSE is to impart free marketability and liquidity to the government and corporate securities by facilitating transactions in its trading floor through member, market intermediaries, such as broker, market makers etc. NEPSE opened its trading floor on 13th January 1994.

Government of Nepal, Nepal Rastra Bank, Nepal Industrial Development Corporation and members are the shareholders of NEPSE.

NEPSE has its own Board of directors to direct, control, and monitor. The Board of Directors (BOD), which will govern NEPSE, constitutes of members representing different sectors as per Securities Act 2006. At Present, the BOD constitutes 2 Members including a chairman from Nepal Government, 2 Members from Nepal Rastra Bank, 1 from NIDC. Moreover, one member will be nominated by BOD as an expert in capital market. General Manager of NEPSE will serve as a director on the BOD.

The authorized capital of the exchange is RS 50 million. The issued capital is also Rs. 50 million. Nepal Government, NRB, NIDC, and the members subscribe Rs. 34.91 million. Nepal Government has contributed 58.7 percent, NRB 34.60 percent, NIDC 6.13 percent and members 0.60 percent on its capital.

NEPSE presently has 23 member brokers and 2 market makers, who operate on the trading floor as per the Securities Exchange Act, 1983, rules and bye-laws. Besides this, NEPSE has also granted membership to issue and sales manager securities trader (Dealer). Issue and sales manager works as manager to the issue and underwriter for public issue of securities whereas securities trader (Dealer) works as individual portfolio manager. At present there are 11 sales and issue manager and 2 dealers (Secondary market).NEPSE has 334 listed companies.

1.1.2 Trading system of Nepal Stock Exchange

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

Security Board Nepal (SEBON) is the apex body to regulate the Nepalese securities markets. It was established on 26th May 1993 under the provision of the securities Exchange Act, 1993. The objectives of the SEBON are to promote and protect the interest of investors by regulating the securities the securities markets. SEBON also regulate, monitor, direct, control and coordinate the entire capital market. SEBON works under the Ministry of Finance.

SEBON regulates both primary and secondary markets. To regulate the primary and secondary markets, there are various acts and laws. The rules and regulation of the transaction of securities provides the information to the potential investors of securities and encourage investment in securities markets.

The history of security market in Nepal start from Biratnager Jute Mill issued 8,000 ordinary shares of Rs. 100 each.

The first Securities Exchange Act was enacted in 1983 to regulate the trading of securities in Nepal. The Act restricted the exchange of unlisted securities and provided the role of stock exchange.
NEPSE is the sole organization for the operation of secondary market for listed companies. NEPSE is working under Security Board Nepal (SEBON).

1.2 Focus of study

In Financial and investment decision financial analysis plays the key mechanism for taking managerial as well as financing and investment decision. All investor invest their fund to get more return but because of lack of knowledge they get loss. Investors must consider all related factors before making and investment.
This study will be centrally focused on analyzing risk and return on common stock of some commercial banks of Nepal. The main purpose of study will be to analyze how one can get sustainable profit by minimizing the risk. As we already know that common stock is a comparatively risky asset than other security in the capital market. For this purpose market return, expected return, total risk, systematic risk and unsystematic risk will be analyzed to give an idea to get sustainable profit by diversifying the risk to avoid future loss of common stock investment.

1.3 Statement of the problem

The attitude and perception of investor play chief role in investment decision. They do not have idea about risk and return. Lack of information about financial assets, investor invest their wealth on the basics of guess and some time they have to bear heavy loss due to inadequate knowledge of stock investment. The policy of investment is not enough for motivating investor on stock market. Stock broker and financial institutions have no effective program to develop investor's knowledge. This is main problem faced by individual investor who are manipulated and exploited by the financial institution and their market intermediaries. Most of the Nepalese people are unfamiliar about stock investment and they invest in land, building, gold and other unproductive item. So it needs courage and faith to invest in common stock.
There are very few practices of analyzing this aspect in Nepalese context. Most of the investors seem to be investing their funds haphazardly without considering risk involved in their investment. Further study says that a stock prices in the market is guided by the intrinsic values which is calculated by add of companies result of financial performance such as dividend, required rate of return and growth rate. In an efficient market condition, stock prices are equal to the intrinsic values since the buyers and sellers are fully aware of facts and figures of the companies. Therefore, one can say that the market price and financial performance are positively correlated but condition here is totally different from that. Since the theories has depicted is not applicable in our context, where more of the investors don’t know to interpret the information and so they can’t make a rational decision regarding transaction of the stocks. Therefore, the sock prices in Nepal are

determined by more the other factors rather than the financial performance of the concerned companies.

In Nepal the major problem on the increment of the stock market efficiency is due to lack of knowledge source skill and technology. Some more research problems are as follows

1. What are the criteria for evaluation that the holding stock gives them favorable return?
2. In what extent the investor should compensated a certain degree of asset.
3. How do they know about the magnitude of the risk?
4. How one can make higher return assuming lower risk.

1.4 Objectives of the study

The overall objective of this study is to analyze risk and returns in common stock investment of selected commercial banks. The objectives of the study are as follows:

- To calculate risk and return of common stocks and their portfolio,
- To analyze comparative risk and return position of commercial banks.
- To compare the banks on the basics of market capitalization.
- To identify the correlation between return of commercial bank and market rate of return.
- To analyze market sensitivity of common stock of listed commercial banks.

1.5 Significance of the Study

In the context of Nepal, three lacks wider investment opportunities, which provides good rate of return. So there have been huge amount of unutilized saving funds with general public. The analysis of the risk and return is a significant in investment decision as well as managerial decision. It influences risk and return of the shareholders. Consequently the risk and return analysis influences the market price of the stock. Therefore they are investing their saving funds in common stock of public companies with the good expectation of higher capital gain in future. But, there seems very least consciousness about the real financial conditions of the companies and degree of risk involved in their investment.

This study will not only to fulfill TU course of MBS but also to provide more knowledge about the Nepal Stock Market developments and encourage investing in the stock market. My study will attempt to clarify concrete pictures of different aspect of risk and return which will be beneficial to the investors for taking right investment decision.

1.6 Limitation of the Study

The limitations of the study are:

- The main focus is given to the quantitative aspect as it is difficult the quantify the qualitative aspects.
- The accuracy of data's are depends upon the data collected and provided by the organization.
- This research concerns only risks and returns common stock of the listed companies.

- Time and financial constraints are also major limitation of the study.
- It covers only relevant data of selected commercial banks are taken into consideration, due to the time limiting factor.
- The data are secondary in nature.

1.7 ORGANIZATION OF THE STUDY

CHAPTER PLAN

Chapter-I

This chapter is the introduction chapter. It deals with the subject matter of the study including general background of the study, problem of the study, objectives of the study statement of problems, limitation of the study, organizing of the study.

Chapter-II

The second chapter is the review of literature. It is directed towards the review of conceptual frame work and review of major related study. It reviews the relevant previous studies made on risk and return analysis of common stock investment. It also includes books, journals, thesis, reports and related websites also.

Chapter-III

The third chapter is research methodology. Research methodology includes various tools and technique used in study for collection of data. It includes research design, population and sample, sources of data analytical tools etc.

Chapter-IV

The fourth chapter is data presentation and analysis. Analysis and presentation of data are done systematically in the form of table, charts, figure etc. Different statistical and analytical tools and technique are used in this study.

Chapter –V

The fifth chapter includes summary, conclusion and Recommendation. From the whole study the final conclusion is drawn and suggestion is given accordingly.

CHAPTER - II

REVIEW OF LITERATURE

2. Introduction

Review of literature deals with the theoretical aspect of the topic on risk and return on common stock investment in more detail and descriptive manner. This chapter reviews same basic academic courses books, journals and others related studies. The objective of this section is to know how various writers have described about risk and return. "Common stock represents ownership status in a firm". This study will focus on the common stock investment. It is may be defined as a share in the ownership of the firm. Common stockholder are real owner of business firm common stock are more risky than both preferred stock and bond but it has also benefit like voting right, right in participation in profit. And common stock may be purchase and sold immediately.

This chapter is divided into two sections. First section refers conceptual framework. The objective of this section is to know how different writer have described about risk and returns well as other related term of the study. The second section is related to review of study from different source.

2.1 Conceptual Framework

2.1.1Risk

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

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

Risk of an asset can be measured quantitatively using statistical tools such as; standard deviation and coefficient of variation that can be used to measure the variability of assets return. The relationship between risk and return is described by investor's perception about risk and their demand for compensation. No investor will like to invest in risk assets unless he is assured of adequate compensation for the acceptance of risk point of view, banking sector is the best for the investment in common stock.

(Mishra, 2002).

2.1.2RETURN

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

Return is the reward for uncertainty risk the concept has returned has different meaning to different investor. Return is the main attraction for investor to invest in risky securities as stock accepting a varying degree of risk tolerance. Return is the total gain or loss experienced on investment over a given period of time. After tax increase in the value of the initial investment is the investment return, the increase in value can come from two source; a direct cash payment to the investor or an increase in market value of the investment relative to the original purchase price. An investment single period rate of return denoted "r" is simply the total return an investor would receive during the investment period or holding period stated as a percentage of the investment' price as the start of the holding period.

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

Expected Return and Risk

Investors purchase financial assets such as shares of stock or bonds because they desire to increase their wealth, i.e. earn positive rate of return on their investment. The future is uncertain; investors do not know what rate of return their investments will realize.

In finance, we assume that individuals base their decisions on what they expect to happen and their assessment of how likely it is that actually occurs will be close to what they expected to happen, when evaluating potential investments in financial assets, these two dimensions of the decision making process is called expected return and risk.

There is a relationship between expected return and the expected level of associated risk. The nature of the relationship is that as the level of expected risk increases, the level of expected return also increased. The opposite is true as well. Lower levels of expected risk are associated with lower expected returns. This risk-risk return relationship is characterized as being a direct relationship or a positive relationship. This risk-return relationship is characterized as being a direct relationship or a positive.

Risk is an important element since investments with greater risk require a higher return than investments with lower risk. A risk-return trade off is related to the preference of the investor.

The Single-Period Rate of Return

Single period return may be defined as the change in value plus any cash distributions expressed as a percentage of the beginning of period investments value. An investor can obtain two kinds of income from an investment in a share of stock or a bond. They are as follows:

1. Income from price appreciation (or losses from price depreciation) sometimes capital gains (or losses). This quantity is denoted$P_t - p_{t-1}$.
2. Cash flow income from cash dividend or coupon interest payments represented by the convention $C_{t.}$

Sum of these two sources of income (or loss) equals the total return and can be express in percentage as follows:

$$Single\ period\ rate\ of\ return, r_t = \frac{(Price\ change) + Cash\ dividend}{Purchase\ price\ at\ start\ of\ the\ period}$$
$$= \frac{(P_t - P_{t-1}) + D_t}{P_{t-1}} = \frac{EP - BP + DPS}{BP}$$

The equation defines the single - period rate of return for a share of common stock:
Where,
$P_{t-1} = Starting\ stock\ price$
$P_t = Ending\ stock\ price$
$D_t = Cash\ dividend\ for\ time\ t.$

Expected Rate of Return, E(r)

The expected rate of return for any asset is the weighted average rate of return using probability of each rate of return as the weight. The expected rate of return is calculated by summing the products of the rates of return and their respective probabilities.

$$Expected\ value, E(r) = \sum_{j=1}^{n} r_j P_j = r_1 p_1 + r_2 p_2 \ldots + r_n p_n$$

$r_j = Rate\ of\ return\ on\ j^{th}\ outcome\ or\ event.$
$P_j = Probability\ of\ occurrence\ of\ j^{th}\ outcome\ or\ event.$

When historical returns are used the following formula is used to calculate an average return;

$$Expected\ value, E(r) = \frac{\sum_{t=1}^{n} r_t}{n}$$

Where,
$E(r)$ is the average or mean return and n is the number or observed returns.

2.1.3 COMMON STOCK

Common stock is an ownership security. Common stockholders will get the return from common stock. People typically buy common stock expecting to earn dividends plus a capital gain when they sell their shares at the end of some holding period. The capital gain may or may not be realized, but most people expect a gain or else they would not buy stocks. Total return consists of two elements namely: Dividend yield and Capital gains/losses yield. The expected dividend yield on a stock during the coming year is equal to the expected dividend,D_1divided by the current stock price, $P_0 i.e. \frac{D_1}{P_0}$. The expected capital gains/losses yield is equal to price changes divided by the current market price i.e. $\frac{(P_1 - P_0)}{P_0}$.

The value of the stock today is calculated as the present value of an infinite stream of dividends. For any investor, cash flows consist of dividends plus the expected future sales price of the stock. This sales price, however, depends on dividends expected by future investors. Therefore the value of stock is defined as follows:

$$P_0 = \frac{D_1}{(1 + k_s)^1} + \frac{D_2}{(1 + k_s)^2} + \cdots + \frac{D_\infty}{(1 + k_s)^\infty}$$

Where,
$P_0 = Intrinsic\ value\ of\ common\ stock$
$k_s = Required\ return\ on\ common\ stock$

$D_1 = Expected\ dividend\ per\ share\ in\ period\ t$

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

The firm's common shareholders are right to receive dividends, if and when they are declared by board of deserters. Dividends are the profits (earnings) of share, which are distributed among all the outstanding shares of common stock. The common stockholder also have the right to elect the members of the board of director, the right to inspect the firm's books and the right to obtain a list of the names and address of other shareholders.
Common stock also referred to as common or ordinary shares are the most usual and commonly held form of stock in a company. Common stock represents ownership in a company. The holders of common stocks, called shareholders or stockholders, are the legal owners of a company. The common stocks are the permanent and vital source of capital since they do not have a maturity date. The capital contributed by shareholders by purchasing common stocks, are entitled to dividends. The Company's Board of Directors fixes the amount or rate of dividend. The common stock is, therefore, known as the variable income security. Being the owner of the company the stockholders bear the risk of ownership, they are entitled to dividends after the claims of others have been satisfied. Similarly, when the company is liquidated, the owners of common stock are the last in the priority. They can exercise their claim on assets after the claims of other suppliers of capital have been met. (Pandey, 1995-1681)
Common stock holders of a corporation are its residual owners, their claim to income and assets comes after creditors and preferred stockholders have been paid full. As a result, stockholder return on investment is less certain than the return to lender or to preferred stockholders. On the other hand; the share of a common stock can be authorized either with or without par value. The par value of a stock is merely a stated figure in the corporate charter and is of little economic significance. (James C. Van Horne, 1997, p-560)
A corporation exists only when it has been granted a charter, or certificate of incorporation, by a state. This document specifies a right and obligation of stockholders. If may be amended with the approval of the stockholders, perhaps by a majority or a two – third vote , where each share of stock generally entitles its owner to one vote, Both the initial terms of charter and term of any amendment must also be approved by the state in which the corporation in chartered. (William F. Sharpe, Gordon J. Alexander and Jaffery V. Bailey, 1999, p-502)
The main features of common stocks are discussed below;

(i) Stock Certificate

A single certificate has typically represented the ownership of a firm's with a number of shares held by a particular investor noted on it. Such a stock certificate is

usually registered, with the name, address and the holding of the investor included on the corporation books.

