

CHAPTER - I

INTRODUCTION

1.1 Background of the Study

There are various factors that are inhibiting the economic development of the country. The per capital income of Nepalese people is about US \$ 562 and recorded as the least developed country of the world. The open border with India and the trade policy of India directly affect Nepalese economy in one or other way. Though tourism industry seemed good as a foreign currency earner, recent political instability at home and in the international stage have direct impact upon this industry.

Capital formation is one of the most important and basic factors for overall economic development. In fact capital accumulation may be regarded as the core process by which all other aspects of development are possible. The level of capital formation depends upon the level of saving and its mobilization. The trend in recent days in declining interest rate, high inflation and slow growth in per capital income have so far depressed the private saving rate in Nepal. However, the banking and financial system can play a vital role in accelerating the pace of economic development of the country through the mobilization of scattered savings and channeling it in the real sector of the economy.

The history of modern banking started after the establishment of Nepal Bank Ltd, the first- ever bank in the country in 1973 AD. Only the Nepal Bank Ltd was not able to provide service all over the country. So, Nepal Rastra Bank, the central bank of the country was established in 1956 under the Nepal Rastra Bank Act, 1955.

The role of financial institutions has been instrumental in the overall economic development of the country. Financial system help pool and utilize resources, reduce costs and risks, expand and diversify opportunities, increase the allocate efficiency of resources and promote the productivity and economic growth.

Nepal's rising development requirements also call for greater proportions of financial resources being available at required size, price, modality and place which is served by financial system.

As precondition to economic liberalization, the industrial Enterprise Act was enacted in 1982 and foreign Investment and Technology Transfer Act came into effect since 1983, since 1985 Nepal has been following liberal economic policy. In its first stage of implementation, banking and financial sector was liberalized. Finance Companies Act, 1986 was also enacted with a view to provide non-banking services to the people in order to promote their economic benefit in general through institutionalized investment.

1.1.1 Structure of Nepalese Financial System

The financial system is a mechanism that transfers funds from the surplus to deficit units. It consists of institutional and legal structure, financial instruments and individuals. It performs the functions of mobilizing savings, allocating resources, exerting corporate control, facilitating risk management and easing trades and contracts. Based on the relative role of financial intermediaries and market, the financial system can be broadly categorized into bank-based and securities market-based system. Japan and Germany have an informal contractual relationship-based financial system in which the banking sector plays vital role in corporate/project finance and governance whereas the securities market serves as the major source of external finance in the USA and UK. These two typical modes of external finance are often referred to as Japan-German and Anglo-US models respectively. The structure of rest of the country's financial system either fall below these two categories or rests somewhere between them depending upon the legal and institutional settings level of financial development and socio-economic and political conditions. Some empirical studies (Demirguc-Kunt and Levin, 1999/2001; Levin, 2002) have shown that most of the high-income economies have efficient market-based financial system whereas the low-income countries have small and

underdeveloped capital markets relative to banking sector. However, Japan and Germany-the world's second and third largest economies-have significantly larger banking sector than securities market.

There are various indicators to measure whether a country's financial system is a bank-based or market based. The ratio of liquid liabilities as percentage of GDP measures the size of financial intermediaries in relation to the size of the economy. A higher ratio indicates greater financial deepening and vice versa. Similarly, a comparison between the ratio of bank assets to GDP and market capitalization to GDP is to be made for looking at the structure of financial system. The ratio of bank assets to GDP tends to be high in those countries where the financial system is dominated by banks and securities market is small and relatively underdeveloped as in Nepal. In a well developed securities market, the ratio of market capitalization to GDP records more than 150 percent whereas it is only 16.6 percent (as of 2006) in Nepal. Moreover, there are other various measures such as value traded as percentage of GDP- an indicator of market liquidity, turnover ratio- a measure of market efficiency and liquidity, ratio of bank overhead costs to total assets and interest margin to total assets-indicators of efficiency and competition in the banking system, claims on private sector and bank concentration indices that compare the overall size, structure and development of financial system.

1.1.2 The Securities Market

Until the emergence of the securities market in the late 1970s, the banking sector was the single component of Nepalese financial system. The early phase of financial sector liberalization initiated in the mid-1980s primarily focused on the banking sector rather than securities market development. The Nepalese securities market evolved through two different phases. The first phase consisted the period between 1976 and 1993 that laid the foundation of modern securities market. Some significant institutional and legal reforms were undertaken at the end of this phase. The major changes took place with the

amendment of Securities Exchange Act, 1983 in 1993 in which the private brokers were allowed to trade in shares in the secondary market and mandatory provisions for disclosure and transparency were revised. The second phase began with the conversion of Securities Exchange Center into Nepal Stock Exchange Limited (NEPSE) in 1993.

The creation of stock index and spread of public education and information about equity investment gradually widened the scope of securities market. Consequently, the number of listed companies increased from 16 in 1986, 63 in 1993 to 135 in 2006. Similarly, the market capitalization and annual turnover grew rapidly from Rs. 3,806 million and 79.8 million in 1993 to Rs. 96763.7 million and Rs. 3451.7 million respectively in 2006. The overall indicators show that the securities market, which was almost stagnant until the late 1980s, witnessed a steady growth until 1993 and then took relatively faster pace to arrive at the current stage of development. However, in relation to the market share in the overall financial system, the Nepalese securities market is passing through its infancy.

A comparative study (Pokhrel, 2005) of securities markets among the selected developing as well as developed countries following the analytical tools used by Demirgüç-Kunt and Levin (1999/2002) shows that Nepalese securities market is very small, inefficient and underdeveloped compared not only with that of developed economies but also with its South Asian counterparts except Bhutan and Bangladesh. The size and structure measures show that Nepalese financial system is a prototype of bank-centered model; however, it is not meaningfully comparable with many other countries following the Japan-German vs. Anglo-US model. The study also points out the securities market; more concisely, the equities market, in Nepal is largely confined to the banking sector. The banks and finance companies are the major industries whose shares are actively traded in the stock exchange. The market share of non-banking sector (such as manufacturing, services, trading etc.) is relatively small and the securities investment in these sectors is relatively less profitable and attractive.

1.1.3 The Banking Sector

Although the securities market is still passing through the infant stage of development, the banking sector in Nepal has relatively longer historical foundation, established institutional settings and better growth and development trend. Measured in terms of the ratio of total bank assets and market capitalization as percentage of GDP, the Nepalese financial system is a bank-based; however, a relative measure puts Nepal in the state of underdeveloped financial system (Pokhrel, 2006).

1.2 Statement of the Problem

In the context of our country Nepal, there are no any separate institutions, which may provide information required making rational decision that can accelerate the stock investment and market efficiency, government policy is less encouraging in promotion common stock investment. Most of the Nepalese investors invest their fund in single security rather than investing in portfolio of security through diversification of risk. Not only general public but also even most of literate people related on such subject cannot prominently analyze the risk and return in stock market investment. As the economic status and awareness towards economic activities are very poor development and growth of capital market in Nepal is still in its infancy. Investors use their own guess to invest their wealth because they do not have proper knowledge about financial assets and they also do not know to take right decision to construct an ideal portfolio and to reach a profitable decision. Investors of Nepal invest their wealth on the basis of thinking the past trends of stock price, so sometime they have to face heavy losses. Investors feel more risk in stock investment than its real risk. To build their confidence, unbiased analysis and information about it is a must unavailability of a simple and clear ways or technique, risk and return of individual stock and portfolio is therefore being a major requirement to increase stock investment and stock market efficiency as well. Stock broker, issue manager, brokers and the entire related person in those fields must become necessary to set the policies, evaluate relative riskiness of their

decision and impression to general investors. Beating above all in the mind following research issue is identified.

- How can one make higher return while lowering risk?
- How do they know about the magnitude of risk?
- What is the comparative risk and return position of selected commercial banks?
- How would investors decide to invest based on risk and return?

1.3 Objective of the Study

The major objectives of the study are to determine the risk and return of sample banks. The specific objectives behind the study and research are as follows:

- To examine the risk and return of the sample banks.
- To analyze the comparative analysis of the risk and return on the common stocks of the selected banks.
- To find out how sensitivity of the stock price of the selected commercial banks.
- To analyze the systematic and unsystematic risk of the selected commercial banks.

1.4 Statement of Hypothesis

Following hypothesis has been set in this study paper.

Null hypothesis (H₀): Average return of common stock of listed company is equal to the market return.

Alternate hypothesis (H₁): Average return of common stock of listed company does not equal to the market return.

1.5 Significance of the Study

The analysis of risk and return is a significance managerial decision. Consequently the risk and return analysis influence the market price of the stock. So before making an investment decision, a person must analyzed the risk and return from a particular stock as well as they can make a good portfolio between their investment in the stock.

Mostly, the public companies obtain funds from the public investor financial market. They long run objective of every company is to maximize shareholder's wealth position where as the investor seek to get good return in future.

Investor's felling to wards risk and return is on surface now. They feel more risk than they exist. As result, there are fair of daps of investment in the common stock. So the will be more significant for exploring and increasing stock investment. It also will provide little contribution to Nepalese stock market development.

The study targets to explore and increase stock investment. This study is not only to fulfill T.U. course of MBS, but also to some Knowledge about the Nepalese stock market developments and encourage investing in the stock market. The study focused to be undertaken by the researcher will bring the output that would be very useful and worthy in terms of:

1. This research is mainly focused on risk and return aspect. The interested individuals and agencies can take help from the findings of the study.
2. This study would be of help to guide the investors.
3. It makes an effort to reflect the picture of NEPSE in terms of private banking sectors.

1.6 Limitations of the Study

No study can be free from constraints and weakness, so this study also is not an exception. The researcher will segregated the annual dividend in quarters as the observation data will on quarterly basis. The same kind of observation regarding cash dividend will be made in the past years in international arena. As the stock price movement correlates other macro variable factors, data and or information on those factors is equally important. This study covers up to FY 2065/66. This study will confined to the study only four commercial banks enlisted in NEPSE particularly in relation with risk and return.

1.7 Organization of the Study

This study has been presented according to the research structure prescribed by the faculty of Master of Business Studies (MBS). The body of the research has been divided into five chapters these are as follows.