(ii) Ownership Right

Common stockholders are owner of the firm; they often have voting right that permit them to select firm's director and to vote on special issue. In contrast, debt holders may receive voting privilege only when the firm has violated the condition of a term loan agreement or bond indenture.

(iii) Claims on Income and Assets

The claims of stockholders receive claims on both income and assets that are secondary to the claims of creditors.

(A) Claims on Income

The claims of stockholders on income cannot be paid until the claims of all creditors have been satisfied. These claims include both interest and scheduled principal payments. Once these claims have been satisfied, the firm's board of directors can decide whether to distribute dividend to the owners. The firm's ability to pay dividends may be limited by legal, contractual and or internal constraints.

(B) Claims on Assets

The claims of stockholders on the firm's assets are secondary to the claims of creditors. When the firm becomes bankrupt, assets are sold and the proceeds are distributed in this order;

A. To employees and customers.
B. To the government.
C. To the secured creditors.
D. To the unsecured creditors.
E. To the stockholders.

(iv) **Maturity**

Common stock is a permanent form of financing. It does not mature and therefore repayment of the initial amount paid in it not required. Since common stock does not mature and will be liquidated only during bankruptcy proceedings. The owner must recognize that although a ready market may exist for the firm's shares, the price that

can be realized may fluctuates. This potential fluctuation of the market price of equity makes the overall return to a firm overall return to a firm's owner even more risky.

(V) Tax treatment

Interest payments to the date holders are treated as tax – deductible expenses on the firms income statement, whereas divided payments to the common stockholders are non tax-deductible. The Tax-deductibility of interest primarily accounts for the fact that the explicit cost of debt is generally less than the explicit cost of equity.

Thus stockholders are the last to receive any distribution of assets during bankruptcy proceedings.

Common stockholders are true owner of business firm, common stockholders are residual owner in the sense they received what is left after all other claims on the firm's income have been satisfied. The main positive consideration involve in equity ownership are income and control.

Since the common stockholders are real owner of business firm thus they have legal control of the firm. They have right to vote of select the member of the board of directors. Another consideration involved in equity owner-ship is risk. On liquidation, holders of common stock are last in the priority of claims.

Right of Holders of common stock

The rights of holders of common stock in a business firm are established by the law of the state in which the corporation is chartered and by the term of the charter granted by the state. The rights of common stock holder are as follows:

A) Collective right of common stock holders:-

1. The right to amend the charter with the approval of the appropriate officials in the state of in-corporation.
2. The right to adopt and amend by laws.
3. The right to elect the directors of the corporation.
4. The right to authorize the sales of fixed assets.
5. The right to enter into mergers.
6. The right to change the amount of authorized common stock and
7. The right to issue preferred stock, debenture, bond and other securities

B. Specific right of common stock holders

1. The right to vote in the manner prescribed by the corporate charter,
2. The right to sell their stock certificates,
3. The right to inspect the corporate book, and
4. The right to share residual assets of the corporation on dissolution.

Nate of Voting Right

The holder of one share of common stock right cost one vote at the annual meeting of the stock holders or at such special meeting.

Cumulative Voting

Cumulative voting permits multiple votes for a single director. For example, Suppose 10 directors are to be elected. The owner of 100 shares, cumulatively the

stockholders has 1000 votes. Under cumulatively voting system and the stock holder can accumulated the vote and cost all of them the vote and cost all of them for one director, instead of 100 each for ten directors. Cumulative voting is designed to elect at least one director from the side of minority group.

Formula for cumulative voting

$$req = \frac{des.(N)}{\# + 1} + 1$$

Where,

$req, N = Number\ of\ share\ required\ to\ elect\ a\ desired\ number\ of\ directors$

des

$= Numbers\ of\ directors\ stockholders\ desires\ to\ elect\ and\ entitled\ to\ be\ voted$

$\# = Total\ number\ of\ director\ to\ be\ elected$

Preemptive Right

The Preemptive right gives common stock holder the first option to purchase additional issues of common stock. Preemptive right allows stockholders to maintain their proportionate ownership in the firm when new issue is made. Preemptive rights permit existing share holders to maintain their voting control and protect against the dilution of their ownership and earnings. For example, assume that 10,000 share of common stock, each with a price if Rs. 50 are outstanding and the total market value Rs. 500,000. An additional 10,000 share are sold at Rs. 40 a share, a total of Rs. 400,000. Thus the total market value is Rs. 900,000. When total markets value is divided by the total number of share Rs. 45 per share is obtained. Thus, preemptive right gives the stock holder first option to purchase new share.

Value of right

A) Value of right with right on

$$P_r = \frac{P_{10} - S_0}{N + 1}$$

where,

$P_r = Theoretical\ value\ of\ right\ when\ stock\ is\ selling\ with\ rights\ on$

$P_{10} = Market\ value\ of\ stock\ with\ right\ on$

$S_0 = Subscription\ price\ of\ the\ stock$

$N = Number\ of\ rights\ needed\ to\ purchase\ one\ share\ of\ stock$

B) Value of right ex-right

$$P_r = \frac{Pex - Sp}{N}$$

Where,

$P_r = Theoretical\ value\ of\ right\ when\ stock\ is\ selling\ with\ ex - rights$

$Pex = Market\ value\ of\ stock\ with\ ex - right$

$Pex = (Pro - P_r)$

$Sp = Subscription\ price\ of\ the\ stock$

$N = Number\ of\ right's\ needed\ to\ purchase\ one\ share\ of\ stock$

$$= \frac{Old\ share}{New\ shares}$$

2.1.4 Portfolio Analysis

A portfolio is defined as a combination of assets. Portfolio theory deals with the section of optimal portfolios that is a portfolio that provides the highest possible return for any specified degree of risk or the lowest possible risk for any specified rate of return. An investor wants to minimize risk of investment and maximize return but it is not possible through investment in single assets. She/he needs to invest in two or more securities. This collection of securities is called portfolio. Same way one should minimize his risk by diversifying investment. Portfolio analysis considers the determination of future risk and return in holding various blends of securities. The objective of portfolio analysis is to develop a portfolio that has the maximum return at whatever level of risk the investor deems appropriate. Diversification of portfolio helps to minimize risk and different diversification techniques have been developed for reducing portfolio risk.

(I) Diversification and Portfolio Analysis

Diversification

An investor's objective is to make maximum return from his/her fund at the lowest risk. By investing in a single asset, investor cannot achieve his/her objective. But it is only possible through portfolio. A portfolio is a combination of securities. By the help of portfolio, risk can be diversified. In this context, it can be cleared through a proverb "do not put all the eggs in one basket". It means that one can lose all the eggs if some unlikely event occurs. So, we can say that risk cannot be diversified by investing in a single asset. Obviously, risk can be diversified by forming portfolio. Thus, the objective of the portfolio analysis is to develop a portfolio that has the maximum return at whatever level of risk the investor deems appropriate. Combination of securities can be made in many ways.

Forms of Diversification

Portfolio approaches usually assume one of the following forms of diversification.

Simple Diversification (Native or Random Diversification)

Simple diversification can be defined as "not putting all the eggs in one basket or spreading the risks". Simple diversification is the random selection of securities that are to be added to a portfolio. Simple diversification reduces a portfolio a total diversifiable risk to zero and only the undiversifiable risk remains. It was found in many research studies that 10-15 securities in a portfolio would bring adequate returns. So this approach assumes that an investor can expect a reasonable return for a given level of risk.

Diversification across Industries

Diversification across industries means, securities are selected from different industries rather than from a single industry to form a portfolio. In the context of Nepalese financial market, Nepal Stock Exchange (NEPSE) has categorized the listed securities into eight sectors that are commercial Banks, Development Banks, Finance Companies, Insurance Companies, Manufacturing and Processing Companies, Trading companies, Hotel Companies and others. Every sector is known as an industry. Under diversification across industries, securities are taken from many different industries to form portfolio. Some investment, counselors advocate selecting securities from different industries to achieve better diversification. It is certainly better to follow this advice than to select all the securities in a portfolio from one industry. But, empirical research has shown that

diversifying across industries is not much better than simply selecting securities randomly.

Superfluous Diversification (Over Diversification)

Superfluous diversification is the extended from of simple diversification, 10-15 securities are selected for a portfolio while superfluous diversification include more than that of simple diversification. But no further risk reduces from this diversification. It refers to the investors spreading himself in many investments on his portfolio. The investor finds it impossible to manage the assets on his portfolio because the management of large number of assets requires knowledge of the liquidity of each investment, return; the tax liability and this will become impossible without specialized knowledge. He also finds it both difficult and expensive to look after a large number of investments. If he plans to switch over investments by often selling and buying assets expecting a high rate of return, he involves himself in high transaction costs and more money will be spent in managing superfluous diversification. It will be very difficult for him to measure the return on each of his investments. All those problems may result in inadequate return.

Simple Diversification across Quality Rating Categories

The securities available in the market are rated on the basis of default risk by rating agencies. Under this technique the portfolio is formed from same quality rating assets. From the various analyses, it is found that the highest quality portfolio of randomly diversified stock was able to achieve lower levels of risk than the simply diversified portfolios of lower quality stocks.

Markowitz Diversification

Markowitz diversification is the combining of assets which are less than perfectly positively correlated in order to reduce portfolio risk. It can sometimes reduce risk below the undiversifiable level. Markowitz diversification is more analytical than simple diversification and considers assets' correlations (or covariance's). The lower the correlation between assets, the more that Markowitz diversification will be able to reduce the portfolio's risk.

(II) Portfolio's Expected Return, E (Rp)

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

$$E(r_p) = \sum_{i=1}^{n} W_i E(i)$$
$$= W_1 E(r_1) + R_2 E(r_2) + \cdots + R_n E(r_n)$$

Where,

$E(r_p) = Expected\ rate\ of\ return\ of\ portfolio$

W_i

$= The\ fraction\ of\ the\ total\ value\ of\ the\ portfolio\ invested\ in\ the\ i^{th}\ asset\ or\ stock$

$E_{(r_i)} = the\ expected\ return\ from\ the\ i^{th}\ assets\ or\ stock$

Portfolio Risk

Portfolio risk is measured by a statistical tool standard deviation and variance. It is a function of the proportions invested in the components. The riskiness of the components

and correlation of returns on the components securities. This risk is computed by using the following equations:

$Var\ (r_p) or\ \sigma_{p^2} = \sum_{i=1}^{n} \sum_{j=1}^{n} W_i W_j\, Cov_{ij}\ or\ \sum_{i=1}^{n} \sum_{j=1}^{n} W_i W_j P_{ij}\, \sigma_i \sigma_j$

$$\sigma_p = \sqrt{\sum_{i=1}^{n} \sum_{j=1}^{n} W_i W_j P_{ij}\, Cov_{ij}}$$

Where,

$\sigma_p = Standard\ deviation\ of\ portfolio's\ return$

$W_i = Proportion\ of\ investment\ in\ asset\ i$

$W_j = Proportion\ of\ investment\ in\ asset\ j$

$Cov_{ij} = Covariance\ of\ the\ return\ between\ asset\ i\ and\ asset\ j$

$P_{ij} = Correlation\ co - efficient\ between\ asset\ i\ and\ asset\ j$

Alternatively,

The above equation can be simplified as follows:

(a) If portfolio is formed by two securities A and B

$\sigma_p = \sqrt{W_{A^2} \sigma_{a^2} + W_{B^2} \sigma_{B^2} + 2 W_A W_B P_{AB} \sigma_A \sigma_B}$

Covariance

Covariance is a measure of the degree in which two variables "move together" over time. A co-variance between the rate of return for the assets that is positive indicates that the rate of return tend to move in the same direction at the same time. If covariance is negative the rate of return of the assets tend to move in opposite direction and zero value of covariance means there is no relationship between two assets at all. The covariance between assets return can be calculated by using the following equation:

(a) $Cov_{AB} = \sum_{j=1}^{n} [r_A - E(r_A)][r_B - E(r_B) P_j$

(b) If the probability is not given, (or if historical or past information is given)

$$Cov_{AB} = \frac{1}{n} \sum_{t=1}^{n} [r_A - \bar{r}_A][r_B - \bar{r}_B]$$

Where,

$Cov_{AB} = covariance\ between\ return\ on\ assets\ A\ and\ B$

$n = no.of\ observations$

$p = probability$

$E(r) = expected\ rate\ of\ return$

$\overline{r} = mean\ return$

Minimum Risk Portfolio

It is the portfolio with the lowest level of risk in the efficient frontier. It is also called risk minimizing risk minimizing weight or optimal weight. In two-stock portfolio, the optimal weight to invest in stock I and j are calculated as follows:

$$W_i = \frac{\sigma_{i^2} - p_{ij} \times \sigma_i \times \sigma_j}{\sigma_{i^2} + \sigma_{j^2} - 2 \times p_{ij} \times \sigma_i \times \sigma_j}$$

Where,

$w_i = Optimal\ weight\ to\ invest\ in\ stock\ i$

$w_j = Optimal\ weight\ to\ invest\ in\ stock\ j$

Capital Market Line

When we introduce a risk-free asset into Markowitz portfolio analysis, given the above assumptions, the efficient frontier is changed from a curve to a straight line. This new efficient frontier is called a capital market line (CML).

The CML starts with the risk-free asset r_f and is tangent to the risky portfolio M on the Markowitz efficient frontier. Portfolio M is the only risky portfolio.

To the left of M, investors on the CML will hold both the risk-free asset and the risky portfolio. Since these investors are holding part of their investment in $r_{f,}$ they are lending at the rate of r_f. All portfolios on the line betweenr_f and M represent lending portfolios.