Chapter one is the introductory which deals with background of the study, Statement of the problem, Objectives of the study, Significance of the study and Organization of the study.

The second chapter deals with the review of literature relating to the brand loyalty, it includes two parts. The first part deals with the conceptual framework of the study while the second part is related with review of previous studies.

The third chapter is the research methodology which deals with the research design, nature and source of data, data gathering procedure and analysis of data.

The fourth chapter deals with the presentation and analysis of relevant data and information using various statistical tools.

The last chapter is concerned with summary, conclusion and recommendation of the study.

CHAPTER - II

REVIEW OF LITERATURE

This Chapter is concerned with the review of literature .The chapter have been divided into main two parts, the first part implies the conceptual framework of the study while second part is related to the review of previous studies i.e. books, journals, dissertations etc.

2.1 Conceptual Framework

For this study, relevant literatures have been reviewed from books journals, magazines, published and unpublished articles and so on. Relevant literatures are also cited from related web sites. A library is frequently visited for this purpose. This chapter presents an outline of the literature reviewed during the study.

2.1.1 Investment

An investment involves the sacrifice of current rupees for future rupees. The sacrifice takes place in the present and certain. The reward comes later and is uncertain. Investment generally involves real assets or financial assets. Real assets are tangible, material things such as building, machinery and factory and text book.

Financial asset are pieces of paper representing an indirect claim to real assets held by someone else. Real assets are generally less liquid then financial assets. Returns to real assets are frequently more difficult to measure accurately. But our principal concern is with financial assets. Investment is an exchange of financial claim stocks and bonds etc. Investment is the employment of funds with the aim of achieving additional income or growth in value. It involves the commitment of resources that have been saved or put away from current consumption in the hope that some benefits will accrue in future. Investment involves long term commitment and waiting for a reward.

Investment, in its broad sense, means the sacrifice of current Rupees (dollars) and resources for the sake of future Rupees (dollars) and resources. In the other words, it is a commitment of money and other resources that are expected to generate additional money and resources in the future. Such a commitment takes place in the present and is certain to occur but the reward comes in the future and always remains uncertain. Therefore, every investment entails some degree of risk.

Investments are made in assets. Assets, generally, are of two types: real assets (land, building, factories etc) and financial assets (stocks, bonds, t-bill etc). These two types of assets are not competitive but complementary, highly-developed institutions for financial investment greatly facilitating real investment.

Forms of Investment

There are two categories of assets viz-financial assets and real assets. Accordingly, there are two forms of investment.

- Financial investment
- Real investment

i) Financial Investment

Investment in financial assets like common stocks, bond etc is called financial investments. Financial assets represent a financial claim. It is an asset that is usually documented by some forms of legal representation. Although financial assets are typically represented by tangible certificates of ownership, the financial assets itself is intangible. They are also called securities.

ii) Real Investment

A real asset represents an actual tangible asset that may be seen, felt, held or collected e.g. real estate, gold etc. Investment in such tangible assets is called real investment. Real assets have productive capacity. The capital formation is the direct outcome of the productive investment.

2.1.2 Common Stock

Common stock is an ownership security. It is a source of long term financing. The common stock certificates are legal documents that give an evidence of ownership in a company in a company that is organized as a corporation. Common stocks are marketable financial instruments. Sole proprietorships and partnerships are other forms of business organizations, but only corporations can issue common stock.

When investors buy common stock, they receive certificate of ownership as a proof of their being part owners of the company. The certificate states the number of share purchased and their par value. Common stock is the first security of corporation to be issued and, in the event of bankruptcy, the last to be retired. Each share of stock is fraction of the rights and privilege that belongs to the owners of a business.

Stockholders return on investment is less certain than the return to lender or a preferred stockholder. On the other hand the share of common stock can be authorized 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. A company should no issue stock at a price less than par value because stockholders who bought for less than par value would be liable to creditors for the difference between par price they paid and the par value (Van Horne, 1997: 560).

The main characteristics of common stock are as follows:

a) Priority to Assets and Earnings

Common stock holders have a residual claim on the earning and assets of their corporation.

b) Par Value Stock No Par Value Stock

Owners of common stock in a corporation are referred to as shareholders. They receive stock certificates for the shares they own. There is often a stated value

on each stock certificate called the par value. The par value each share of most common stock in Nepal is NRS.100.

c) Authorized, Issued and Outstanding Shares

The corporate charter of a company specifies the number of authorized shares of common stock that the company can issues maximum without amending its charter.

d) Voting Rights

The common shareholders have right to vote in the affairs of the company. In most of the common stock each shareholders can cast one vote in one share. A proxy is a temporary transfer of the right to vote.

e) Maturity

The capital obtained from this source is called as fixed capital. This cannot be redeemed in the mid life of the organization.

f) Capital in excess of Par Value

Capital in excess of par value often called capital surplus or additional paid in capital usually refers to the amount directly contributed to equity capital in excess of the par value.

g) Retained Earnings

Retained earnings are the balance sheet account that indicates the total amount of earnings that is retained in the business. These earnings have been reinvested in the firm.

h) The Book Value Per Share

The book value of each common stock is equal to the net worth or common equity (common stock holder's equity), consisting of sum of common stock,

retained earnings, and paid in capital, dividend by the number of share of common stock outstanding.

i) Stock Certificates

Stock certificate is usually registered with the name, address and holding of the investor included on the corporation books, which represented the ownership of a firm's stock.

j) Ownership Right

Common stockholders are owners of the firm they often have voting right that permits them to select the firm's director and to vote on special issue.

As owners, common stockholders are entitled to certain rights and privileges as follows:

A) Control

Common stock has voting rights that can be used to elect corporate directors who, in turn appoint the corporate officers.

B) Pre-emptive Right

A pre-emptive right gives existing shareholders the first option to purchase a proportionate interest in a new issue of a corporation stock. The purpose of this provision is to protect stockholder against a loss of voting and Control and dilution in the value of their shares. The pre-emptive right is usually satisfied by the use of right offering.

C) Liquidation Right

As owners rather than the creditors, common stockholders receive no priority in the distribution of assets resulting from liquidation of corporation. Typically, after assets are sold liabilities and preferred stockholders are satisfied, little if any cash will be available for common stockholders.

D) Right to Income Distribution of Additional Shares

Common stockholders have no legal right to receive income distribution from the corporation. As a practical matter, however the board of directors may declare cash dividends to the stockholders, provided the financial resources are available, even for periods when the corporation has experienced a loss.

2.1.3 Return

Return is the reward for uncertainty or risk. The concept of return has different meaning to different investors. Return is the main attraction for investors 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.

Some investors seek near term cash inflows and give less value to more distant return such an investor might purchase the stock of other firm that pays large cash dividends. Other investors are concerned primarily with growth of sales, earning and capital appreciation.

When people buy common stock they give up current consumption in the hope of attaining future consumption. They expect to collect dividend and eventually sell the stock at a profit. The benefit associated with ownership includes the cash dividends paid during the year together with an appreciation in market price, or capital gain realized at the end of year. Returns are defined as the dividend yields plus the capital gain or loss. The relationship between levels of return on their relative frequencies is called probability distribution. It can formulate a probability distribution for the relative frequency of a firm annual return by analyzing its historical return over the previous year. But history never repeats itself exactly. Hence, after analyzing relative frequencies of historical return for individual company, it can form a probability distribution based on historical data plus the analysis

for the economy and outlook for the economy and the outlook for the industry, the outlook for the firm in its industry and another factors.

The after tax increase in the value of the initial investment is the investment return, the increase in value can come from two sources: a direct cash payment to the investor or a increase in the market value of 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 at the start of holding period.

$$r = \frac{(P_1 - P_0) + D_1}{P_0}$$

Where,

r = single period of return

P₁ = market price at the end of period '1'

P₀ = current market price at the purchase price

D₁ = cash dividend received during the period '1'

(P₁ - P₀) = Income from price appreciation (or losses from depreciation) sometimes called capital gain (or losses).

Above formula can be used to determine both actual single period return as well as expected return. Holding period's returns are often calculated for periods other than one year. Many holding periods returns over periods shorter or longer than year are annualized. In general, if the length of holding period is not specified, it is assumed to be one year.

The expected rate of return for any asset is the weighted average rate of return, using probability of each rate of returns as the weight. The expected rate of

return is calculated by summing the product of the rates of return and their respective probabilities.

$$\text{Expected value}(r) = \sum r_j p_j = r_1 p_1 + r_2 p_2 + \dots + r_n p_n$$

Where,

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:

$$\text{Expected value, } E(r) = \frac{\sum r}{n}$$

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

Probability Distribution of Return

When we expect return in the future, we talk about chances to earn some possible returns. The possibility or the chances are known as probabilities. Probabilities are assigned on two different bases: objective probability and subjective probability. Objective probabilities are assigned on the basis of past data or relative frequency distribution and subjective probabilities are based on a financial analyst's best guesses about the future returns. Subjective probability is also known as judgmental probability. Whatever techniques are followed to assign the probabilities, the main thing is that, the probabilities are the foundation of the quantitative analysis of risk and return.

2.1.4 Risk on a Common Stock

Risk is defined in Webster's dictionary as hazard; a peril: exposure or loss or injury. Thus for most, risk refers to the chance that some unfavorable event will occur. If you invest in speculative stocks for really, any stock, you are taking a risk in the hope of making an appreciable return.

Risk is the uncertainty associated with the end-of –period value of investment. “Risk is the possibility or chance of meeting danger or suffering loss. Uncertainties and risk are the facts of life to the common stock holders. Uncertainties and risk are perceived by different people in different ways. Some people perceived uncertainty as simply a lack of defines outcomes. It is anything that could happen any unknown event, which may be favorable or unfavorable. Other many people consider risk as a chance of happening some unfavorable event or danger of losing some value. The terminology uncertainty and risk are often used interchangeably.

Although it is not quite clear what previously uncertainty and risk means. Authorities are the field of finance and people concern about finance does agree that risk is the product of uncertainty. If we interpret uncertainty as a future outcome which is hundred percent sure to happen, uncertainty is then just a opposite of certainty that refers to all possible outcomes none of which is sure to happen .Risk on the other hand is the product of all potential outcomes expressed with probability associated with each of them and it is measure in terms of the degree of variability in the probability distribution of such outcome. Risk defines most generally is the probability of the occurrence of unfavorable outcomes. But risk has different meanings on the different context. In our context two-measure development from the probability distribution has been used as initial measures of return and risks. There are the variance and the standard deviation of the probability distribution.

The standard deviations can sometimes the misleading in comparing the risk on uncertainty, surrounding alternative of they differ size. To adjust the size, or scale, problem, that standard deviation can be divided by the expected return computed the co-efficient of variation (C.V) thus the co-efficient of variation measures relatives’ dispersion.

Uncertainty and risk are treated separately in financial analysis. The practice is to translate the uncertainty into the mathematical value, which represent the

best estimate of uncertainty, is taken care by calculating the expected value of all possible uncertainty outcomes .But risk is treated is differently. Although risk raises from uncertainty it magnitude depends upon the degree of variability in the uncertain cash flows, and it is measured in terms of standard deviation.

2.1.5 Sources of Risk

An investment is commitment of money that is expected to generate addition money. Every investment entails some degree of risks. A major objective of financial institution is to increase the returns for its owner by taking minimum risk. The effective management of the risk is central to its performance. Indeed, it can be argued that the main business function of financial institution is managing these risks through the consumption of maximum time and efforts in understanding and managing the various source and kinds of risks factors with its different natures and complexities (Francis, 1995: 23). The primary risks factor that create investments uncertainties are as follows:

- **Interest Rate Risk**

Asset transformation function is the key functions of financial institution. It involves buying primary securities or assets and issuing secondary securities or liabilities to fund assets purchase. The primary security purchased by financial institutions often has maturity and liquidity characteristics which are different from those of secondary security that financial institutions sell. In mismatching the maturities of assets and liabilities as part of their asset transformation function (Francis, 1995: 23).

- **Bull-Bear Market Risk**

Market risk is incurred in the trading of assets and liabilities due to changes in market forces like interest rates, exchange rates. Furthermore, market risk is the risk related to uncertainty on the earning on its trading portfolios caused by changes in the market condition. The various market forces make securities price upward and downward. The upward trend of market price (Bull Market)

and downward trend of market price (Bear Market) create a long lasting source of investment at risk. (Francis, 1995: 24)

- **Credit Risk**

It is also called default risk. Default risk is probability that the borrower is unable to fulfill the term promised under the loan agreement. It is that portion of investments total risks that result from changes in the financial integrity of the investment (Francis, 1995: 24).

- **Liquidity Risk**

Liquidity risk is sudden surges in liability withdrawal may leave as financial institution in a position of having to liquidate assets in a very short period of time and at low prices. Liquidity risks arises when its liability holders such as depositor or insurance policy maker etc demand immediate cash for the financial claim they hold with financial institution or when holders of loan commitment or credit line suddenly exercise their right to borrow or draw down their right of loan commitments that situation financial institution s must either borrow addition funds or sell assets to meet the demands for the withdrawal of funds (Francis, 1995: 24).

- **Call-Ability Risk**

Some bonds and preferred stocks are issued with a provision that allows the issuer to call them in for repurchase. Issuer like the call provision because it allows them to buy back outstanding preferred stock and/or bond with funds from a newer issue if market interest rate drop below the level being paid on the outstanding securities. There is chance of creating call-ability risk (Francis,1995: 24).

- **Convertibility Risk**

Call ability risk and convertibility risks are in two aspects. First both are contractual stipulations that included in the term of original security issue.

Second, both of these provisions alter the variability of return from the affected security. Convertibility risk is that portion of the variability of return from a convertible that the investment may be converted into the issuer's common stocks at a time or under terms to the investor's best interest (Francis, 1995: 24).

- **Industrial Risk**

An industry may be viewed as a group of companies that compete with each other to market homogeneous products. Industry risk is that portion of risk that can be an investment variability of return caused by events that affects the product and firms that make up an industry (Francis, 1995: 24).

- **Political Risk**

Political risk arises from the exploitation of a politically weak group for the benefits of politically strong group, with the efforts of various groups to improve their relative positions increasing the variability return from the affected assets. Regardless of whether the changes that cause political or by economic interests, the resulting variability of return is called political risk (Francis, Jack Clark, 1995: 25).

- **Other Risk**

Beside these above mentioned risks, there are other risks like off balance sheet risk, technological and operational risk, country and sovereign risk, insolvency risk etc (Francis, 1995: 25).

2.1.6 Expected Rate of Return

The future is uncertain. Investors do not know with certainty whether the economy will be growing rapidly or be in recession. As such, they do not know what rate of return their investments will yield. Therefore, they base their decisions on their expectations concerning the future. The expected rate of return on a stock represents the mean of a probability distribution of possible

future returns on the stock. "It is the rate of return to be realized from an investment, the weighted average of the probability distribution of possible assets. Thus 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" (Brigham, and Houston, 1996:159).

2.1.7 Required Rate of Return

The required rate of return is the minimum rate of return (expressed as a percentage) that an investor requires before investing capital. The degree of risk associated with an investment is reflected in the required rate of return. Investors and analysts often use the required rate of return as a discount rate for future cash flows from an investment. For many investors, a beginning point in stock valuation is calculating the required rate of return. On occasion, the required rate of return is confused with the internal rate of return. "The capitalization or the discount rate is defined as the required rate of return. It is the minimum rate expected by the investors to buy or hold a security." The required rate of return is composed of a risk-free interest rate and a risk premium rate (Sheridon & Grinblantt, 1998:105).

2.1.8 Determinants of the Required Rate of Return

- **Real Risk –Free Rate (RFR)**

The risk-free interest rate is the interest rate that it is assumed can be obtained by investing in financial instruments with no default risk. It is the basic interest rate if there were no uncertainty at all about the future, also called pure time value of money. RFR depends on the preference individual have for current consumption over future consumption and the set of investment opportunities in the country (Van Horne, 1997:205).

- **Nominal Risk Free Rate**

It is the interest rate obtained after the adjustment of expected inflation and supply and demand aspect of funds (Van Horne, 1997:205).

2.1.9 Types of Risk

The total variance of the rate of return is the sum total of various risks which are primarily classified into two types.

- Systematic Risk
- Unsystematic Risk

Hence, Total Risk = Systematic Risk + Unsystematic Risk

- **Systematic Risk**

It refers to that portion of the variability of an individual security's return caused by factors affecting the market as a whole as such it can be thought of being non diversifiable. It is because of this that it is also called market risk or relevant risk. The systematic risk is market related. In other words, it arises from the changes in the economy and market condition. For example, high inflation, recession, impact of political factors, wars, depression and long term changes etc which are beyond the control of company management. It affects all the firms in the market. The systematic risk is rewarded in the form of risk premium, Sometimes; systematic risk is called market risk. Systematic risk affects almost all assets in the economy, at least to some degree, whereas systematic risk affects at a small number of assets. The principle of diversification has an important implication to a diversified investor, only systematic risk matters. Systematic risk accounts for 25% to 50% of the total risk of any security. Some of the sources of systematic risk include:

- Interest rate changes
- Changes in purchasing power
- Changes in investor's expectation about the overall performance of the economy. Because diversification cannot eliminate systematic risk, this type of risk is the predominant determinant of the individual security risk premium. This risk is also called beta risk (Weston and Brigham, 1982:89).

- **Unsystematic Risk**

It is also called diversifiable risk or company specific risk or unavoidable risk. It is such a risk which is unique to the firm. The unsystematic risk is non market factors related. In other word, it arises from the project specific factors. This portion of risk is possible to reduce or eliminate through diversification of their investments. It is inherent individual companies or projects. It is the variability in the security's return caused by such factors as:

- Management capability and decisions
- The availability of the raw materials
- Strikes
- The unique effects of government regulations such as pollution control
- The effect of foreign competition
- The particular levels of financial and operating leverage of the firm employees (Weston and Brigham, 1982:89)

2.1.10 Measurement of Risk and Return

i) Standard Deviation

Any measure of risk has a definite value and for this, the measure of the tightness of the probability distribution is necessary. The tighter the probability of expected future return, the smaller the risk of a given investment .One such measure of risk is the use of standard deviation, the symbol for which is σ pronounced "sigma". The smaller the standard deviation, the tighter the probability distribution and accordingly, the lower is the risk of the stock. The larger the standard deviation, the more variable is an investment's returns and the riskier is the investment. A standard deviation of 0 indicates no variability and thus no risk (Van Horne, 1997:38).

Square each deviation and multiply it by the probability of occurrence of the applicable state of the economy, and then sum these products to obtain the variance (σ^2).

$$\sigma^2 = \text{Variance} = \text{Var} = \sum P_j [r_j - E(r_j)]^2$$

Take the square root of the variance to obtain the standard deviation. The square root of the variance of the rates of the return is called the standard deviation of the rates of return.

$$\text{Standard Deviation} = \sigma = \sqrt{\sum [r_j - E(r_j)]^2 P_j}$$

ii) Coefficient of Variation

The coefficient of variation shows the risk per unit of return, and it provides a more meaningful basis for comparison when the expected returns on two alternatives are not the same. If a choice has to be made between two investments which have the same expected returns but different standard deviation, most people would choose the one with the lower standard deviation and therefore same risk. Similarly given a choice between two investments with the same risk but different expected returns, investors would generally prefer the investment with the higher expected return. Investors want as much returns as little risk as possible and coefficient of variance helps to choose such investment or asset (Van Horne, 1997:39).

$$C.V = \frac{\sigma}{\bar{X}}$$

2.1.11 Concept of Co-Variance

The covariance is a measure of relatedness that depends on the units of measurement. For example – the height of parents co-varies positively with the height of their children. However, the size of the covariance will differ depending on which unit the height is measured. The height measured in inches will be 144 times the covariance measured in feet. For this reason, it is often convenient to employ a measure of relatedness that does not depend on the unit of measure. To compute a co-variance between two returns, it is necessary to pair each outcome for one return with a corresponding outcome for the other return. The set of probabilities attached to each pair is known as the joint

distribution of the two returns. To compute a covariance with the forward-looking approach, the probability weighted average of the product of the two demeaned returns associated with each of the paired outcomes is determined using the joint distribution (Weston and Brigham, 1980:336).