To the right of M, investors are borrowing at r_f and investing more in M they are utilizing leverage. Portfolio M is called the market portfolio and ontains all assets. All portfolios on the line between M and L represent borrowing portfolio.

r_f ML represents the risk return trade off for efficient portfolios. It shows the capital market equilibrium relationship between risk and return for efficient portfolios consisting of various combinations of the risk free asset and the market portfolio. If investors are to invest in risky securities they must receive a risk premium $[E(r_M) - r_1]$ to compensate for the added risk. Risk premium is an excess return over the risk free rate, expected for incurring the risk associated with the market portfolio, σ_M. Therefore,

$$Slope\ of\ CML = \frac{[E(r_M) - r_f]}{\sigma_M}$$

The slope of the CML is called the market price of risk and is reward per unit of risk. Because the CML shows the tradeoff between return and risk for efficient portfolios, the unit of risk must be the portfolio standard deviation. Therefore, the equation for the CML is:

$$E(r_p) = r_f + \frac{[E(r_M) - r_f]}{\sigma_M} \times \sigma_p$$

Where,

$E(r_p) = the\ required\ rate\ of\ return\ on\ any\ efficient\ portfolio\ on\ the\ CML$

$r_f = the\ risk\ free\ rate\ of\ return$

$E(r_M) = the\ expected\ rate\ of\ return\ on\ the\ market\ portfolio$

$\sigma_M = the\ standard\ deviation\ of\ return\ on\ the\ market\ portfolio$

$\sigma_p = the\ standard\ deviation\ of\ returns\ on\ the\ efficient\ portfolio.$

2.1.5 Capital Assets Pricing Model (CAPM) Approach

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

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

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

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

The capital assets pricing model specifies the relationship between risk and required rates of return on assets when they are held in well diversified

Basic Assumptions of the CAPM

- All investors focus on single holding period, and they seek to maximize the expected utility of their wealthy by choosing among alternative portfolios on the basis of each portfolio's expected return and standard deviation.
- All investors can borrow and lend an unlimited amount at a given risk free rate of interest, k_{RF}, and there are no restrictions on short sales of any asset.
- All investors have identical estimates of the expected returns, variances, and co variances among all assets; that is, investors have homogeneous expectations.
- All assets are perfectly divisible and perfectly liquid.
- There are no transactions costs
- There are no taxes.
- All investors are price takers (that is, all investors assume that their own buying and selling activity will not affect stock prices.)
- The quantities of all assets are given and fixed.

The relevant risk for an individual asset is systematic risk (or market-related risk) because non-market risk can be eliminated by diversification. The relationship between an asset's return and its systematic risk can be expressed by the CAPM which is also called the security market line (SML). The equation for the CAPM is

$$E(r_i) = r_f + [E(r_m) - r_f]\beta_i$$

Where,

$E(r_i)$ Is the expected return for an asset, R is the risk-free rate (usually assumed to be a short-term T-bill rate), $E(r_m)$ equals the expected market return (usually assumed to be the S&P 500), and β_i denotes the asset's beta.

The CAPM is an equilibrium model for measuring the risk-return tradeoff for all assets including both inefficient and efficient portfolios.

2.2 Review from related study

Ojha,K.P (2000), entitled "*Financial Performance and Common Stock Pricing*" concluded that: An investment in common stock of a corporate from neither neither

ensures annual return nor ensure the return of principle. Therefore, investment in common stock is very sensitive on the ground of the risk. Dividend to common stockholders is paid only of the firm marker on operating profit after tax and performance dividend. The company can return the principal in case of its liquidation only to extent of the residual assets after satisfying to all of its creditors and preferential shareholders. Besides this, investor have to sacrifice the return on their investment in common stock, which could be earned investing fund elsewhere in the next best opportunity.

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

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

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

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

- To see the portfolio risk and return of selected finance companies.
- To analyze the relation among the returns of selected finance companies.

The major findings of the study are;

a. Among the selected finance companies, only Citizen Investment Trust (CIT) and Ace Finance Company Limited have favorable expected rate of return, which are 20.70% and 11.35% respectively. Citizen Investment Trust has larger expected return i.e. 20.70% and National Finance Company has lower expected rate of return, i.e. 0.101. The average expected return of finance companies is 19.05%. This is considered as the average return.
b. All the investment involved has certain amount of risk (i.e. standard deviation). The investment on Citizen Investment Trust involves the highest risk, i.e. 86.51%,

whereas Kathmandu Finance Company has the lower risk of 22.34%. The average risk on finance company investment is 43.56. Most of the finance company has the risk less than the average. The average risk on finance company investment is 43.56. Most of the finance company has the risk less than the average.

c. The highest value of CV is 1.053 for Ace Finance Company Ltd. Whereas the lowest value of CV is for Peoples' Finance Ltd., i.e. -7.71 which indicated that the Re 1 returns from finance companies involve less risk than 1. The average CV for finance companies is -1.27, which indicates that there is low risk associated with investment on stock of finance company.
d. The highest value of β, i.e. degree of systematic risk for finance companies is 1.15 for Samjhana Finance Company Ltd. Whereas lower beta for Peoples Finance Limited i.e., 0.13. The average value of β is 0.5450. Majority of finance companies have the value of beta less than 1. The value of beta suggests that the majority of finance companies stock volatility is less than the market volatility and they are defensive stock.

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

Basnet.A (2009) has conducted a study on, risk and return analysis on common stock of commercial bank. According to his study the major findings are followings:

1. Among 25 commercial banks, 18 commercial banks are listed in NEPSE in 2009 A.D. Among listed commercial banks, four commercial banks i.e. NIBL, SCNBL NABIL and BOKL are taken into consideration. The Expected return of four commercial banks is 50.54%, 63.73%, 71% and 77.66% respectively.
2. On the basis of standard deviation of NIBL, SCBNL, NABIL and BOKL is 56.40%, 50.40%, 77.13% and 80.62% respectively. Standard deviation of common stock of BOKL is maximum by 80.62%.whatever the standard deviation of common stock of SCBNL is minimum by 50.40%.
3. On the basis of coefficient of variation, the coefficient of variation of NIBL, SCNBL, NABIL and BOKL is 1.12, 0.79, 1.09 and 1.04 respectively. The

coefficient of variation of NIBL is maximum by 1.12 units which are risky too, and the C.V. of SCBNL is minimum by 0.79.

4. Sector wise NEPSE index is an increasing trend from 2004/05 to 2007/08. So that considering Market risk and return, expected return of overall market from fiscal year 2001/02 to 2007/08 is 30% and the risk associated with expected return is 29.66% and the coefficient of variation is 0.99 units. Overall Market is increasing slightly in this period so risk is less than expected return.
5. In Hypothesis-I, the calculated value of 't' is 0.1521 is less than the all tabulated value at 10%,5%,2%and 1% level of significance i.e. 1.812, 2.278, 2.764 and 3.169 respectively. It is not significant and therefore H_0 is accepted.
6. The beta coefficient of NIBL, SCBNL, NABIL and BOKL is 1.06, 1.54, 2.23 and 0.819 respectively. It proves that the common stock of NABIL is most aggressive and the beta coefficient of common stock of BOKL is minimum by 0.819 and it is better to invest for investor because the beta coefficient indicates systematic risk of the asset...
7. In hypothesis-II the calculated value t = 1.90 calculated value of 't' is less than all tabulated value at 10%, 5%, 2% and 1% level of significance and null hypothesis is accepted .
8. Considering market capitalization of four commercial banks the market capitalization of NIBL, SCBNL, NABIL and BOKL is 21.55%, 34.80%, 33.41% & 10.24% respectively in the year 2007/08. The market capitalization of SCBNL is maximum by 34.80% and the market capitalization of BOKL is minimum by 10.24%.
9. On the basis of required rate of return and expected rate of return the study shows RRR of NIBL, SCBNL, NABIL and BOKL is 0.3147, 0.4324, 0.6015 & 0.2556 respectively. The ERR of NIBL, SCBNL, NABIL & BOKL is 0.5054, 0.6373, 0.71 & 0.7766 respectively. Analysis of RRR and ERR shows that the common stock of all four banks are under priced.
10. The average expected return of common stock of four sample commercial banks is 65.83% and the risk associated with return is 48.58%. On the basis of Portfolio

analysis, four assets portfolio is constructed and the portfolio return is similar with average expected return i.e. 65.83% and the portfolio risk is 45.34%.

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

The finding of this study may be important for those who are directly or indirectly concerned with the common stock investment. Thus the following findings can be outlined;

Yadav.P (2010) has conducted a study on analysis of risk and return on common stock of commercial bank. The main objective of the study is to evaluate the risk and return associated with common stock investment of selected banks. The major findings of his study are follows:

1. Without proper analysis of individual securities of industries and overall market, it is almost impossible to be at the stock market. General knowledge about political economical and technological trend is advantageous.
2. The higher risk of common stock may have greater possible return.
3. On the basis of market capitalization, the commercial banking sector is doming all other sectors that mean the banking sector has good performance than others.
4. Others sector has the highest expected return 89.77%, this is due to the inclusive of the new project i.e. hydropower, the finance sector is in the second position i.e.55.63% and the commercial banks expected return is 39.27%. As so, the expected return of manufacturing and processing industry has least among all the sectors.
5. The four commercial bank stocks are under priced and one bank stock is overpriced among the five listed commercial banks i.e. investors need to buy these stocks. The NABIL bank stock is overpriced. So, the stockholder wants to sell these securities.
6. By using Sharpe single index model for optimal portfolio, we can use our fund to 3% in BOKL's securities, 1.86% in NIBL's securities, 34.87% in HBL' securities, 55.58% in SCBL's securities and 4.64% in NABIL's securities.
7. The first hypothesis is based on the taste of average return of common stocks of listed companies are equal to the market return or not and it was found that if the level of

significance is 5%, Null hypothesis is accepted. i.e. Average returns of listed commercial banks are equal to market return,

8. The second hypothesis is based on the test the significance difference in average return of common stock of listed commercial banks and overall market portfolio and it was found that the Null hypothesis is accepted at 5% of level of significance i.e. there is no significance difference in average return of common stock of listed commercial banks and overall market portfolio.

According to Silwal.B (2009), the major findings of the study are as follows:

- EBL's common stock is yielding the highest rate of return with 68.10% whereas it the lowest 3.20% in case of NIBL. The other banks rates of return are 52.40%, 56.53% and 35.78% of NABIL, SCBL and HBL respectively.
- The selected bank's average rate of return is 43.20%, the commercial bank's which have more than the average return are NIBL and HBL. The related rates of return are 33.57%, 3.20%and 35.78% respectively.
- SCBL's common stock consists of the higher (i.e. 56.23%) risk, which is the riskiest whereas EBL stock is the least risky as is consist of only 30.60% risk.
- With the coefficient of variation analysis it is clearly depicted that there is the highest percentage of per unit risk for NIBL (ie.16.175) whereas it is the lowest for EBL (i.e. 0.4493).
- NABIL's stock is more aggressive to the market changes as revaluated by the highest beta coefficient of 3.157 but SCBL, HBL, NIBL and EBL which has beta less than 1 (i.e. 0.0.5417, 0.3973, 0.3037 and 0.1645). They are defensive as they make less response to the market change.
- The first hypothesis is based on the test of significance of single means (i.e. banks return and market return). Over the study period it was found that if the level of significance is 5% null hypothesis is accepted (i.e. average return of commercial banks is equal to market return).
- The second hypothesis is based on the test of significance of different means (i.e. different commercial bank's return). Thus, over the study period it was found that the null hypothesis is accepted as 5% level of significance which means there is no significant difference between the average return of common stock of listed commercial banks.

Optimum portfolio construction suggests investing in EBL.
According to Shrestha.R (2010), concluded her study on analysis of risk and return on common stock of commercial banks are as followings:

- Nepal stock market is in an emerging state. But its development is accelerating rapidly. The Political changes in 1990 have affected the openings and liberalization in national economy. But due to the lack of information and proper knowledge, Nepalese individual investors cannot analyze the security market properly.

- Return is the change in value plus any cash distribution expressed as a percentage of the initial value. Expected return of common stock of BOKL is maximum due to the effect of unrealistic annual return. Similarly, expected return of the common stock of EBL is found minimum.

- The risk of assets can be measured quantitatively using statistical tools as standard deviation and coefficient of variation that can be used to measure the variability of assets return. Standard deviation is only the way to measure systematic risk, which is not defined by the market and is measured by beta coefficient. On the basis of standard deviation, common stock of BOKL is most risky, since it has high S.D. of 1.1463 and common stock of EBL is less risky because of its lowest S.D. of 0.4580.

- Coefficient of variation is the best way to make investment decision in common stock, which measures the risk per unit of return. NIBL has highest C.V. of 1.1903 and EBL has lowest coefficient of variation of 0.7452. So, considering this fact the best decision would be to invest in the share of EBL.

- Beta Coefficient in this section of market sensitivity analysis measures the index of systematic risk. It may be used for ranking the systematic risk of different assets. By observing individual shares beta coefficient, most of the shares appears to be aggressive as beta coefficient are greater than one. High Beta stock is more volatile than the market as a whole. However beta of the stock of all the five banks are aggressive i.e. more risky than average stock.

- Coefficient of determination is the portion of systematic risk of assets. Coefficient of determination of EBL is highest (i.e.152.3%) where as coefficient of determination of BOKL is lowest (i.e.56.63%). Alternatively, lower the coefficient of determination means higher the portion of unsystematic risk. That means BOKL common stock risk is highly diversifiable risk while EBL common stock risk is highly undiversifiable and higher unsystematic risk can be avoided through diversification. From the above analysis investors are recommended to buy those stocks which have higher expected return with lower portion of undiversifiable risk to make portfolio investment.

- According to security market line (CAPM) analysis none of share price is in equilibrium. The shares with higher expected return than the required rate of

return will be striving towards equilibrium. Therefore, the prices of shares of all sampled banks are under priced.

- All the sampled banks have positive correlation with market. The positive correlation reveals that the return on bank goes up if the markets return goes up and vice-versa. In other words the shares move in the direction the market moves.