2.1.12 Portfolio

A portfolio is a combination of investment assets “Portfolio, which are combination of securities, may or may not take on the aggregate characteristics of their individual parts.” The portfolio is the holding of securities and investment in financial assets i.e. bond, stock. Portfolio manager is related to the efficient portfolio investment in financial assets.

Investors rarely place their wealth in a single assets rather, they contract a portfolio is simply an investment made on two or more than two securities of financial assets. Portfolio analysis considers the determination of future risk and return in holding various blends of individual securities of financial assets.

There are two types of objectives:

- **Primary Objectives:**
 - To maximized return
 - To minimized risk.
- **Secondary Objectives:**
 - Regular return
 - Stable income
 - Appreciation of capital
 - Ever liquidity
 - Easy marketability
 - Safety of investment
 - Tax benefits

2.1.13 Portfolio Return

A portfolio is collection of securities. Since it is rarely desirable to invest the entire funds of an individual or institution in single security, it is essential that every security be viewed in a portfolio context. The expected return of a portfolio is simply a weighted average of expected return of the securities containing in that portfolio. The weights are the proportion of total weight must sum i.e.100 percent. The general formula for expected return of portfolio is given:

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

Where,

$E(R_p)$ = Expected return on portfolio

W_i = Proportion of wealth investment in I assets.

W_j = Proportion of wealth investment in j assets.

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

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

2.1.14 Portfolio Risk

The calculation of portfolio risk is not as straight forward as the calculation of portfolio expected return. In the order to calculate the risk of a portfolio, consideration must be given not only to the risk of individual assets in the portfolio and their relative weight but also to the extent to which the assets return move together. "By combining the measures of individual assets risk (Variance or Standard deviation) relative assets weights and the co- movement of assets return (correlation or covariance) the risk of the portfolio can be estimate. It can be written as:

$$\sigma_p = \sqrt{\sigma_i^2 w_i^2 + \sigma_j^2 w_j^2 + 2\text{cov}(R_i, R_j) w_i w_j}$$

Where

σ_p = Standard deviation of stock i and j

W_i = Proportion of asset i

$W_j =$ Proportion of asset j

$\sigma_i =$ Variance of assets i

$\sigma_j =$ Variance of assets j

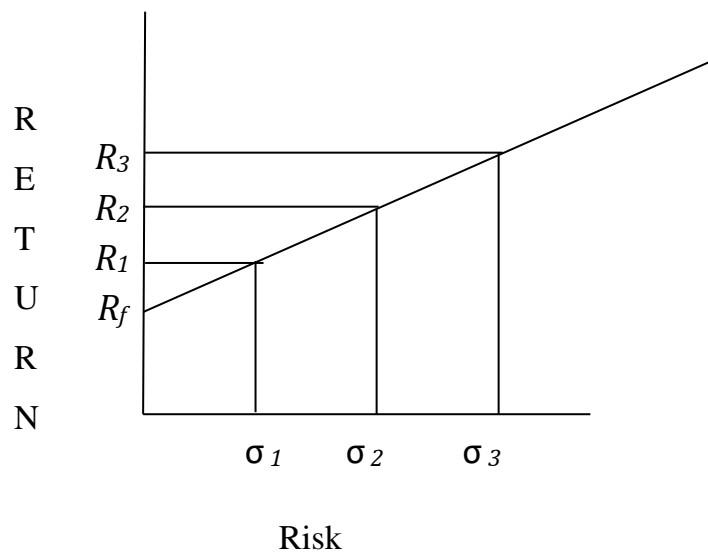
$\text{Cov}(R_i, R_j) =$ Covariance between the return of assets i and j

2.1.15 Relationship between Risk and Return

Investors are generally risk averse. This implies that risky investment must offer higher expected return than less risky investment in order to make the people buy and hold them. The risk aversion attitude of investors portfolio theory was developed and being very important subject in the field of finance. “Any individual investment may differ substantially from the adverse risk and return statistics. That is why it is prudent to investigate any assets before investing.

The relationship between the risk and return is described by investors’ perception about risk and their demand for compensation. No investors will like to invest in risky assets unless he is assured of adequate compensation for the assumption of risk. Therefore it is the investor required risk premiums that establish a link between risk and return. In a market dominated by rational investor higher risk will command by rational premium and the trade off between the two assumes a linear relationship between risk and risk premium. The observe difference in both the levels and variability of the rates of return across securities are indicative of the underlying risk return relation in the market.

Figure 2.1
Relationship between Risk and Return



The figure represents a higher premium for a higher risk in a linear fashion indicating a premium of $(R_1 - R_F)$ for σ_1 degree of risk $(R_2 - R_F)$ for σ_2 degree of risk and so on. Risk premium will be change in increase or decrease in proportion of risk. R_F stands for return on risk free security. The partial interest is the difference in rates of return across sacrifice, since provide valuable clues to the market's trade off between risk and return.

Rational investors would agree that an investment's required return should increase as the risk of investment increase. Most investors would also agree how the expected rate of return should be calculated. But when the discussion turns to risk, the debate begins.

2.1.16 Capital Assets Pricing Model

CAPM is a model that describes the relationship between risk and expected return. It was developed by William F. Sharpe, who was awarded the 1990 Nobel Prize for economics. In this model, a security's expected return is the risk free rates plus a premium based on the systematic risk of the security. The CAPM equation is suggested for the computation of expected rate of return on common stock.

This model is a under:

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

K_r =Required Rate of Return or Equilibrium rate of return for stock j.

R_f =Risk free rate of return.

$E(R_m)$ =Expected return for the Market portfolio.

B_j =Beta Coefficient of stock j.

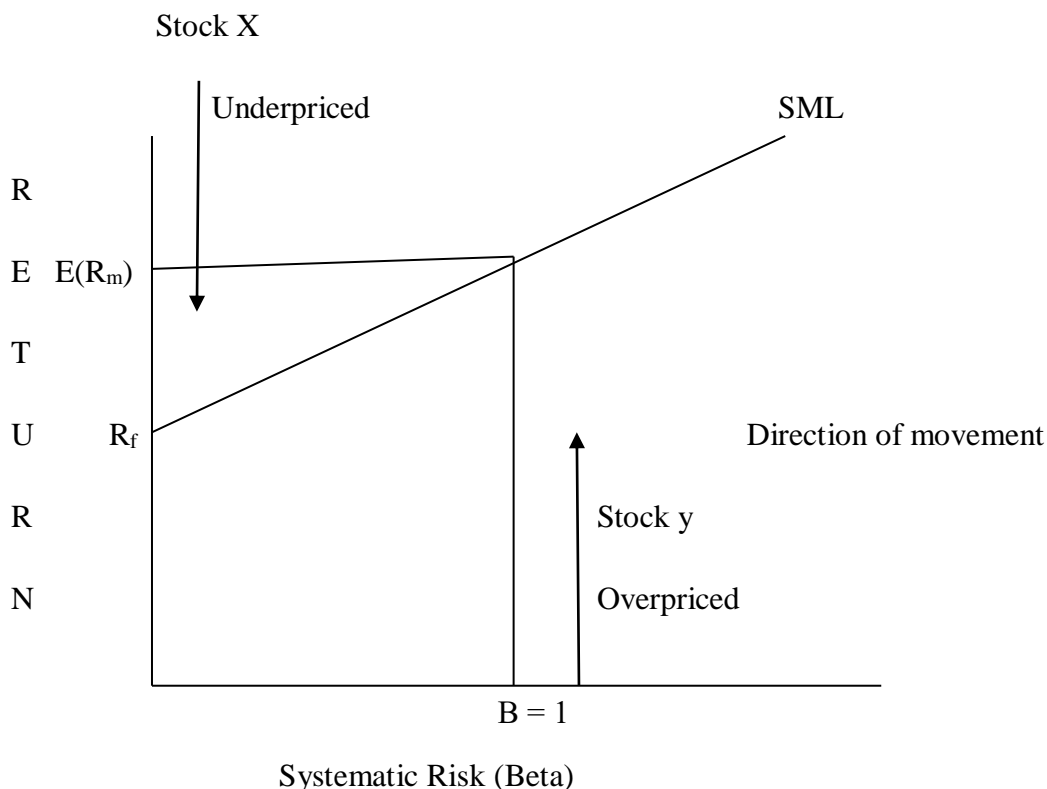
It means the sensitivity of stock's returns; it changes in returns on the market Portfolio. The beta of portfolio return is simply a weighted average of the individual stock beta in the portfolio.

If beta is 1 (one) then required return is simply the average return for all situations that is the return on market portfolio; otherwise, the higher then the premium and the total return required. A relatively high beta does not however, guarantee a relatively high return. The actual return depends partly on the behavior of the market, which acts as a proxy for general economic factors.

Premium is the amount of excess return over the risk free rate that investors demand for holding a risky security such as stock. Financial economists, William sharp are one of the creators of the CAPM a theory which began a quest to identity the tendency portfolio. In fact of the CAPM as it is called is very useful tool. It has been taken as a prescription for the investment portfolio, as well as a tool for estimating an expected rate of return. Comparison between the expected rates of returns and require rate of return can analyze the stock to be under priced. And when these two return are equal than it is said to be market equilibrium i.e. all stock lie on the security market line (SML). "The graphical version of CAPM is called the security market line which shows the relation between risk and the required rate of return.

Figures 2.2

Under – Priced and Overpriced Stock During Temporary Market Disequilibria



The security market line clearly shows that return is increasing function. In fact a linearly increasing function of risk. Furthermore, it is only market risk that effects return. The investors receive no added return for being diversifiable risk. The slope of SML is the risk premium of the market portfolio. At the point where $\beta=1$ (which is the beta of the market portfolio) on the horizontal axis, it can read off the vertical axis the expected return of the market portfolio.

Stock that are overpriced lies below the SML and the stock that are underpriced lays above the SML diagram which shows the security market line with overpriced and underpriced.

Above diagram clarifies that stock X being underpriced, its expected rate of return is greater than required rate of return. And stock Y is expected to provide lower rate of return than required rate to compensate the systematic risk. Investors seek the opportunity to invest in stock X for superior return.

Investing in stock X is rush to buy it. This action (increase in demand) would drive price up and the expected return, until the expected return was on the SML. In case of stock Y, investor holding this stock would sell it, recognizing that they could obtain a higher return for same amount of systematic risk with other stocks. These selling pressure would drive Y's market price down and its expected return up until the expected return was on SML. When the expected returns for these two stocks to the SML market equilibrium will again prevail. Few people discuss with that idea that investors require some extra return for taking risk. That is why common stocks require higher return than government Treasury bill (which is assumed to be risk free, because of taxing power that government enjoy). No one would want to invest in risky common stock, if they offered only the same expected return as bills.

The CAPM captures these ideas in a simply way. That is why many financial managers find it the most convenient to for coming to the decision with the slippery motion of risk. And it is why economists often use the CAPM to demonstrate important ideas in finance even when there are otherwise to prove these ideas. But this does not mean the CAPM is ultimate truth.

2.2 Reviews of Related Studies

Although, there are very less articles published about the risk and return analysis of Nepalese commercial banks, some of the related articles published in national and international newspapers and journals are extracted below. "There is growing empirical evidence that multiple factors are cross-sectionally correlated with average returns in the United States. Measured over a long time, stocks of small firms earn higher average returns than that of the bigger firms.

Fama French (1992, 1996) and Lakonishock, Shleifer and Vishny (1994) show that value stocks with high book-to-market, earning to price, on cash-flow to price outperform growth stocks with low book-to-market, earning-to-price, on

cash-flow to price. Moreover, stocks with high return over the year continue to outperform stocks with poor prior performance. The evidence that beta is also compensated for average returns is weaker. The interpretation of evidence is strongly debated. Some believe that the premium are a compensation for pervasive risk factors, others attribute them to firm characteristics or an inefficiency in the way market incorporate information into prices. Yet others average that the premiums may be biased by survivorship or data snooping. Again from the perspective of collecting independent samples, emerging market countries are particularly interesting because of their relative isolation from the capital markets of other countries. Compared to the developed markets, the correlation between most emerging markets and other stock markets has historically been low (Harvey, 1995) and until recently many emerging countries restricted investment by foreign investors. Interestingly, Bekaert and Harvey found that despite the recent trend toward abolition of these restrictions and the substantial inflows of foreign capital, some emerging equity markets have actually become more segmented from world capital markets. A large portion of the equity capital of emerging economies is held by local investors who are likely to evaluate their portfolios in light of local economies and market condition" (Rouwenhorst, K. Greet (1999/1439-40). "The share transaction in NEPSE is mostly dominated by commercial banks followed by the finance companies in terms of number of share traded and transaction amount. The faith of the investors in the shares of commercial banks is growing. As the commercial banks are more and more diverse in their services, and with the new explore of investment areas, the banks are earning more profit each year. This has positively affected the investment of the investors. However the investors seemed to have less willingness to find the long term consequences of the banks' current investment. They also, do not understand the reason behind the banks' growing profit amount. Without any proper analysis of risk and return of these banks, it is possible that the investor's faith may collapse as the house of card in the days ahead" (Ghimire, Vijay, The Kantipur Daily, 2007:5) Akhigbe and Whyte (2004) in their

research paper, “The Gram-Leach-Bliley Act” of 1999: Risk implications for the Financial Service Industry have focused on risk implication of banking and private sectors. The research paper has included many other studies some of the studies find that bank expansion into banking activities can affect events that permitted only limited entry by banks into non banking activities. The study is conducted on systematic, unsystematic and total risk, such risk are calculated by using statistical tools i.e. variance and standard deviation. The study has included 340 banks for the sample size than they partition two sub-samples: 46 large banks and 294 small banks.

The major finding of the study is that evidence of a significant decline in systematic risk for the banks securities firm and insurance companies but a significant increase in total and unsystematic risk for the banks and insurance companies are less risk than other securities business. If security wants to decline in risk, security firm can be explained by their ability to diversify into less risky banking and insurance activities. The research paper result suggests that regulators should carefully monitor and supervise banking activities in new era of financial modernization to mitigate effects from the increase in risk (Akhigbe and Whyte: 2004). Pagano's (2001) has a study on how theories of financial intermediation of corporate risk management influence Bank risk taking behavior. This paper has based on the relation for the risk taking and risk management behavior from a both corporate finance and banking perspective. That data set covers the period from 1986-94, 1986-90 and 1991-94 but overall time of study is nine year period. In this study, the research scholar has used mathematical tools that are the standard deviation, total risk (systematic and unsystematic risk), and interest rate risk. The main objective of the study is to examine the relation for risk taking and risk management behavior for both corporate financial and a banking perspective. After combining the theoretical insights from the corporate finance and banking literatures related to hedging and risk taking the paper reviewed empirical tests based on these theories to determine which of these theories are best supportive

by the data. Management incentives appear to be must consistently supported rational for describing how bank manage risk. In particular, moderate/high levels of equity ownership reduce bank risk while positive amount of stock option grants increase bank risk-taking behavior. The empirical tests of theory of corporate risk management need to consider individual subcomponents of total risk and the bank ability to trade these risks in a component financial market (Pagano's, 2001). An article entitled “Expected Return, Realized returns and Assets Pricing Tests” by Edwin J Elton as journal of finance in the year 1999 is relevant to this study. In this he pointed out the fundamental issues in finance like what the factors are that affect expected return on assets, the sensitivity of expected return to those factors and the reward for bearing this sensitivity. There is a long history of testing in this area and it is clearly one of the most investigated assess in finance. Almost all of the testing being aware of using realized returns as a process for expected returns. The sue of a average realized relies on a belief that information surprises tent to out over the period of a study and realized returns are therefore an unbiased estimate of expected returns. However he believes that there is ample evidence that this belief is misplaced. There are period longer than 10 years during which stock market realized returns are one average less than risk free rate (1973 to 1984). There are periods longer than 50 years in which risk long term bond s on average underperform the risk free rate. Having a risky asset with expected return above the risk less rate is an extremely weak condition for realized returns to be an appropriate process for expected return, and 11 and 50 years is an awful longtime for such a weak condition not to be satisfied. In the recent past, the United States has had stock market returns of higher than 30% per year while Asian Markets have had negative returns (Elton, 1999:26).

2.3 Review of Thesis

Three theses has been reviewed in this section which seems to be little relevant with the study. Some of them, which are relevant for this study, are presented below:

Khatiwada (1996), entitled "*Risk Analysis of Commercial Banks*" one of the objectives was to analyze the stock market performance. In this aspect, the finding was – "interest rate so ascertained by financial institution for the year 1995 ranges from 12% to 12.75% per annum. As it is reviewed, commercial banks deposits accepted on fixed term carry 8% to 9.5% per annum interest rate in the same year. Although interest rate on fixed deposit in an immediate return was generated through savings, the return on securities cannot be exactly predicted. Some of the companies yield on their securities investment is very low as compared to the immediate return earned through fixed deposit." But he had not stated the common stock return in any exact figure. About the market price movement of common stock, Khatiwada summarized that leaving some exceptional cases aside, almost all the companies experienced their market price going down by less than 50% in 1995. Even the banking group could not spare the share price going down. More specifically, the year 1995 was a disheartening period for the stock price. It is because, almost all the company's share price during the year were down even in some cases below the face value. But the reason behind this deep declination in prices was not mentioned in the thesis. The study had also not focused on the analysis of individual security and the view point of the investors.

Sapkota (2001) on "*Risk and Return Analysis of Commercial Bank*" is more relevant than the previous one. He had stated one of the objectives as an analysis of the volatility of different stocks and other relevant variables that should be considered while deciding investment in stocks. This objective is vague but in findings, he had written that – "most of the Nepalese investors still invest on different securities on the basis of expectation and assumption of individual security rather than analysis of effect of portfolio. Again analysis of coefficient of variance and the correlation analysis are seldom done for forming portfolio and making investment". He has also said that the portfolio between the common stock of the same industry cannot reduce risk properly. So, portfolio should be so constructed that it reduces the overall risk and increase

the overall return and for this, the securities having negative correlation should be selected.

Shrestha (2003), on "*Stock Market and Investment*" has made a conclusion that "though the Nepalese investors in the last decade had grown investment in the share of the commercial banks, development banks and finance companies a lot, their investment decisions are merely depends upon rumors and baseless expectations. A proper analysis of firm's financial positions and its potentiality of future growth are not given much priority for the investment." It was noticed in her study that there is a positive correlation between risk and return character of the company. Nepalese capital market being inefficient, the price index itself is not sufficient to give the information about the prevailing market. Situation and the company proper regulation should be introduced so that there is more transparency in issuance, sales and distribution of the securities. Investors do not have any idea about the procedures of the securities issuance. Neither company nor the stock brokers transmit any information to the investors about the current market situation and hence it becomes difficult for common investors to invest in the securities. Both government authorities and the stock exchange regulator body should try to promote healthy practices so that the stock brokers do not give false information to the investors for their personal benefit which is a common practice in Nepal.

2.4 Others

Very few independent studies can be found in the topics of finance. Specifically, it is rare in the case of this research topic, risk and return analysis. However the available independent studies which are related to the Nepalese stock market and about shareholders are reviewed here. The study carried out by professor Dr. Manohar Krishna Shrestha (1995) in the title of "Shareholder's Democracy and Annual General meeting feedback" is reviewed here. Dr. Shrestha prefers to consider this book as assemblage of opinions which he had expresses in different occasions of various annual general meeting here he has

critically analyzed the situation of common stock investors and the situation of common stock investors and the situations that is not improving till date. The content of the book have been divided into two parts. The first part includes views on the rights of the shareholders regarding how they can exercise them in democratic perspective , where as the second part consists of feedback and the issues raised by shareholders art different annual general meeting of the public limited d companies and financial institutions. Writer has found the overall shareholders democracy in terms of the protection of their interest, is basically focused on the payment of satisfactory wealth by appreciating the value or share they hold. In many cases the existing authoritarian mentality of management seems to have not considered the shareholders in deciding managerial plans and policies. Top level decision often by pass the interest of shareholders. As the management lacks serious concerns about the protection of shareholders rights and expectations. The annual general meeting has become a platform for shareholders to express their opinion and grievance in front of the management and board of directors. Many general meeting feedbacks reveal no serious response to the feelings of shareholders. Thus it reflects unwillingness of the management and broad of directors to change their traditionally held activities towards shareholders (Dr. Manohar Krishna Shrestha, 1995:86).