To compare with market portfolio risk return, hypothesis is set. This hypothesis is based on t-test. The conclusion is that there is no significant difference between the average return of sample banks common stock and overall market return.
According to thesis of Lama.R, (2010)

- The return is the income received on a stock investment, which is usually expressed in percentage. Expected return on common stock of EBL is maximum (52.97%). Similarly expected return of C.S. of HBL is (29.52%) and SCBNL is 37.95%.
- Risk is the variability of returns which is measured in terms of standard deviation. On the basis of S.D., common stock of SCBNL is most risky since it has high S.D. i.e. 0.6167 C.S of HBL is least because of its lowest S.D. of 0.4671, on the other hand we know that C.V. is more rational basis of investment decision, which measures the risk per unit of return. On the basis of C.V., C.S. of EBL is best among all other banks. EBL has 1.0392 unit of risk per 1 unit of return. But C.S. of SCBNL has the highest risk per unit of return.
- Beta coefficient explains the sensitivity or volatility of the stock with market. Higher the beta higher the volatility in the contest, common stock of HBL is most volatile I.e. $\beta = 1.1251$ and common stock of EBL is least volatile i.e. $\beta = 0.3230$. The bank's stock, having the beta less than beta coefficient of market i.e. defensive stock. We find SCBNL and HBL have aggressive type of common stock. Among them most aggressive seems to be HBL with highest beta and least aggressive is EBL with lowest beta among three bank's common stock.
- SCBNL is in the highest position (Rs. 32,001.08 in million) and EBL is in lowest position (Rs. 14525.78 in million) according to their interbank market capitalization comparison.
- One of the main significance of beta is in Capital Asset Pricing Model (CAPM). Comparison between expected rate of return and required rate of return identity whether the stock is overpriced or under price. If the required rate of return is greater than the expected rate of return the stock is overpriced and vice versa. This

study shows that all the stocks of commercial banks, which are analyzed, are under priced. That means their stock value will increase in a near future. All the stocks are in demand. So, investor can buy the common stock of any bank.

- The portfolio return between SCBNL and EBL is high i.e. 46.78% and SCBNL & HBL is lower i.e. 30.41%.
- The portfolio risk between SCBNL and HBL is high i.e. 43.98% and HBL and EBL is lower i.e. 39.69%.
- Since the entire bank has positive correlation so bank doesn't reduce any unsystematic risk. Among them, SCBNL and EBL have lower correlation, so it can be favorable for the investors.
- Systematic risk cannot be diversified through creation of portfolio. It is occurred due to market factor. Unsystematic risk can be diversified through creation of portfolio. It is occurred due to internal management factor. This study shows that EBL has high proportion of unsystematic risk i.e. 77.18% which can be minimized from internal management. Whereas HBL has high proportion of systematic risk i.e. 97.49%. This cannot be minimized from internal management. C.S. of EBL is best among these banks due to its highest proportion of unsystematic risk.

CHAPTER - III

RESEARCH METHODOLOGY

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

3.1 Research Design

Research design is necessary to fulfill the objectives of well-set research. Research design may be defined as framework, plan and structure for collecting, analyzing and evaluating data. It is a procedure and techniques, which provide ways for research viability. This research is belongs to risk and return analysis so that this research is based on recent historical data, which covers the five years period data from 2007 to 2012 A.D. It deals with the common stocks of commercial banks on the basis of available information. As the title of the study suggests, it is more analytical and empirical but less descriptive.

3.2 Source and Procedure of Data Collection

Mainly the study is conducted on the basic of secondary data. The data relating to the investment, stock price, annual, half yearly and quarterly reports and other are directly obtained with concerned banks. The supplementary data and information are collected from number of institutions and regulating authorities like NRB, Security Exchange Board, Nepal Stock exchange ltd. Ministry of Finance and National Planning Commission etc.

All the secondary data are compiled, processed, and tabulated in the time series as per the need and objectives. In order to judge the reliability of data provided by the banks and other sources, they were compiled with the annual reports' of auditor. Formal and informal talk to the concerned department of the banks. We are also helpful to obtain the additional information of the related problem. Similarly, various data and information are collected from the economic journals, periodicals , bulletins , magazines and other published report and documents from various sources .

Sources of Population and Samples

The population of the study is all the listed commercial banks in NEPSE index. This study is concentrated in listed commercial banks only. Total listed commercial banks are 33. For this study 3 commercial banks are selected for study.

1. Everest Bank Limited (EBL)
2. Nepal Investment Bank Limited (NIBL)
3. Kumari Bank Limited(KBL)

3.2.1 Everest Bank Limited (EBL) Nepal

Catering to more than 5 lacks customers today, Everest Bank Limited (EBL) is a name you can depend on for professionalized and efficient banking services. Founded in 1994, the bank has been one of the leading banks of the country and has been catering its services to various segments of the society since then. With clients from all walks of life, the bank has helped develop the nation corporately, agriculturally and industrially. So one can say with all earnestly that Everest Bank Limited is truly a Nepalese bank

Joint Venture Partner

Punjab National Bank (PNB), our joint venture partner (holding 20% equity in the bank) is the largest nationalized bank in India. With its presence virtually in all the important centers at India and over 6000 ATM counters, Punjab National Bank offers a wide variety of banking services which include corporate and personal banking, industrial finance, agricultural finance, financing of trade and international banking. For its excellence in banking services, it was recently awarded the "Best Bank Award 2011"amongst all banks in India by the leading corporate magazine, Business India.

Networks

Everest Bank Limited (EBL) provides customer-friendly services through its Branch Network and all it's the branches are connected through Anywhere Branch Banking System (ABBS), which enables customers for operational transactions from any branches. The bank has 48 Branches, 63 ATM Counters, 3 extension counter & 20 Revenue Collection across the country making it a very efficient and accessible bank for its customers, anytime, anywhere.

3.2.2 Nepal Investment Bank Limited (NIBL)

Nepal Investment Bank Ltd. (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was Credit Agricola Indosuez, a subsidiary of one the largest banking group in the world.

With the decision of Credit Agricola Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen, had acquired on April 2002 the 50% shareholding of Credit Agricola Indosuez in Nepal Indosuez Bank Ltd.

The name of the bank has been changed to Nepal Investment Bank Ltd. upon approval of bank's Annual General Meeting, Nepal Rastra Bank and Company Registrar's office with the following shareholding structure.

- A group of companies holding 50% of the capital
- Rashtriya Banijya Bank holding 15% of the Capital.
- Rashtriya Beema Sansthan holding the same percentage.
- The remaining 20% being held by the General Public (which means that NIBL is a Company listed on the Nepal Stock Exchange).

NIBL, which is managed by a team of experienced bankers and professionals having proven track record, can offer you what you're looking for. It is sure that your choice of a bank will be guided among other things by its reliability and professionalism.

3.2.3 Kumari Bank Limited (KBL)

Kumari Bank Limited, came into existence as the fifteenth commercial bank of Nepal by starting its banking operations from Chaitra 21, 2057 B.S (April 03, 2001) with an objective of providing competitive and modern banking services in the Nepalese financial market. The bank has paid up capital of Rs. 1,603,800,000.

Visa Electron Debit Card, which is accessible in entire VISA linked ATMs (including 35 own ATMs) and POS (Point of Sale) terminals both in Nepal and India, has also added convenience to the customers. The bank has been able to get recognition as an innovative and fast growing institution striving to enhance customer value and satisfaction by backing transparent business practice, professional management, corporate governance. The key focus of the bank is always center on serving unfulfilled needs of all classes of customers located in various parts of the country by offering modern and competitive banking products and services in their door step. The bank always prioritizes the priorities of the valued customers.

3.3 Method of Analysis

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

3.3.1 Financial Tools

3.3.1.1 Percentage

Percentage is used to measure the changing position of different amounts. The differences show the actual impacts of this sector; the given formula is used to find out the annual percent change.

$$\text{Annual Percentage Change} = \frac{\text{Amount of This Year} - \text{Amount of Last Year}}{\text{Amount of Last Year}}$$

3.3.1.2 Market Price of Stock

Market price of stock is the basic variable of the study. Among high, low, and closing Price, each year closing price has been taken as market price of the stock, which has specific time span of one year and the study has in annual basis. Closing price is used as market price of stock. Due to the variance in price within a year, it is difficult to predict the market price. However average price could be used as market price. It is also complicated to collect the day's price of five year period. So it is appropriate to use closing price as maket p rice.

3.3.1.3 Earnings per Share

Earning refers to the net income after taxes. It can be obtained by dividing net income By common stock outstanding.

Symbolically it is is represented as:

$$\text{EPS (Earning per share)} = \frac{\text{Net income after taxes}}{\text{Number of common stock outstanding}}$$

3.3.1.4 Dividend

Dividend is relevant during the computation of rate of return, which is a return to the shareholders for the investment. If company declares only cash dividend there is no problem while taking exact amount of dividend. But if company declares bonus share, shareholder will receive extra number of shares consequently. Price of the stock declines. At this condition,

Total Dividend Amount = Cash Dividend + Stock Dividend% × Next year's MPS.

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

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

3.3.1.5 Expected Rate of Return on Common Stock

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

Symbolically,

$$Rj = \frac{\sum Rj}{n}$$

Where, Rj = Expected rate of return on stock j

n = No of years that the return is taken

$\sum$ = Sign of summation

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

Where,

R = annual rate of return

D_t = Cash dividend received at time t.

P_t = Price of a stock at time t.

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

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

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

Symbolically,

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

Where,

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

R_J = Return on stock j.

n = number of years that the return is taken.

$\sum$ = Sign of summation.

3.3.1.7 Return on market

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

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

Where,

R_m = Return on Market

NI_t = NEPSE index at time t

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

3.3.1.8 Expected Return on Market, $E(R_m)$

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

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

Where,

$E(M_{r.})$ = Expected return on market.

$\sum R_m$ = Summation of market return.

N = Number of samples period.

3.3.1.9 Standard Deviation (S.D)

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

If data given as time series

$$\sigma_j = \sqrt{\frac{\sum [R_i - E(R_j)]^2}{n-1}}$$

If data is probability distribution

$$\sigma_j = \sqrt{\sum_{i=1}^{n} [R_i - E(R_j)]^2 P_i}$$

Where,

σ_j = Standard Deviation on of return sock j during the time period n.

P_j = Probability distribution of the observation.

R_j = Single period rate of return on stock j.

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

n = Number of years that the returns are taken.

3.3.1.10 Coefficient of Variation (C.V.)

It is the relative measurement of risk with return. It measures the risk per unit of return. It provides a more meaningful basis for comparison when the expected returns

on two alternatives are not the same. The higher coefficient of variation, higher the risk. It is calculated as

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

Where,

C.V. = Coefficient of variation of stock.

σ_j = Standard deviation of return on stock j.

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

3.3.1.11 Beta Coefficient (β)

Beta coefficient shows the market sensitivity of stock. Higher the beta, greater the sensitivity and reaction to the market movement. Beta coefficient of a particular stock will be less than equal or more than 1, but the beta for market will be always 1.

$$\beta_j = \frac{Cov(R_j, R_m)}{\sigma_m^2}$$

Where,

β_j = Beta coefficient of stock j .

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

$$= \frac{\sum_{i=1}^{n} (R_{ij} - \bar{R}_j)(R_{im} - \bar{R}_m)}{n-1}$$

σ^2_m = Variance of Market Return.

3.3.1.12 Correlation Coefficient (P_{ij})

Two variables are correlated when they are related that the change in the value of one variable is accompanied by change in the value of other. Correlation may be positive or negative. If return on two securities is negatively correlated which combined in portfolio reduces the risk. If securities are positively correlated risk cannot be reduced. Correlation coefficient is negative or positive which ranges from +1 to -1. It can be calculated as.

$$P_{ij} = \frac{Cov_{ij}}{\sigma_i \sigma_j}$$

Where,

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

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

σ_i σ_j = Standard deviation of returns for securities i and j.

3.3.1.13 Portfolio Risk and Return

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

Portfolio Return, E (R_P)

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

Symbolically,

$E(R_P) = W_i E(R_i) + W_j E(R_j)$

Where,

$E(R_P)$ = Expected return on portfolio

W_i = Proportion of wealth invested in i assets.

W_j = Proportion of wealth invested in j assets.

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

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

Portfolio Risk,

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

$\sigma_P =$ 

Where,

σ_P = Standard deviation of stock i & j.

σ_i^2 = Variance of assets i.

w_i = proportion of assets i.

σ_j^2 = Variance of assets j.

w_j = Proportion of assets j.

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

3.3.2 Risk Minimizing Portfolio

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

$$W_i = \frac{\sigma_j^2 - Cov(R_i R_j)}{\sigma_i^2 + \sigma_j^2 - 2Cov(R_i R_j)}$$

$W_j = 1\text{-}W_i$

Where,

w_i = optimal weight to invest in stock i.

w_j = optimal weight to invest in stock j.

σ_j^2 = Variance of stock j.

σ_i^2 = Variance of stock i.

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

3.3.2.1 Partitioning of Total Risk

Systematic Risk Proportion (ρ^2) = $\frac{\beta^2_j \sigma^2_m}{\sigma^2_j}$

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

Where,

σ_j^2 = Variance of stock j.

β_j^2 = Square beta of stock j.

σ_m^2 = variance of market return.

Var (e) = residual variance.

3.4 Data Presentation

Results are presented in tabular form and clear interpretation on it is given simultaneously. All the method of analysis and presentation are applied as simple as possible. Detail calculations are presented in appendices at the end of report. To make report simple and easily understandable charts, diagrams and graphs have been used. Summary conclusion and recommendations are presented finally.

CHAPTER IV

4. DATA PRESENTATION AND ANALYSIS

In this chapter only secondary data are collected and presented in a systematic way. It is the main body of the study. This chapter includes analysis of collected data and their presentation. Detail data of MPS, EPS, Dividend of each banks, and P/E ratio of selected banks. Different table and diagrams are drawn to make simple and easy understandable to the study. The use of secondary data is much extensive which are collected through the records of annual report. The data have been collected from the published and unpublished official records of samples for commercial bonus and paper, previous studies, financial statement and annual report of the selected companies. The collected data are presented in systematic form using different appropriate tools and technique.

4.1 Analysis of Individual Commercial Bank

In this chapter, selected companies are analyzed separately. All together there are 32 Commercial banks. Out of them three commercial banks are taken as sample. The sample banks are:

Everest bank limited

Kumari bank limited

Nepal Investment bank limited

Brief introduction of each bank as well as their common stock, risk and return analysis and interpretation is included in the study.

4.1.1 Everest Bank Limited (EBL)

Everest Bank Limited was established in 1993 and started its operation in 1994, with the joint venture of Punjab National Bank Limited (Holding 20%equity in the bank), in India. The bank is providing customer-friendly services through its Branch Network. All the branches of the bank are connected through Any Branch Banking System (ABBS), which enables customers for operational transactions from any branches. The bank has been conferred with "Bank of the Year 2006, Nepal" by the banker, a publication of financial times, London. The main objective of bank is to carry out commercial banking activities under the commercial bank act 1974. It was listed in NEPSE in 1995. With an aim to help Nepalese citizens working abroad, the

bank has entered into arrangements with banks and finance companies in different countries, which enable quick remittance of funds by the Nepalese citizens in countries like UAE, Kuwait, Bahrain, Qatar, Saudi Arabia, Malaysia, Singapore and U K. Bank has set up its representative offices at New Delhi (India) to support excellence in banking services, it was recently awarded the "Best Bank Award 2011" amongst all banks in India by the leading corporate magazine, Business India. The bank is providing customer friendly service through a network of 45 branches of Network and 55 ATM (Automatic Teller Machine).

4.1.1.1 MPS, Dividend, and EPS Data of EBL

Market price, dividend records, and EPS of common stock of EBL are shown in table 4.1. MPS and EPS movement is shown in the figure 4.1. Closing price is taken into account for the purpose of calculating realized return for the years. The total dividend includes cash as well as stock (Bonus) dividend.

Table: 4.1

MPS, Dividend, and EPS Data of EBL

Fiscal Year	Closing MPS	DPS	Total Dividend	EPs	P.E. Ratio
2006/07	2430	10	739	78.42	30.99
2007/08	3132	20	959.60	91.82	34.11
2008/09	2455	30	766.50	99.99	24.55
2009/10	1630	30	519	100.16	16.27
2010/11	1094	50	159.4	83.18	13.15

(Source: Annual Trading Report/NEPSE)

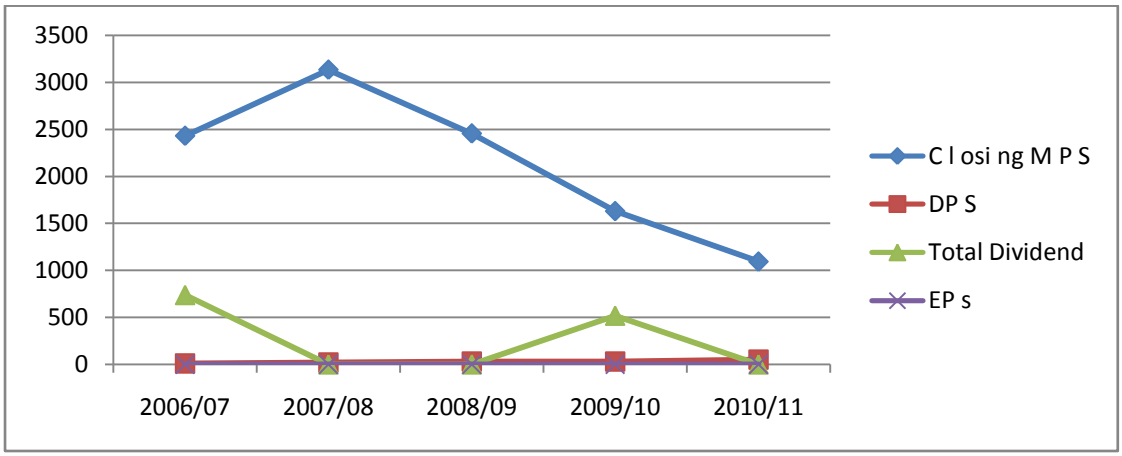

Figure 4.1 Year end MPS movement and EPS trend of EBL

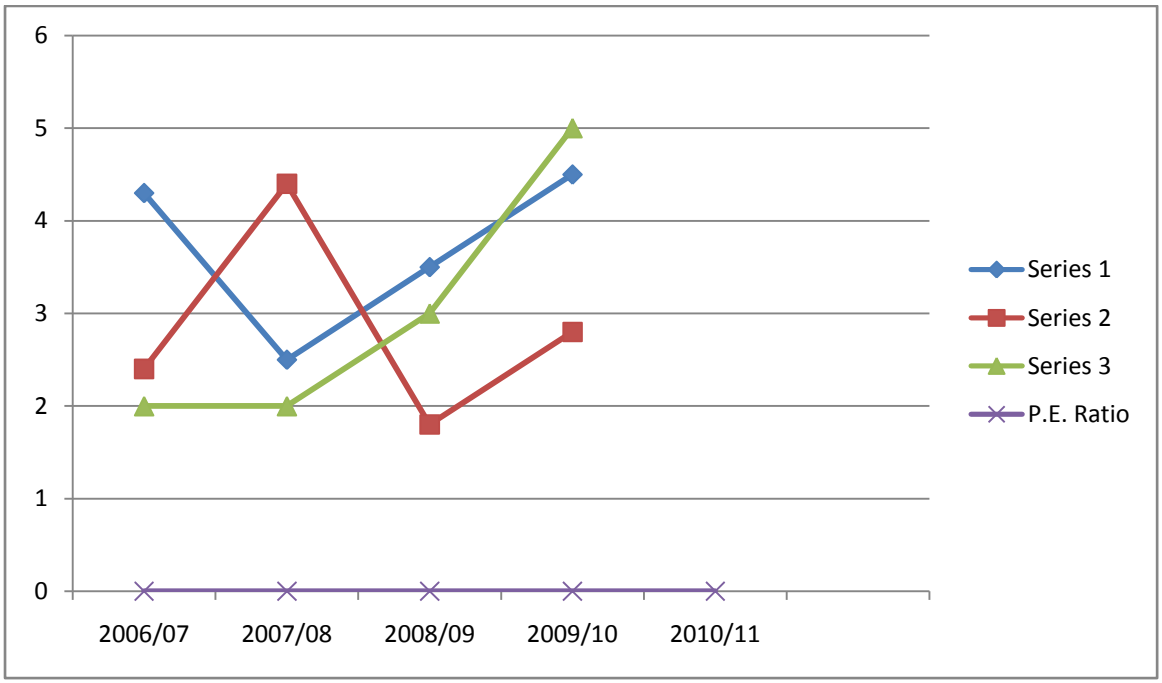

Figure 4.2 P/E Ratio of EBL

The above table and diagrams shows that the closing MPS of EBL is increasing from year 2006/07 to 2007/08 from Rs. 2430 to Rs. 3132 then it has decreased in the year 2008/09, 2009/10 and 2010/11 at Rs. 2455 Rs 1630 and Rs 1094. As a whole we can see that the MPS of EBL is in decreasing trend beside the year 2007/08. Dividend of EBL is slightly changes in different year. EBL has provided highest total dividend per share Rs.269 in 2008/09. And EBL has provided lowest dividend per share Rs.112 in the year 2006/07.

Similarly EPS also shows increasing trend in the different year. However it has slight decrease in year 20010/11. It has greatest EPS in the year 2009/10 i.e. Rs.100.16 and lowest EPS in the year 2006/07 i.e. 78.42. But P/E ratio of EBL is going decreasing trend. It is highest 34.11 in year 2007/08 and lowest at 13.15 in 2010/11.

Table:4.2

Realized Return(R), Expected Return ($\bar{R}$), Standard Deviation (σ) and Coefficient Variation (C.V) of EBL

Fiscal Year	Closing MPS	Total Dividend	$R=\frac{P_t - P_{t-1} + D_t}{P_{t-1}}$	$R-\bar{R}$	$(R-\bar{R})^2$	Remark

2006/07	2430	739	1.29	-0.359	0.13	Base year
2007/08	3132	959.60	0.68	-0.969	0.94	
2008/09	2455	766.50	0.029	-1.62	2.62	
2009/10	1630	519	-0.12	-1.769	3.13	
2010/11	1094	159.4	-0.23	-1.879	3.53	
Total			∑R=1.649		10.35	

(Source: From Appendix II).

We have,

Expected Return (R) = $\frac{\sum R}{n}$

$= 1.64$

9

$\frac{}{5}$

$= 0.3298 \text{ or } 32.98$

%

Variance $(\sigma) = \frac{\sum (R - R)^2}{n-1}$

$= \frac{10.35}{4}$

$= 2.5875$

Standard Property $^{n}(\sigma) = = \sqrt{}$ Deviatio of σ^2

$= \sqrt{2.5875}$

$= 1.608$

Coefficient of Variation = $\frac{\sigma}{R}$

$= \frac{1.608}{0.3298}$

=

4.87

The above table shows realized return, expected return, standard deviation and Coefficient of variation of EBL. The realized return and expected return of EBL is 1.649 and 32.98%. Where as its standard deviation and C.V. is 1.608 and 4.87 respectively. This means that for earning one extra unit of return from the share of

EBL investors have to bear 4.87 unit of risk.

4.1.2 Kumari Bank Limited (KBL)

Kumari Bank Limited, came into existence as the fifteenth commercial bank of Nepal by starting its banking operations from Chaitra 21, 2057 B.S (April 03, 2001) with an objective of providing competitive and modern banking services in the Nepalese financial market. The bank has paid up capital of Rs. 1,603,800,000 of which 70% is contributed from promoters and remaining from public. **Kumari Bank Ltd** has been providing wide - range of modern banking services through 29 points of representations located in various urban and semi urban part of the country, 20 outside and 9 inside the valley. The bank is pioneer in providing some of the latest / lucrative banking services like E-Banking and SMS Banking services in Nepal. The bank always focus on building sound technology driven internal system to cater the changing needs of the customers that enhance high comfort and value. The bank has been able to get recognition as an innovative and fast growing institution striving to enhance customer value and satisfaction by backing transparent business practice, professional management, corporate governance and total quality management as the organization all mission. The key focus of the bank is always center on serving unfulfilled needs of all classes of customers located in various parts of the country by offering modern and competitive banking products and services in their door step. The bank always prioritizes the priorities of the valued customers.

4.1.2.1 MPS, Dividend and EPS Data of KBL

Market price, dividend records, and EPS of common stock of KBL are shown in table 4.3 MPS and EPS movement is shown in the figure 4.3. MPS of KBL is increasing trend from the fiscal year 2006/07 to 2007/08. But the figure shows that MPS is decreased in year 2008/09 to 2010/11.

Table: 4.3

MPS, Dividend and EPS Data of KBL

Fisial Year	Closing MPS	DPS	Total Dividend	EPS	P.E.Ratio
2005/06	443	1.05		16.59	26.71
2006/07	830	1.05	175.77	22.70	36.56
2007/08	1005	0.53	106.36	16.35	61.47
2008/09	700	0.55	74.61	22.04	31.76
2009/10	468	12	68.16	24.24	19.31
2010/11	266	0.44	22.89	15.67	16.98

(Source: Annual Trading Report/NEPSE)

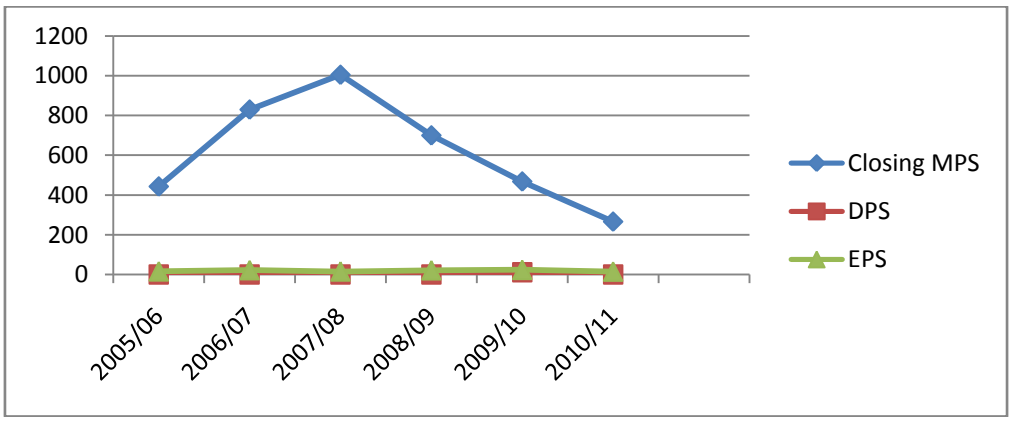

Figure 4.3
Year end MPS movement and EPS trend of KBL

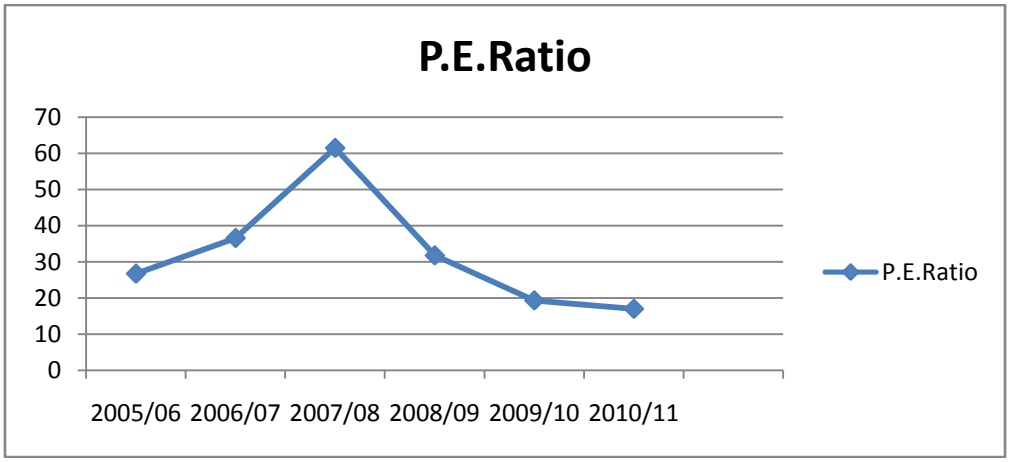

Figure 4.4
P/E Ratio of KBL

The above table and diagrams shows that the closing MPS of KBL is increasing from year 2006/07 to 2007/08 from Rs.830 to Rs.1005 then it has decreased in the year 2008/09 to year 2010/11 at Rs.700 to Rs266. As a whole we can see that the MPS of KBL is in decreasing trend expecting the year 2007/08.

Dividend of KBL is slightly changes in different year. KBL has provided highest dividend in 2009/10. And KBL has provided lowest dividend in the year 2010/11. Similarly EPS shows fluctuating in the different year. It has greatest EPS in the year 2009/10 i.e. Rs.24.24 and lowest EPS in the year 2010/11 i.e. 15.67. P/E ratio of KBL also shows the fluctuating trend in different year. It is highest 61.47 in year 2007/08 and lowest at 16.98 in 2010/11.