2.5 Research Gap

I have done a lot of research then the past research. While analyzing risk and return, I have compared co-variance, correlation and beta with market (NEPSE) but in past research it does not. The data used in past research was ambiguous but my research is simple and understandable. I have used recent data and information. Table, chart and diagram have been used to make the study clear.

CHAPTER - III

RESEARCH METHODOLOGY

This study has aimed to explore the risk and return aspects of various joint venture commercial banks during the last seven years. Being focused on the commercial banking sector, the study has done the comparative analysis between the commercial banking risk and return with that of risk and return of the other sectors and also with the market. It has also studied how sensitive the stocks of commercial banks with the NEPSE Index. And to fulfill their objective, a systematic research methodology has been adopted, which has been organized under the following heading.

- Research Design
- Population and Sample
- Sources of Data and Data Collection Techniques
- Specific Research Questions
- Method of Analysis and Presentation.

3.1 Research Design

An attempt has been made in this paper to determine risk and return aspects of various joint venture commercial banks. The study has adopted historical and analytical research design. The data utilized are mostly secondary in nature. Some theoretical models have been used and discussed to analyze return and risk characteristics of those commercial banks. The research is based on historical data. For this purpose survey was conducted. Survey is non experimental research design, classified as either descriptive or exploratory, although there is no difference in classification. They are designed to obtain information from sample population. Survey is conducted to obtain detail information of existing variable by either structured questionnaires or structured (or unstructured interviews). Collected data is simply explored by using some statistical tools. As most of the data are quantitative, the research is

based on scientific method. Detail analyses of different variables have been made using both the financial and statistical tools. The raw data have been arranged in the tables and various charts and bar-diagrams have been used to clearly depict the data and findings. The period of study is between 2060/61 to 2065/66.

3.2 Population and Sample

The population of commercial banks would represent all the joint venture commercial banks that have been listed in the NEPSE. The population of the study thus includes:

Nepal Investment, Bank Limited, Standard Chartered Bank Limited, Himalayan Bank Limited and Everest Bank Limited. However, due to the constraints of time and unavailability of data of banks, only the Four joint-venture commercial banks are taken as the sample, which have already been listed in the NEPSE during the period studied. The selected banks taken for the study are:

- Nepal Investment Bank Limited.
- Standard Chartered Bank Limited
- Himalayan Bank Limited
- Everest Bank Limited.

3.3 Data Collection Techniques

The study is mainly based on secondary data however primary data have been taken with the individual investor, NEPSE staff and stockbrokers. The secondary data are collected mainly from sources like annual reports, prospectus published bulletins, news paper, journal internet and other sources. Secondary data are collected from various publications of concerning organizations from NEPSE and even from Websites of various banks. The research work has covered a period of six years i.e., FY 2060/61 to FY 2065/2066. In brief, the source of data can be dividend into two parts.

3.3.1 Primary Sources

Unpublished data or adopting from the spot by questionnaire, Mail method, direct visit method, observation method so on are called primary sources. To write the thesis report, I used personal as well as personal as well as telephone interviews, mobile contract and also using SMS service conducted to collect more information on the subject.

3.3.2 Secondary Source

Collected from published matters i.e. speeches, articles, news, report, thesis, books are called secondary sources. The major sources of secondary data for the study are :-

- Published documents of different institution the NEPSE, trading report.
- Published Journals from Nepal Rastra Bank.
- Abstracts articles and newspaper.
- Published documents of government with related commercial banks
- Other related records and data relevant to the study, economic journal, financial report and policy.

3.4 Tools for Analysis

3.4.1 Market Price of Share (P)

One of the major data of this study is market price of the stock. Market price of stock for a particular year should have represented the average price of the year, but for the sake of simplicity, prices of the stock at the closing date of the fiscal years are taken as the market price of stock for the particular years. And these data are taken from the annual reports of the respective banks. Here in this study, each year closing price is taken as the market price of stock which has specific time span of one year and the study has focused in annual basis. To get the real average, volume and price of each transaction in the whole year are essential which is tedious and impossible too, considering the data availability and maintenance. Market value in the secondary market is determined by the supply and demand factors and reflects the opinion of investors and trader

concerning the values of the stock closing price is used as market price of stock because it is very difficult to obtain and include these all information and average of high and low price may not be reliable and Representative information.

3.4.2 Dividend (D)

Dividend per share (including Bonus) provided under the major indicator section of the respective banks have been used for the study. Dividend is the part of earning that is distributed to the shareholders as a part of their investment. Dividend is return to equity capital that consist price of time and price of risk taking by the investors. The total amount of dividend out of earning available to the shareholder if distributed, the common stock's portion is said Dividend per share (DPS). Symbolically DPS can be expressed as follows:

$$DPS = \frac{\text{Total Amount of Dividend Paid}}{\text{No. of Common Shares Outstanding}}$$

If company declares only cash dividend, there is no problem while taking the exact amount of dividend that is relevant. But if the company declares stock dividend (bonus share), it is difficult to obtain the amount that really shareholders has gained. In this case, they get extra numbers of shares as dividend and simultaneously price of stock declines as a result of increased number of stocks. To get a real amount of dividend following model has been used throughout.

$$\text{Total Dividend Amount} = \text{MPS} \times \text{Cash Dividend\%} + \text{MPS} \times \text{Stock Dividend\%}$$

3.4.3 Return on Common Stock Investment (R)

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

Symbolically,

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

Where;

R = Actual rate of return on common stock at time t.

D_t = Cash dividend received at time t.

P_t = Price of a stock at time t.

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

3.4.4 Expected Return of Common Stock R

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

Symbolically,

$$E R_j = \bar{R}_j = \sum \frac{R_j}{N}$$

Where,

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

N = Number of years that the return is taken.

Σ = Sign of Summation.

3.4.5 Standard Deviation

It is a statistical measure of the variability of a distribution of return around its mean. It is the square root of the variance and measure the unsystematic risk on stock investment. It is widely used to measure risk from holding a single asset. It is also a statistical measure of the variability of a set of observations. The standard deviation represents a large dispersion of return and is a high risk and vice versa. The symbol is called (σ) sigma. It is the measure the total risk on stock investment.

Symbolically,

$$\text{Standard Deviation } (\sigma_j) = \sqrt{\frac{\sum(R_j - \bar{R}_j)^2}{N-1}}$$

where,

σ_j = standard deviation of returns on stock j during the time period n.

R_j = Probability distribution of the observation

\bar{R}_j = Expected rate of return on stock j.

N = Number of years that the returns are taken

3.4.6 Coefficient of Variance (CV)

It is the ratio of standard deviation of returns to the mean of that distribution. It is a measure of relative risk and 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.

Symbolically,

$$CV = \frac{\sigma_j}{\bar{R}_j}$$

Where,

C.V. = Coefficient of variation of stock

σ_j = standard deviation of returns on stock j.

\bar{R}_j = Expected rate of return on stock j.

3.4.7 Beta (β)

It is an index of systematic risk. It measures the sensitivity of a stock's return on the market portfolio. Higher the beta, higher 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.

Symbolically,

Beta

$$B_j = \frac{\text{COV}_{R_j, R_m}}{\sigma_m^2}$$

where,

B_j = Beta coefficient of stock j

$\text{Cov. } R_j, R_m$ = Covariance between R_j and R_m , and equal to

$$\text{Cov. } R_j, R_m = \frac{(\sum R_j - \bar{R}_j)(R_m - \bar{R}_m)}{N-1}$$

σ_m^2 = Variance of market return.

3.4.8 Correlation Coefficient

Correlation coefficient is the relationship between two variables where one variable is independent and other variables are dependent. 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. It always lies in the range of +1 to -1. A positive correlation coefficient indicates that the returns from two securities generally move in the same direction or vice-versa. 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 is used to test the significant relationship between risk and expected return. It can be calculated as follows.

$$\text{COV}_{jm} = \sigma_j \sigma_m \rho_{jm}$$

$$\rho_{jm} = \frac{\text{COV}_{jm}}{\sigma_j \sigma_m}$$

Where σ_j and σ_m are the standard deviations of returns for assets J and Market and ρ_{jm} is correlation coefficient for asset I and Market.

3.4.9 Return on Market

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

$$R_m = \frac{\sum R_m}{N}$$

Where,

Σ = sign of summation.

R_m =Market return

N =Number of samples period

3.4.5 Standard Deviation

It is a statistical measure of the variability of a distribution of return around its mean. It is the square root of the variance and measure the unsystematic risk on stock investment. It is widely used to measure risk from holding a single asset. It is also a statistical measure of the variability of a set of observations. The standard deviation represents a large dispersion of return and is a high risk and vice versa. The symbol is called (σ) sigma. It is the measure the total risk on Market..

Symbolically,

$$\text{Standard Deviation } (\sigma_j) = \sqrt{\frac{\sum (R_m - \bar{R}_m)^2}{N-1}}$$

where,

σ_m = standard deviation of returns on Market during the time period n.

R_m = Probability distribution of the observation

\bar{R}_m = Expected rate of return on stock j.

N = Number of years that the returns are taken

3.5 Method of Analysis and Presentation

Methods of analysis are applied as simple as possible. Results are presented in tabular form and clear interpretation on it is given simultaneously. Detail calculations, which cannot be shown in the body part of the report, are presented as annexes at the end of the report. To make report simple and easily understandable; charts, bar diagrams and charts have been used. Summary, findings and recommendations are presented finally.

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

This chapter includes analysis of data collected and their presentation. In this chapter the effort has been made to analyze “Risk and Return of Sampled commercial banks. Detail data of MPS, EPS and dividend of each bank and their interpretation and analyses is done with reference to the various reading and literature review in the preceding chapter. Efforts are made to analyze and diagnose the recent Nepalese stock market movement, with a special reference to the listed commercial banks. The analysis of data consists of organizing, tabulating and assessing financial and statistical result from different tables and diagrams are drawn to make the results more simple and understandable.