Table4.4

Realized Return(R), Expected Return (R), Standard Deviation (σ) and Coefficient Variations (CV) of KBL

Fiscal Year	Closing MPS	Total Dividend	$R=\frac{P_t - P_{t-1} + D_1}{P_{t-1}}$	R-R	$(R-R)^2$	Remark
2005/06	443	–	–	–	–	Base Year
2006/07	830	175.77	1.27	0.51	0.26	
2007/08	1005	106.36	0.339-	-0.43	0.18	
2008/09	700	74.616	0.229 -	-0.99	0.99	
2009/10	468	8.1622	0.234 -	-1.00	1.00	
2010/11	266	.89	0.382	-1.15	1.31	
Total			$\sum R = 0.764$		3.74	

(Source: From Appendix II).

We have,

Expected Return (R) = $\frac{\sum R}{n}$

$= \frac{0.764}{5}$

$=0.152$

or15.28%

Variance $(\sigma)^2 = \frac{\sum (R-R)^2}{n-1}$

$= \frac{3.74}{4}$

$= 0.93$

5

Standard Deviation $(\sigma) = \sqrt{\sigma}$

$$= \frac{\sqrt{0.93}}{5}$$

$$= 0.966$$

$$\text{Coefficient of Variation} = \frac{\sigma}{R}$$

$$= \frac{0.966}{0.1528}$$

$$= 6.32$$

The above table shows realized return, expected return, standard deviation and Coefficient of variation of KBL. The realized return and expected return of KBL is 0.764 and 15.28%.Where as it standard deviation and C.V. is 0.966 and 6.32 respectively. This means that for earning one extra unit of return from the share of KBL investors have to bear 6.32 unit of risk.

4.1.3 Nepal Investment Bank Limited (NIBL)

Nepal Investment Bank Ltd. (NIBL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partners. The French partner (holding 50% of the capital of NIBL) was Credit Agricole Indosuez, a subsidiary of one the largest banking group in the world.

With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen, had acquired on April 2002 the 50% shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd.

The name of the bank has been changed to Nepal Investment Bank Ltd. upon approval of bank's Annual General Meeting, Nepal Rastra Bank and Company Registrar's office with the following shareholding structure.

- A group of companies holding 50% of the capital
- Rashtriya Banijya Bank holding 15% of the capital.
- Rashtriya Beema Sansthan holding 15% of the capital.
- The remaining 20% being held by the General Public (which means that NIBL is a Company listed on the Nepal Stock Exchange).

"Our Vision is to be the most preferred provider of Financial Services in Nepal"

Mission Statement:

To be the leading Nepali bank, delivering world class service through the blending of state-of-the-art technology and visionary management in partnership with competent and committed staff, to achieve sound financial health with sustainable value addition to all our stakeholders. We are committed to do this mission while ensuring the highest levels of ethical standards, professional integrity, corporate governance and regulatory compliance.

Core Values and Ethical Principles:

Our core values tell us, our customers and the communities we serve, who we really are; what we are about; and the principles by which we pledge to conduct business. In essence, we believe that success can only be achieved by living our core values and principles:

- **Customer Focus:** At NIBL, our prime focus is to perfect our customer service. Customers are our first priority and driving force. We wish to gain customer confidence and be their trusted partner.

- **Quality:** We believe a quality service experience is a paramount to our customers and we are strongly committed in fulfilling this ideal.

- **Honesty and Integrity:** We ensure the highest level of integrity to our customers, creating an ongoing relationship of trust and confidence. We treat our customers with honesty, fairness and respect.

- **Belief in our people:** We recognize that employees are our most valuable asset and our competitive strength. We respect the worth and dignity of individual employees who devote their careers for the progress of the Bank.

- **Teamwork:** We are a firm believer in team work and feel that loyal and motivated teams can produce extraordinary results. We are derived by a performance culture where recognition and rewards are based on individual merit and demonstrated track record.

- **Good Corporate Governance:** Effective Corporate Governance procedures are essential to achieve and maintain public trust and confidence in any company, more so in a banking company. At NIBL, we are committed in following best practices resulting in good corporate governance.

- **Corporate Social Responsibility:** As a responsible corporate citizen, we consider it important to act in a responsible manner towards the environment and society. Our commitment has always been to behave ethically and contribute towards the improvement of quality of life of our people, the community and greatly the society, of which we are an integral part.

4.1.3.1 MPS, Dividend and EPS Data of NIBL

Market price, dividend records, and EPS of common stock of NIBL are shown in table

4.5. MPS and EPS movement is shown in the figure 4.5. MPS of NIBL is increasing

trend from the fiscal year 2006/07 to 2007/08. But the figure shows that MPS is decreased in year 2008/09 to Rs.1388 from Rs.2450 in 2007/08. NIBL has provided highest total dividend per share Rs.208 in 2007/08.

Table4.5
MPS, Dividend and EPS Data of NIBL

Ficial Year	Closing MPS	DPS	Total Dividend	EPS	P.E. Ratio
2006/07	1729	5	523.7	62.57	27.63
2007/08	2450	7.5	1007.84	57.87	42.33
2008/09	1388	20	297.60	37.42	37.10
2009/10	705	25	20.25	52.55	13.42
2010/11	515	25	282.50	48.84	10.54

(Source: Annual Trading Report/NEPSE)

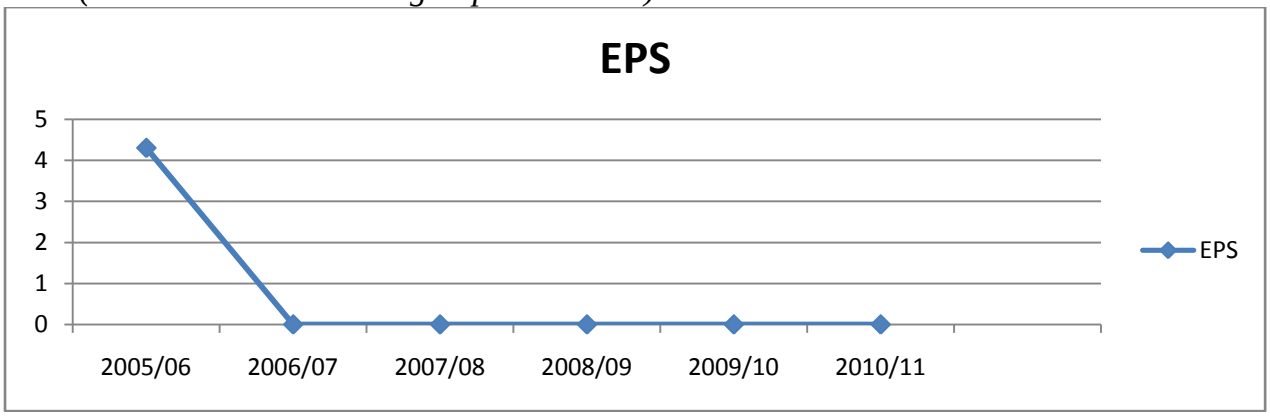

Figure 4.5
Year end MPS movement and EPS trend of NIBL

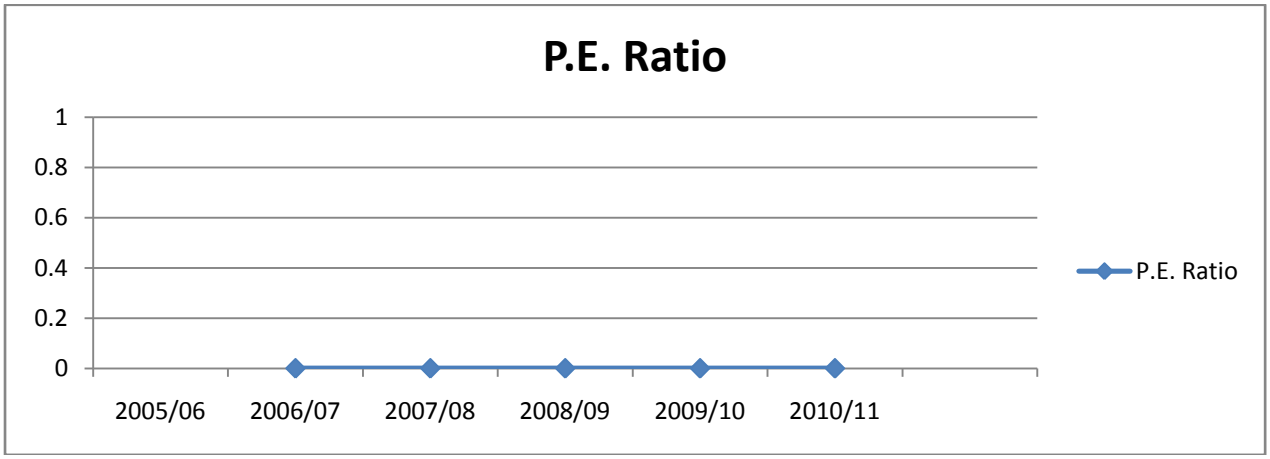

Figure 4.6
P/E Ratio of NIBL

The above table and diagrams shows that the closing MPS of NIBL is increasing from year 20006/07 to 2007/08 from Rs. 1729 to Rs. 2450 then it has decreased in the year

2008/09 to 2010/11 at Rs. 1388 to Rs 515 respectively. As a whole we can see that the MP of NIBL is in decreasing trend beside the year 2007/08.
Dividend of NIBL is slightly changes in different year. NIBL has provided highest dividend in 2010/11. And NIBL has provided lowest dividend in the year 2008/09. Similarly EPS shows fluctuating in the different year. It has greatest EPS in the year 2006/07 i.e. Rs.62.57 and lowest EPS in the year 2008/09 i.e. 37.42. Highest P/E ratio of NIBL 42.33 in year 2007/08 and lowest at 10.54 in 2010/11.

Table4.6

Realized Return(R), Expected Return ($\bar{R}$), Standard Deviation (σ) and Coefficient Variation (C.V) of NIBL

Fiscal Year	Closing MPS	Total Dividend	$R=\frac{P_t - P_{t-1} + D_t}{P_{t-1}}$	R-$\bar{R}$	$(R-\bar{R})^2$	Remark
2006/07	1729	523.7	0.79	-0.47	0.2229	
2007/08	2450	1007.84	1	-0.26	0.0676	
2008/09	1388	297.6	-0.31	-1.57	2.4712	
2009/10	705	201.25	-0.35	-1.61	2.5827	
2010/11	515	282.5	-0.13	-1.13	1.2742	
Total		$\sum R = 1.26$		6.62		

(Source: From Appendix II).
We have,

$$\text{Expected Return } (\bar{R}) = \frac{\sum R}{n}$$

$$= \frac{1.26}{5}$$

$$= 0.252 \text{ or } 25.20\%$$

$$\text{Variance } (\sigma^2) = \frac{\sum (R-\bar{R})^2}{n-1}$$

$$= \frac{6.62}{4}$$

$$= 1.655$$

$$\text{Standard Deviation } (\sigma) = \sqrt{\sigma^2}$$

$$= \sqrt{1.655}$$

$$= 1.29$$

$$\text{Coefficient of Variation} = \frac{\sigma}{\bar{R}}$$

$$= \frac{1.29}{0.252}$$

$$= 5.12$$

The above table shows realized return, expected return, standard deviation and coefficient of variation of NIBL. The realized return and expected return of NIBL 1.26 and 25.2%. Whereas it standard deviation and C.V. is 1.29 and 5.12

respectively. This means that for earning one extra unit of return from the share of NIBL investors have to bear 5.12 unit of risk.

Table 4.7

Name of Bank	Expected Return	Standard Deviation	Coefficient of Variation	Remarks
Everest Bank Ltd	0.3298	1.608	4.87	Higest in term of risk and return
Kumari Bank Ltd	0.1528	0.966	6.32	Highest CV
Nepal Investment	0.252	1.29	5.12	

(Source: From Appendix II)

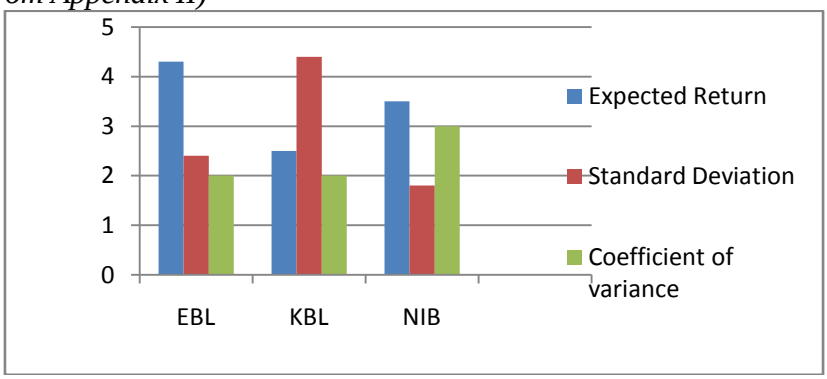

Figure 4.7
Expected Return, Standard Deviation and C.V. of Each Banks

The above table and multiple bar-diagrams show the expected return, standard deviation and coefficient of variation of three commercial banks of this study. From the above table, it has been shown that EBL enjoys the greater return than others banks but at the same time EBL has highest risk. So we can say that the evidence "Higher the risk, higher the return". If we consider coefficient of variation (C.V.), that risk on per unit of return of KBL is 6.32, which is highest compare with others. Investor of NIBL must bear 5.12 risks to get a unit of return. Whereas C.V. of EBL is lowest than others. To take an investment decision on single assets common stock, coefficient of variation (C.V.) is the most appropriate basis. So, rational investors should invest on common stock of EBL. But here more interestingly on the basis of risk and return EBL's stock also best than others.

4.2. Market Capitalization of three Commercial Banks

Table4.8

Market Capitalization of three Commercial Banks at F/Y 2010/2011

Name of Bank	NEPSE Code	NEPSE Code no.	Market Captlization	Percentage
Everest Bank	EBL	108	6988690000	31

Ltd				
Kumari Bank Ltd	KBL	113	3154330000	14
Nepal Invested Bank	NIBL	103	12396400000	55
Total			22539420000	100.00

(Source: From Appendix II)

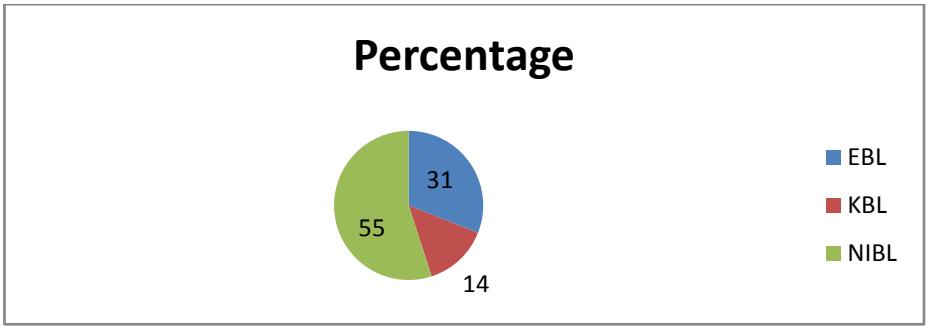

Figure 4.8

Market Capitalization of three Commercial Banks

On the market capitalization of selected commercial banks, we can say that NIBL is the biggest commercial banks and KBL is the smallest commercial banks. NIBL covers 55% of total market where as EBL and KBL covers only 31% and 18% of total market respectively.