4.1 Nepal Investment Bank Ltd (NIBL)

4.1.1 Introduction

Nepal Investment Bank Ltd, 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 was Credit Agricole Indosuez, a subsidiary of one of the largest banking groups in the world. With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessmen, in April 2002, acquired 50% of the holdings of Credit Agricole Indosuez in Nepal Indosuez Bank. The name of the bank was changed to Nepal Investment Bank Ltd. upon approval of the Bank’s Annual General Meeting, Nepal Rastra Bank and Company Registrar’s Office. Out of total equity shares of NIBL, 50% shares hold by a group of companies, 15% shares by Rastriya Banijya Bank, another 15% shares by Rastriya Beema Sansthan and remaining 20% being held by the General Public (which means that NIBL is a company listed on the Nepal Stock Exchange).

4.1.2 Analysis of Total Dividend

Table 4.1

MPS, Dividend, EPS and P/E Ratio of NIBL

FY	MPS (in Rs.)	Cash DPS (%)	Stock Dividend (%)	Total Dividend	EPS(RS) P/E	P/E Ratio
2060/61	940	15	-	141.000	0.4392	18.18
2061/62	800	12.5	-	100.000	39.5	20.25
2062/63	1260	20	35.46	698.796	59.35	21.23
2063/64	1729	5	25	518.700	62.57	27.693
2064/65	2450	7.5	33.33	1,000.335	57.87	42.33
2065/66	1388	20	0	277.600	37.42	37.1
	Total			2,736.431		

Source: AGM Report of NIBL 2060/61 to 2065/66

According to table 4.1, NIBL is not paying stock dividend in 2060/61, 2062/63 and 2065/66 year. In the year 2062/63, 2063/64, and 2064/65 it is paying both cash and stock dividend. Highest total dividend is paid in the year 2064/65 i.e. Rs 1000.335 and minimum total dividend is 100 in 2061/62 Year. P/E ratio of NIBL is maximum in the year 2064/65 i.e. 42.33 and minimum in the year 2060/61 i.e. 18.18. The closing MPS of NIBL is maximum of Rs. 2450 in the year 2064/65 and minimum of Rs. 800 in the year 2061/62.

Figure 4.1

Year and Market Price Movement of NIBL

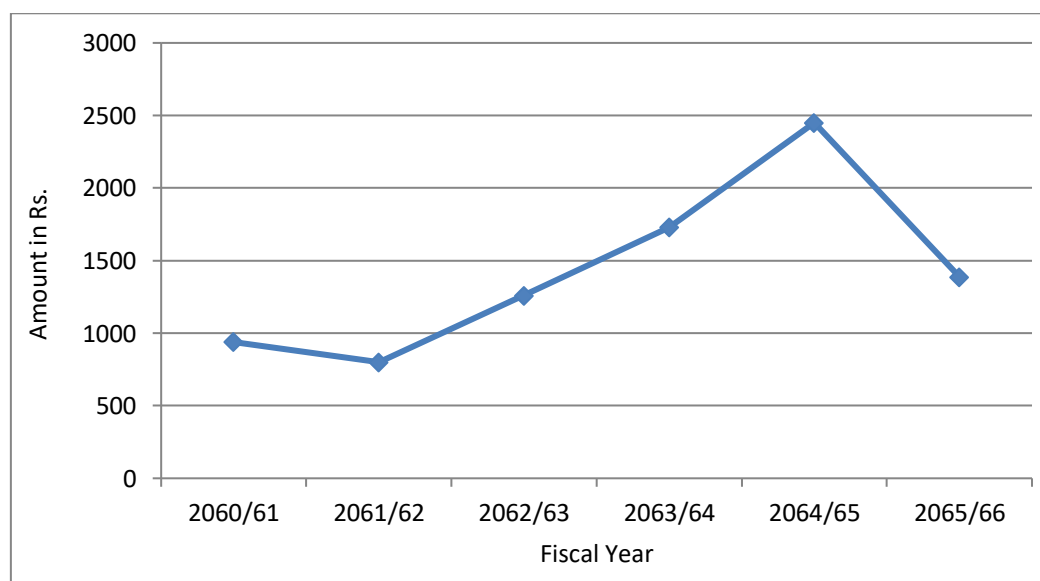


Figure 4.1 shows the trend line of market price in several year of NIBL. It can be seen that there is fluctuation of market price from year 2060/61 till 2065/66. There is minimum price in the year 2061/62 i.e. Rs. 800 and maximum in the year 2064/65 i.e. Rs. 2450. The trend reaches the peak point in the Year of 2064/65.

4.1.3 Expected Return (R_j), Standard Deviation (σ) and Coefficient of Variation (C.V) of NIBL

Table 4.2

Expected Return, Standard Deviation and Coefficient of Variation of NIBL

FY	MPS (in RS)	Total Dividend	R_j	$(R_j - \bar{R}_j)$	$(R_j - \bar{R}_j)^2$
2060/61	940	141.000	-	(0.478)	0.228
2061/62	800	100.000	(0.043)	(0.520)	0.270
2062/63	1260	698.796	1.448	0.971	0.943
2063/64	1729	518.700	0.784	0.306	0.094
2064/65	2450	1,000.335	0.996	0.518	0.268
2065/66	1388	277.600	(0.320)	(0.798)	0.636
	Total		2.865		2.440

Where,

R is calculated with the use of following formula.

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

The detail calculations of R for each fiscal year are given in Annex 1.

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

$$= \frac{2.865}{6}$$

$$= 0.478$$

The detail calculation of $(R_j - \bar{R}_j)$ and $(R_j - \bar{R}_j)^2$ for each fiscal year are given in Annex 2.

$$\begin{aligned} \text{Standard Deviation } (\sigma) &= \sqrt{\frac{(R_j - \bar{R}_j)^2}{N-1}} \\ &= \sqrt{\frac{2.440}{6-1}} \\ &= 0.699 \end{aligned}$$

Coefficient of Variance

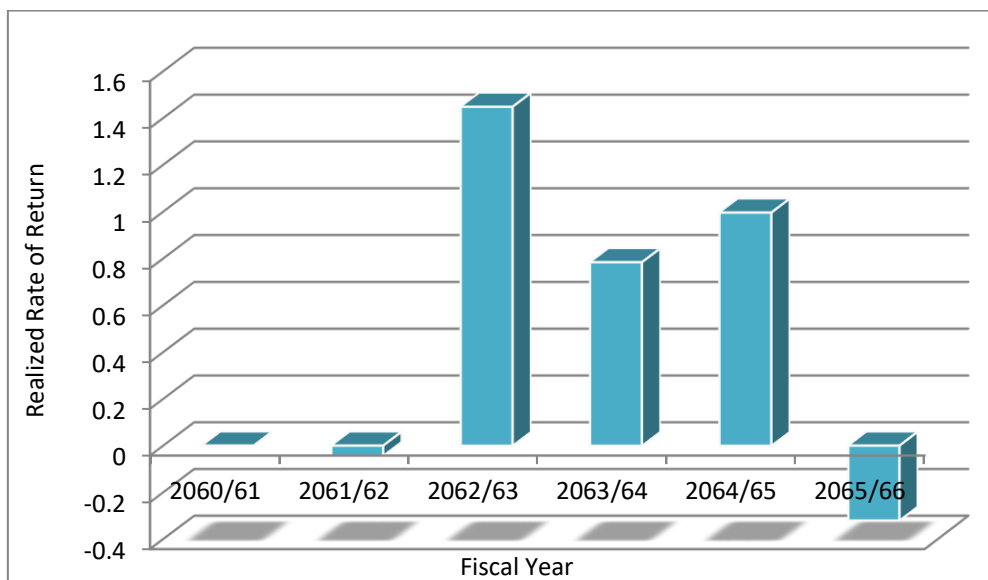
$$CV = \frac{\sigma}{R} = \frac{0.699}{0.478} = 1.462$$

Expected return of NIBL is 0.478 with the total risk (measured by S.D) of 0.699. The C.V of NIBL is 1.462 which denotes that to get per unit return 1.462 risk must be sacrifice.

Following bar diagram shows the realized rate Return per share of Nepal Investment Bank Limited in the various years under study.

Figure 4.2

Realized Rate of Return per share of Nepal Investment Bank



Source: (Table no 4.2)

The figure 4.2 shows that the expected rate of return of NIBL in several years. The rate of return is maximum on 2062/63 i.e. 1.448 which shows highest return profitable while the return is negative in the year 2061/62 and 2065/66.

4.2 Standard Chartered Bank Limited Nepal (SCBL)

4.2.1 Introduction

Standard Chartered Bank Nepal Limited (SCBL), previously known as Nepal Grindlays Bank Limited has been in operation in Nepal since 30th January 1987 when it was initially registered as a joint-venture operation. Today the bank is an integral part of Standard Chartered Group having an ownership of 75% in the company with 25% shares owned by the Nepalese public. The bank enjoys the status of the largest international bank currently operating in Nepal, with 18 points of representation, 23 ATMs across the country and with more than 350 local staff; Standard Chartered Bank Nepal Ltd. is in a position to serve its customers through an extensive domestic network. In addition, the global network of Standard Chartered Group gives the bank a unique opportunity to provide truly international banking services in Nepal. SCBL offers a full range of banking products and services in consumer banking , wholesale and SME Banking catering to a wide range of customers encompassing individuals, mid-market local corporate, multinationals, large public sector companies, government corporations, airlines, hotels as well as the DO segment comprising of embassies, aid agencies, NGOs and INGOs.