The correlation of EBL's common stock to another commercial bank's common Stock is shown in following table.

Table no: 4.9

Correlation of EBL's C.S with Other Banks C.S

S.NO.	CommercialBank	Correlation(r)
1	EBL and KBL	0.74
2	EBL and NIBL	0.76

(Source: From Appendix II)

As per the above table, the correlation of the EBL and NIBL is highly positive (0.76) which is greater than the correlation of EBL and KBL (0.74). It means that the correlation of EBL's with other commercial bank is positive but degree of relationship is different.

4.3 Systematic and Unsystematic Risk and its Proportion

The proportion of systematic and unsystematic risk indicates the percentage of systematic risk created from systematic or market factors and percentage of unsystematic risk created from company related factors.

Table no: 4.10

Systematic and Unsystematic Risk and its proportion

Stock	Systematic Unsystematic	Unsystematic Risk	Proportion of systematic risk	Proportion of unsystematic risk
EBL	1.29	1.2975	0.35	0.90
KBL	1.33	-0.395	0.36	-0.28
NIBL	1.12	0.535	0.29	0.38

(Source: From Appendix II)

The above table shows the systematic and unsystematic risk and its proportion of different commercial bank's common stock. The proportion of systematic risk of C.S of EBL is higher than other bank i.e. 97.02%. This means it indicate that out of total risk on stock of EBL's 97.02% is un-diversifiable risk and created from systematic factors or market factors of the remaining 2.98% is diversifiable risk created from Property company related factors as well as the proportion of systematic risk of stock of NIBL s lower i.e. 76.47% . This mean that the remaining 23.53% risk is diversifiable risk created from the company related factors.

4.4 Analysis of Market Sensitivity

Market sensitivity of stock is the systematic risk that is measured by its beta coefficient. Systematic risk is the risk that cannot be reduced by diversification. Higher the beta represent the greater sensitivity and higher reaction to the market movement and lower the beta represent lower sensitivity and lower reaction to the market movement. Greater beta means higher risk and return. It measures the responsiveness of a security movement in the market portfolio Depending upon the volatile of the risk of the stock return relative to market return for an individual stock, bet could be less than, more than or equal to 1.

Table no: 4.11

Calculation of Beta Coefficient of the Common Stock of EBL

Year	$(R_i - R_i)$	$(R_m - R_m)$	$(R_i - R_i)(R_m - R_m)$
2006/07	-0.359	0.698	-0.025
2007/08	-0.969	0.338	-0.33
2008/09	-1.62	-0.293	0.47
2009/10	-1.769	-0.433	0.76
2010/11	-1.879	-0.311	0.58
Total			$\sum[(R_i - R_i)(R_m - R_m)]$ =1.23

(Source: From Appendix II)

Now,

$$COV(R_{i,R_m} = \frac{\sum (R - Rj)(R_m - R_m)}{n-1}$$

$$= \frac{1.23}{4}$$

$$= 0.31$$

Again,

$$B_j = \frac{COV(R_j R_m)}{\sigma^2 m}$$

$$= \frac{0.31}{(0.49)^2}$$

$$B_j = 1.29$$

Table no: 4.12

Calculation of Beta Coefficient of the Common Stock of KBL

Year	$(R_i - R_i)$	$(R_m - R_m)$	$(R_i - R_i)(R_m - R_m)$
2006/07	0.51	0.698	0.36
2007/08	-0.43	0.338	-0.150
2008/09	-0.99	-0.293	.290.43
2009/10	-1.00	-0.433	0.36
2010/11	-1.15	-0.311	
Total			$\sum[(R_i - R_i)(R_m - R_m)]$= 1.29

(Source: From Appendix II)

Now,

$$COV(R_j R_m) = \sum (R_j - R_j)(R_m - R_m)$$

$$= \frac{1.29}{4}$$

$$= 0.32$$

Again,

$$B_j = \frac{COV(R_j R_m)}{\sigma^2 m}$$

$$= \frac{0.32}{(0.49)^2}$$

$$B_j = 1.33$$

Table no: 4.13

Calculation of Beta Coefficient of the Common Stock of NIBL

Year	$(R_i - R_i)$	$(R_m - R_m)$	$(R_i - R_i)(R_m - R_m)$
2006/07	-0.47	0.698	-0.33
2007/08	-0.26	0.338	-0.08
2008/09	-1.57	-0.293	0.46
2009/10	-1.61	-0.433	0.69
2010/11	-1.13	-0.311	.35
Total			$\sum[(R_i - R_i)(R_m - R_m)] = 1.09$

(Source: From Appendix II)

Now,

$$COV(R_j R_m) = \frac{\sum (Rj\text{-}Rj)(Rm\text{-}Rm)}{n-1}$$

$$= \frac{1.04}{4}$$

$$= 0.27$$

Again,

$$B_j = \frac{COV(R_j R_m)}{\sigma^2 m}$$

$$= \frac{0.27}{(0.49)^2}$$

$$Bj = 1.21$$

Table no: 4.14

Beta Coefficient of Selected three Commercial Banks

S.NO	Bank's Name	Beta Coefficient
1	EBL	1.29
2	KBL	1.33
3	NIBL	1.12

(Source: From Appendix II)

Table no: 4.15

Required Rate of Return, Expected Return and Price Evaluation of Selected Commercial Banks.

S.N	Banks	Beta($\mathbf{B}_j$)	Risk free Return ($\mathbf{R}_f$)	Required rate of return	Exp. Return	Price situation
1	EBL	1.29	0.0600	0.073287	0.3298	Under priced
2	KBL	1.33	0.0600	0.073699	0.1528	Under priced
3	NIBL	1.12	0.0600	0.071536	0.252	Under priced

(Source: From Appendix II)

Where,

Required rate of return = $R_f + (R_m - R_f)B_j$ (Source from Investment Book)

Risk free return = 0.06 (Source: NRB, Treasury bill)

Expected market return = 0.0703

Table no: 4.16

Calculation of Weighted Beta of three Commercial Banks

Bank's Name	Beta(B_j)	Market capitalization	Weight(W_j)	W_jB_j
EBL	1.29	6988690000	0.31	0.3999
KBL	1.33	3154330000	0.14	0.1862
NIBL	1.12	12396400000	0.55	0.616
Total		22539420000	1.000	1.2021

(Source: From Appendix II)

Table no: 4.17

Calculation of Estimated Population Standard Deviation of Beta

Bank's Name	Beta(B_j)	$(B_j - B_j)$	$(B_j - B_j)^2$
EBL	1.29	0.04	0.0016
KBL	1.33	0.08	0.0064

NIBL	1.12	-0.13	0.0169
Total	3.74		

(sources :From appendix II)

Here,

$$\bar{\bar{B}}_j = \frac{\sum B_j}{No\ of\ Sample} = \frac{3.74}{3} = 1.25$$

$$Variance\ of\ beta\ (\sigma_B{}^2) = \frac{\sum\left(B_j - \bar{B}_j\right)^2}{n-1} = \frac{0.0249}{3-1} = 0.01245$$

$$Estimated\ variance\ of\ population\ (\sigma_B{}^2) = \frac{n}{n-1} \times 0.1245$$

$$= \frac{3}{3-1} \times 0.01245 = 0.01867$$

$$S = \sqrt{0.01867}$$

$$= 0.14$$

4.5 Analysis of Risk Diversification

The analysis is based on two assets portfolio and the tools for analysis are already mentioned in research methodology. It is already stated that correlation between the return of the two securities plays a vital role in risk reduction by portfolio construction. The negative relationship between two returns is acceptable in portfolio return. If the correlation is perfectly negative (-1), then the combination of securities reduces unsystematic risk to zero. If correlation is perfectly positive or equal to 1, then the portfolio cannot reduce any part of risk. Now we analyze the portfolio risk and return of EBL's with others two commercial banks.

Here portfolio of the common stock of EBL and KBL is made. Let us suppose the return on common stock of EBL as stock A and stock of KBL as stock B.

Table 4.18

Correlation and Covariance of stock A and Stock B (EBL and KBL)

Fiscal Year	$\left(R_A - \overline{R}_A\right)$	$\left(R_B - \overline{R}_B\right)$	$\left(R_A - \overline{R}_A\right)\left(R_B - \overline{R}_B\right)$
2006/07	-0.359	0.51	-0.183
2007/08	-0.969	-0.4	0.417
2008/09	-1.62	-0.99	1.603
2009/10	-1.769	-1.00	1.769
2010/11	-1.879	-1.15	2.160
		Total	$\sum\left(R_A - \overline{R}_A\right)\left(R_B - \overline{R}_B\right) = 5.766$

(Source: From Appendix II)

$\left(R_A - \overline{R}_A\right) = (From\ table\ No.\ 4.2).$

$\left(R_B - \overline{R}_B\right) = (From\ table\ no.\ 4.4).$

$$COV(R_A, R_B) = \frac{\sum\left(R_A - \overline{R}_A\right)\left(R_B - \overline{R}_B\right)}{n}$$

$$= \frac{5.766}{5}$$

For maximizing the risk of weight of stock A in the portfolio is given as:

$$W_A = \frac{\sigma_B{}^2 - COV(R_A, R_B)}{\sigma_A{}^2 + \sigma_B{}^2 - 2COV(R_A, R_B)}$$

$W_A = Optimal\ weight\ to\ invest\ on\ EBL$

$W_B = Optimal\ weight\ to\ invest\ on\ KBL$

$\sigma_A{}^2 = Variance\ of\ EBL\ (taken\ from\ table\ 4.2)$
$\sigma_B{}^2 = Variance\ of\ KBL\ (taken\ from\ table\ 4.4)$
$W_A = \frac{\sigma_B{}^2 - COV(R_A, R_B)}{\sigma_A{}^2 + \sigma_B{}^2 - 2COV(R_A, R_B)}$
$= \frac{0.935 - 1.1532}{2.5875 + 0.935 - 2 \times 1.1532}$
$W_A = -0.18$
$W_B = 1 - (-0.18)$
$W_B = 1.18$
As above ……..
$pAB = \frac{COV(R_A, R_B)}{\sigma_A \sigma_B}$
$= \frac{1.1532}{1.608 \times 0.966}$
$pAB = 0.74$
Here,
Again, calculation of Portfolio return
$\overline{R}_p = \left(W_A \overline{R}_A + W_B \overline{R}_B\right)$
$= -0.18 \times 0.3298 + 1.18 \times 0.1528$
$= -0.0593 + 0.18$
$\overline{R}_p = 0.12$
$\overline{R}_A = Expected\ return\ of\ A\ (From\ table\ 4.2)$
$\overline{R}_B = Expected\ return\ of\ B\ (From\ table\ 4.4)$
Portfolio return is combination of two or more securities of or assets and portfolio return is simple weighted average of the individual stock return.
Calculation of Portfolio risk:
$\sigma_p = \sqrt{W_A{}^2 \sigma_A{}^2 + W_B{}^2 \sigma_B{}^2 + 2COV_{AB} W_a W_B}$

$= \sqrt{(-0.18)^2 \times 2.5875 + (1.18)^2 \times 0.935 + 2 \times 1.1532 \times (-0.18) \times 1.18}$
$= \sqrt{0.89}$
$\sigma_p = 0.94$

Again,
The portfolio of the common stock of EBL and NIBL is made. Let us suppose the return on common stock of EBL as stock A and stock of NBL as stock B.

Table 4.19

Correlation and Covariance of stock A and Stock B (EBL and NIBL)

Fiscal Year	$\left(R_A - \overline{R}_A\right)$	$\left(R_B - \overline{R}_B\right)$	$\left(R_A - \overline{R}_A\right)\left(R_B - \overline{R}_B\right)$
2006/07	-0.359	-0.47	0.1689
2007/08	-0.969	-0.26	0.2519
2008/09	-1.62	-1.57	2.5434
2009/10	-1.769	-1.61	2.8481
2010/11	-1.879	-1.13	2.1233
		Total	$\sum\left(R_A - \overline{R}_A\right)\left(R_B - \overline{R}_B\right) = 7.94$

(Source: From Appendix II)
$\left(R_A - \overline{R}_A\right) = (From\ table\ No.\ 4.2).$

$\left(R_B - \overline{R}_B\right) = (From\ table\ no.\ 4.6).$

$COV(R_A, R_B) = \frac{\Sigma(R_A - \overline{R}_A)(R_B - \overline{R}_B)}{n}$

$= \frac{7.94}{5}$

For maximizing the risk of weight of stock A in the portfolio is given as:

$W_A = \frac{{\sigma_B}^2 - BCOV(R_A, R_B)}{{\sigma_A}^2 + {\sigma_B}^2 - 2COV(R_A, R_B)}$

Where,

$W_A = Optimal\ weight\ to\ invest\ on\ EBL$

$W_B = Optimal\ weight\ to\ invest\ on\ NIBL$

${\sigma_A}^2 = Variance\ of\ EBL$

${\sigma_B}^2 = Variance\ of\ NIBL$

$W_A = \frac{{\sigma_B}^2 - COV(R_A, R_B)}{{\sigma_A}^2 + {\sigma_B}^2 - 2COV(R_A, R_B)}$

$= \frac{1.6547 - 1.588}{2.5875 + 1.6547 - 2 \times 1.588}$

$W_A = -0.05$

$W_B = 1 - 0.05$

$W_B = 1.18$

As above ……..

$pAB = \frac{COV(R_A, R_B)}{\sigma_A \sigma_B}$

$= \frac{1.588}{1.608 \times 1.29}$

$PAB = 0.76$

Here,

Again, calculations of Portfolio return

$\overline{R}_p = \left(W_A \overline{R}_A + W_B \overline{R}_B\right)$

$0.05 \times 0.3298 + 0.95 \times 0.252$

$= -0.0593 + 0.18$

$\overline{R}_p = 0.25$

$\overline{R}_A = Expected\ return\ of\ A$

$\overline{R}_B = Expected\ return\ of\ B$

Portfolio return is combination of two or more securities of or assets and portfolio return is simple weighted average of the individual stock return.

Calculation of Portfolio risk:

$\sigma_p = \sqrt{{W_A}^2 {\sigma_A}^2 + {W_B}^2 {\sigma_B}^2 + 2COV_{AB} W_a W_B}$

$= \sqrt{(0.05)^2 \times 2.5875 + (0.95)^2 \times 1.6547 + 2 \times 1.588 \times 0.05 \times 0.95}$

$= \sqrt{1.65}$

$\sigma_p = 1.28$

4.6 Major Findings

In this research, data have been basically obtained by secondary sources. The analysis is performed with the help of financial tools and statistical tools. In the financial tools, percentage, market price of stock, earning per share, dividend, expected return on common stock and return of common stock investment analysis has been using to analysis the financial activities of commercial banks and in statistical tools standard

deviation, coefficient of variation, portfolio return, portfolio risk, portfolio beta, correlation co-efficient and required rate of return analysis has been used. This chapter focuses on the major findings, which are derived from the analysis of selected commercial banks.

The major findings of the analysis are as follows:

- All the securities of selected commercial banks are risky in general and most of the investors are attracted to the common stock security because of its higher expected return.
- On the basis of market capitalization size of NIBL is biggest one and KBL is the smallest.
- The expected return on common stock of EBL is maximum i.e. 32.98%, which is high rate of return. Similarly, the expected rate of return of common stock of NIBL is 25.2% which is also highest than expected rate of return of KBL i.e. 15.28%.
- The S.D of EBL is higher i.e 1.608 and that of KBL is lower i.e. 0.966. So KBL C.S. is low risky. The S.D. of NIBL is 1.29.
- In the context of market sensitivity, the return of C.S. of KBL is found highly Sensitive to the market during the study period. It is because that it has highest beta i.e. 1.33 which is greater than 1. Similarly, the C.S. of EBL and NIBL are also positive beta i.e. 1.29 and 1.12 respectively. Since the beta coefficient of KBL, EBL & NIBL is greater than 1 which indicates that the stock of all three C.S. is more risky or volatile than market.
- By evaluating the pricing situation for C.S. of three commercial banks, it has been found that all common stock's expected rate of return is higher than required rate of return. So, the entire banks stock price is found undervalued.
- The portfolio analysis indicates that forming portfolio can reduce the risk. We have constructed portfolio between EBL and KBL and EBL and NIBL that found their correlation coefficient is positively correlated so such portfolio is not beneficial for investment.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

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

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

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

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

5.2 Conclusion

The study shows that the Nepalese investor has less knowledge of stock market and may be mis-guided about the risk. Even Nepalese investor has also lack of proper knowledge and adequate information about the stock market. This study enables investor to put the returns they can expect and the risk they may take into better perspective. Overall evidence from the data presentation and analysis lead to the conclusion that ' Risk and Return ' of common stock of commercial banks is not in good condition. It means there is no good return according to risk of investment in common stock of commercial banks. When risk and return is compared in commercial banks, EBL is regarded as the most risky security as we know that higher the risk higher the return. EBL and NIBL's expected return is the highest which ultimate the standard deviation (risk) is also highest than KBL. Comparison between RRR and ERR helps us to identify whether the stock is under priced or over priced among the selected commercial bank stock all stock price is under priced so it isn't appropriate to purchase. The correlation coefficient between EBL and KBL and EBL and NIBL that found their positively correlated so such portfolio is not beneficial for investment however expected return of all the selected banks are positive.

5.3 Recommendations

Mainly this study is conducted to analyze risk and return for the investor's point of view and this study is made for the partial fulfillment of M.B.S. level. However, this study may be helpful for the individual investors and others who want to know something about financial investment. The following recommendations are prescribed

on the basis of data analysis, conclusion and major findings of the study.

- Irrespective to return, EBL and NIBL's common stock should be preferred, Although there is high risk.
- Standard deviation is not only risk measurement tools. Minimum coefficient Of variation is best for single security. So the investor who want to invest in single security, EBL can taken as the best for investment as per minimum C.V.
- Generally most of the Nepalese investors think that investment on stock Market is beneficial all the time. But it is not in reality, there are various factors affecting the stock market which may increase or decrease the price of stock. So before investing on stock of any companies investor need to have general knowledge about stock market and market trend.
- Before reaching to any decision for investing any stock market assessment of Personal risk attitude and requirement will always be useful. Normally investors focus their mind on return only but before thinking about higher return, they also need to think about risk associated with return.
- The companies themselves are also responsible for increasing or decreasing The unsystematic risk which is badly hits the business and profit. So proper and efficient management is essential for progress of any organization.
- The activities of stock market should not centralize only in capital city. So the Brokers should be encouraged to generate their business from outside the Kathmandu valley and they should suggest the investors to make suitable portfolios.
- NEPSE should initiate to develop different programmers for private investors Such as investors meeting and seminars in different subject like trading, rules and regulations, new financial information and so on.
- Financial information must be published regularly so that the investors scan Know about the changes take place. For this also NEPSE should enforce all listed companies to publish financial in timely manner.
- Government also needs to play an active role in the mobilization of the stock market as the economic condition of the country heavily depends in the policy of government. Government needs to make policies for facilitating the industries and increasing investing opportunities.

Thanks.

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Appendix II

Calculation of Total Dividend of EBL, KBL & NIBL.

Table 4.1

Total Dividend of EBL

Fiscal Year	Closing MPS	Cash Dividend	Stock Dividend %	Total Dividend
2006/07	2430	10	30	739
2007/08	3132	20	30	959.60
2008/09	2455	30	30	766.50
2009/10	1630	30	30	519
2010/11	1094	50	10	159.4

Table 4.3

Total Dividend of KBL

Fiscal Year	Closing MPS	Cash Dividend	Stock Dividend %	Total Dividend
2006/07	443	1.05		Based Year
2007/08	830	1.05	175.77	175.77
2008/09	1005	0.53	106.36	106.36
2009/10	700	0.55	74.61	74.61
2010/11				

Table 4.5

Total Dividend of NIBL

Fiscal Year	Closing MPS	Cash Dividend	Stock Dividend %	Total Dividend
2005/06	1260			Based Year
2006/07	1729	5	30	523.7
2007/08	2450	7.5	40.83	1007.84
2008/09	1388	20	20	297.6
2009/10	705	25	25	201.25

Table 4.13

Total Dividend of NIBL

Year	Market Index (MI)	$R_M = \frac{NI_1 - NI_{t-1}}{NI_{t-1}}$	$(R_m - \overline{R}_m)$	$(R_m - \overline{R}_m)^2$
2005/06	386.86			
2006/07	683.95	0.7681	0.698	0.4869
2007/08	963.36	0.4085	0.338	0.1144
2008/09	749.10	-0.2224	-0.293	0.0857
2009/10	477.73	-0.3623	-0.433	0.1871
2010/11	362.85	-0.2405	-0.311	0.0966
Total (Σ)		0.3515		0.9707

$$Expected\ return = \overline{R} = \frac{\sum R}{n}$$

$$= \frac{0.3515}{5}$$
$$= 0.0703$$

$$Standard\ deviation\ \sigma = \sqrt{\frac{\sum(R-\overline{R})^2}{n-1}}$$
$$= \sqrt{\frac{0.9707}{4}}$$
$$= \sqrt{0.24}$$
$$= 0.49$$

Coefficient of variation C.V.$= \frac{\sigma}{\overline{R}}$
$$= \frac{0.49}{0.0703}$$
$$= 6.97$$

Table 4.16
Calculation of beta coefficient of the common stock of EBL

Year	Market Index (MI)	$R_M = \frac{NI_1 - NI_{t-1}}{NI_{t-1}}$	$(R_i - \overline{R}_i)\ (R_m - \overline{R}_m)$
2006/07	-0.357	0.698	-0.25
2007/08	-0.969	0.338	-0.33
2008/09	-1.62	-0.293	0.47
2009/10	-1.769	-0.433	0.76
2010/11	-1.879	-0.311	0.58
		Total	$\sum[(R_i - \overline{R}_i)(R_m - \overline{R}_m)] = 1.23$

Table 4.17
Calculation of beta coefficient of the common stock of KBL

Year	$(R_i - \overline{R}_i)$	$(R_m - \overline{R}_m)$	$(R_i - \overline{R}_i)\ (R_m - \overline{R}_m)$
2006/07	0.51	0.698	0.36
2007/08	-0.43	0.338	-0.15
2008/09	-0.99	-0.293	0.29
2009/10	-1.00	-0.433	0.43
2010/11	-1.15	-0.311	0.36
		Total	$\sum[(R_i - \overline{R}_i)(R_m - \overline{R}_m)] = 1.29$

Table 4.18
Calculation of beta coefficient of the common stock of NIBL

Year	$(R_i - \overline{R}_i)$	$(R_m - \overline{R}_m)$	$(R_i - \overline{R}_i)\ (R_m - \overline{R}_m)$
2006/07	-0.47	0.698	-0.33
2007/08	-0.26	0.338	-0.08
2008/09	-1.57	-0.293	0.46
2009/10	-1.61	-0.433	0.69
2010/11	-1.13	-0.311	0.35
		Total	$\sum[(R_i - \overline{R}_i)(R_m - \overline{R}_m)]$

	$= 1.09$

Table 4.22
Calculation of estimated population standard deviation of beta

Bank's Name	$Beta(B_j)$	$(B_j - \overline{B}_j)$	$(B_j - \overline{B}_j)^2$
EBL	1.29	0.04	0.0016
KBL	1.33	0.08	0.0064
NIBL	1.12	-0.13	0.0169
Total	3.74		0.0249

Table 4.15
Systematic and unsystematic risk and its proportion

Stock	Systematic Risk	Unsystematic Risk	Proportion of Systematic Risk	Proportion of Unsystematic Risk
EBL	1.39	1.2975	0.35	0.90
KBL	1.33	-0.395	0.36	-0.28
NIBL	1.12	0.535	0.29	0.38

For EBL:
TOTAL RISK=SYSTEMATIC RISK+UNSYSTEMATIC RISK
WHERE, TOTAL RISK $= \sigma^2(Variance\ of\ EBL'Sstock)$
Beta Coefficient=Systematic Risk
2.5875 = 1.29 + unsystematic risk
Unsystematic risk = 1.2975

For KBL:
Unsystematic Risk = 0.935 – 1.33
Unsystematic risk = -0.395
For NIBL:
Unsystematic Risk = 1.655 – 1.12
Unsystematic risk = 0.535

Table 4.2

Realized Return (R), Expected Return$(\overline{R})$, Standard Deviation(σ) and Coefficient Variation (C.V.) of EBL

Fiscal Year	Closing MPS	Total Dividend	$R = \frac{P_t - P_{t-1} + D_1}{P_{t-1}}$	$R - \overline{R}$	$(R - \overline{R})^2$	Remark
2005/06	1379					Base year
2006/07	2430	739	1.29	-0.359	0.13	
2007/08	3132	959.60	0.68	-0.969	0.94	
2008/09	2455	766.50	0.029	-1.62	2.62	
2009/10	1630	519	-0.12	-1.769	3.13	
2010/11	1094	159.4	-0.23	-1.879	3.53	
		Total	$\sum R = 1.649$		10.35	

Expected Return $(\overline{R}) = \frac{\sum R}{n}$

$$= \frac{1.649}{5}$$
$$= 0.3298 \; or \; 32.98\%$$

Variance $(\sigma^2) = \frac{\sum(R-\overline{R})^2}{n-1}$
$$= \frac{10.35}{4}$$
$$= 2.5875$$

Standard Deviation $(\sigma) = \sqrt{\sigma^2}$
$$= \sqrt{2.5875}$$
$$= 1.608$$

Coefficient of Variation $= \frac{\sigma}{R}$
$$= \frac{1.608}{0.3298}$$
$$= 4.87$$

Table 4.4

Realized Return (R), Expected Return$(\overline{R})$, Standard Deviation(σ) and Coefficient Variation (C.V.) of KBL

Fiscal Year	Closing MPS	Total Dividend	$R = \frac{P_t - P_{t-1} + D_1}{P_{t-1}}$	$R - \overline{R}$	$(R - \overline{R})^2$	Remark
2005/06	443		-	-	-	Base year
2006/07	830	175.77	1.27	0.51	0.26	
2007/08	1005	106.36	0.339	-0.43	0.18	
2008/09	700	74.61	-0.229	-0.99	0.99	
2009/10	468	68.16	-0.234	-1.00	1.00	
2010/11	266	22.89	-0.382	-1.15	1.31	
		Total	$\sum R = 0.764$		3.74	

Expected Return $(\overline{R}) = \frac{\sum R}{n}$
$$= \frac{0.764}{5}$$
$$= 0.1528 \; or \; 15.28\%$$

Variance $(\sigma^2) = \frac{\sum(R-\overline{R})^2}{n-1}$
$$= \frac{3.74}{4}$$
$$= 0.935$$

Standard Deviation $(\sigma) = \sqrt{\sigma^2}$
$$= \sqrt{0.935}$$
$$= 0.966$$

Coefficient of Variation $= \frac{\sigma}{R}$
$$= \frac{0.966}{0.1528}$$
$$= 6.327$$

Table 4.6

Realized Return (R), Expected Return$(\overline{R})$, Standard Deviation(σ) and Coefficient Variation (C.V.) of NIBL

Fiscal Year	Closing MPS	Total Dividend	$R = \frac{P_t - P_{t-1} + D_1}{P_{t-1}}$	$R - \overline{R}$	$\left(R - \overline{R}\right)^2$	Remark
2005/06	1260		-	-	-	Base year
2006/07	1729	523.7	0.79	-0.47	0.2229	
2007/08	2450	1007.84	1	-0.26	0.0676	
2008/09	1388	297.6	-0.31	-1.57	2.4712	
2009/10	705	201.25	-0.35	-1.61	2.5827	
2010/11	515	282.5	-0.13	-1.13	1.2742	
		Total	$\sum R = 1.26$		6.62	

Expected Return $\left(\overline{R}\right) = \frac{\sum R}{n}$

$= \frac{1.26}{5}$

$= 0.252\ or\ 25.20\%$

Variance $(\sigma^2) = \frac{\sum\left(R-\overline{R}\right)^2}{n-1}$

$= \frac{6.62}{4}$

$= \grave{}.655$

Standard Deviation $(\sigma) = \sqrt{\sigma^2}$

$= \sqrt{\grave{}.655}$

$= 1.29$

Coefficient of Variation $= \frac{\sigma}{R}$

$= \frac{1.29}{0.252}$

$= 5.12$