4.2.2 Analysis of Total Dividend

Table 4.3

MPS, Dividend, EPS and P/E Ratio of SCBL

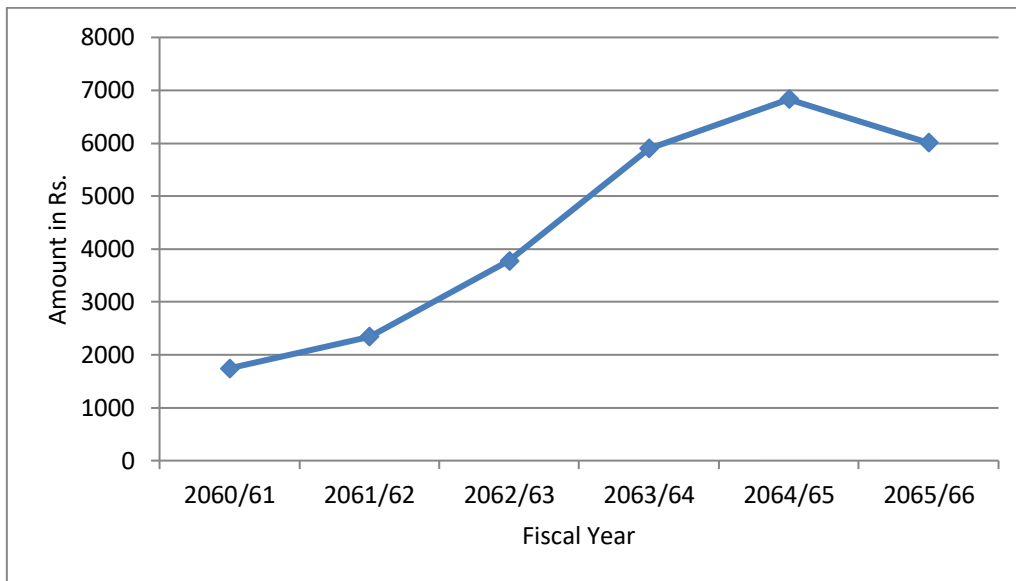
FY	MPS in Rs	Cash DPS (%)	Dividend (%)	Total Dividend (in Rs)	EPS (Rs)	Ratio
2060/61	1745	110	-	1919.5	100.22	18.08
2061/62	2345	120	-	2814	143.14	16.38
2062/63	3775	130	10	5285	175.84	21.47
2063/64	5900	80	50	7670	167.37	35.25
2064/65	6830	80	50	8879	131.92	51.77
2065/66	6010	50	50	6010	109.99	54.64
	Total			32577.5		

Source: (AGM Report of SCBL 2060/61 to 2065/66)

According to table 4.3, SCBL is not paying stock dividend in 2060/60 and 2061/62 year. Highest total dividend is paid in the year 2064/65 i.e. Rs 8879. P/E ratio of SCBL is maximum in the year 2065/66 i.e. 54.64 and minimum in the year 2061/62 i.e. 16.38. The closing MPS of SCBL is maximum of Rs. 6830 in the year 2064/65 and minimum of Rs. 1745 in the year 2060/61.

Figure 4.3

Year and Market Price Movement of SCBL



Source: (Table no 4.3)

Figure 4.3 shows the trend line of market price in several year of SCBL. The trend line shows the rapid growth after 2060/61 to 2064/65. There is minimum price in the year 2060/61 i.e. Rs. 1774 and maximum in the year 2064/65 i.e. Rs. 6830.

4.2.3 Expected Return (R_j), standard Deviation (σ) and Coefficient of Variation (C.V) of SCBL

Table 4.4

Expected Return (R_j), Standard Deviation (σ) and Coefficient of Variation (C.V) of SCBL

FY	MPS (in RS)	Total Dividend	R _j	(R _j - \bar{R}_j)	(R _j - \bar{R}_j) ²
2060/61	1745	1919.5	0.000	-1.640	2.690
2061/62	2345	2814	1.956	0.316	0.100
2062/63	3775	5285	2.864	1.224	1.497
2063/64	5900	7670	2.595	0.955	0.911
2064/65	6830	8879	1.663	0.023	0.001
2065/66	6010	6010	0.760	-0.880	0.775
	Total		9.837		5.973

The detail calculations of R for each fiscal year are given in Annex 1.

Now,

$$\begin{aligned} \text{Expected Return } \bar{R} &= \frac{\sum R}{N} \\ &= \frac{9.837}{6} = 1.640 \end{aligned}$$

The detail calculation of (R_j - \bar{R}_j) and (R_j - \bar{R}_j)² for each fiscal year are given in Annex 2.

$$\begin{aligned} \text{Standard Deviation } (\sigma_j) &= \sqrt{\frac{\sum (R_j - \bar{R}_j)^2}{N-1}} \\ &= \sqrt{\frac{5.973}{(6-1)}} \\ &= 1.093 \end{aligned}$$

Coefficient of Variance

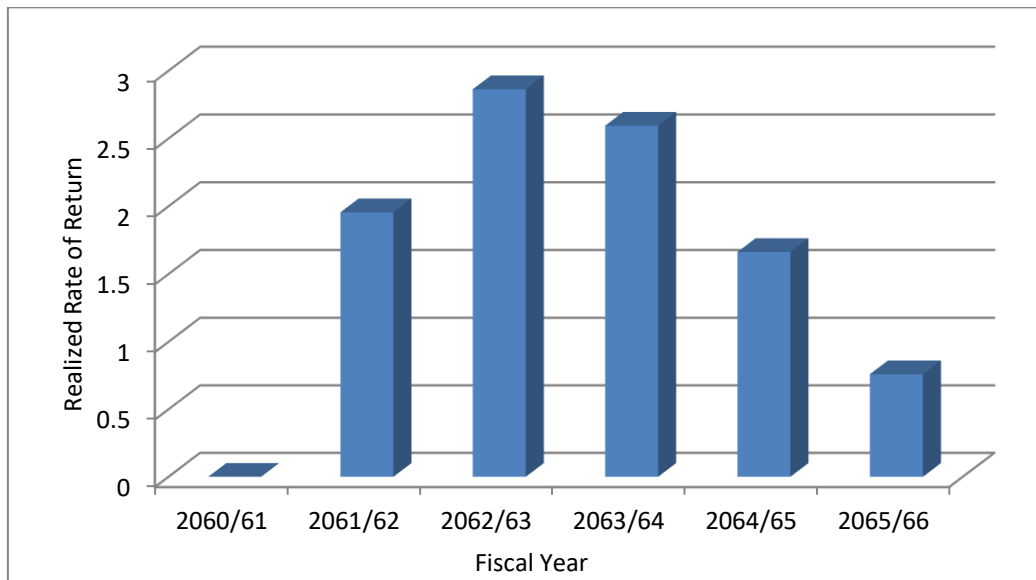
$$CV = \frac{\sigma}{\bar{R}} = \frac{1.093}{1.640} = 0.666$$

Expected return of NIBL is 1.640 with the total risk (measured by S.D) of 1.093. The C.V of NIBL is 0.666 which denotes that to get per unit return 0.666 risk must be sacrifice.

Following chart shows the rate of return of Standard Chartered Bank Limited in the various years under scrutiny.

Figure 4.4

Realized Rate of Return of Per Share of Standard Chartered Bank Ltd.



Source: (Table no 4.4)

The figure 4.4 shows that the expected rate of return of SCBL in several years. The rate of return is maximum on 2062/63 i.e. 2.864 which shows highest return profitable while the return of return is minimum in the year 2065/66 i.e.0.760.

4.3 Himalayan Bank Limited (HBL)

4.3.1 Introduction

Himalayan Bank Limited (HBL) was incorporated in 1992 by a few distinguished business personalities of Nepal in partnership with Employee Provident Fund and Habib bank Limited, one of the largest commercial bank of Pakistan. Banking operation was commenced from January 1993. HBL does not include government ownership. It has been established to maintain the economic welfare of the general people to facilitate loan for agriculture industry and commerce to provide the banking service to the country and people. It is the first commercial bank of Nepal with maximum share holding

by Nepalese private sector. Besides commercial, activities, the bank also offers industrial and merchant banking. Its ownership is composed of founder shareholder 51% Habib bank of Pakistan 20%, employee's provident fund 14% and general public 15%. It is the 1st bank having domestic ownership more than 50%. HBL has been operating in high profit from the establishment period till now. It accepts deposit through current deposit, saving deposit, fixed deposit and call deposit.

At present, Himalayan Bank has a total network of 17 branches across the country and a counter in the premises of the Royal palace. There are six branches in Kathmandu valley In addition; the bank has also ten branches outside Kathmandu valley.

4.3.2 Analysis of Total Dividend

Following table shows the market price per share, dividend per share and rate of return per share.

Table 4.5
MPS, Dividend, EPS and P/E Ratio of HBL

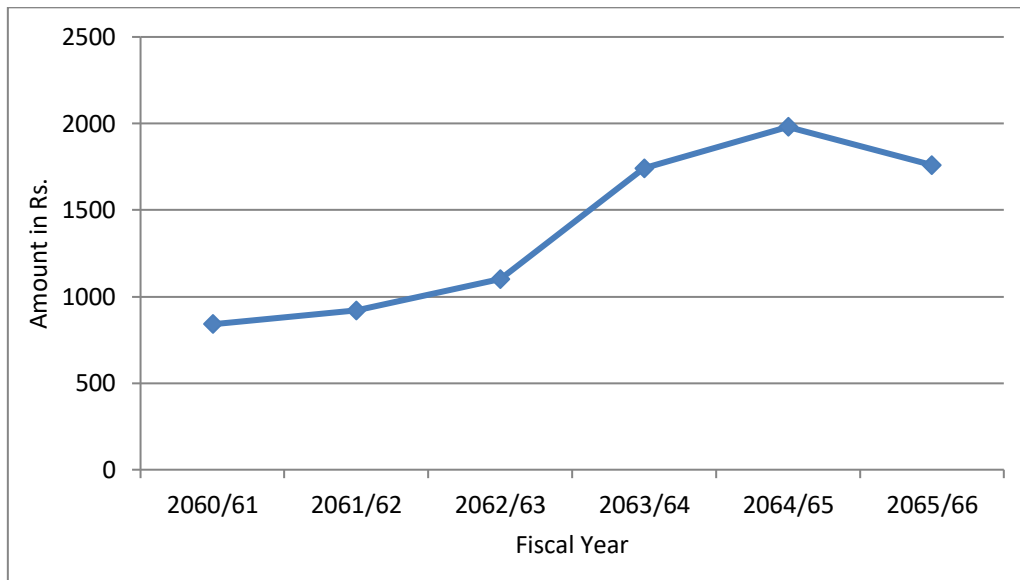
FY	MPS in Rs	Cash DPS(Rs.)	Stock Dividend (%)	Total Dividend (Rs)	EPS	P/E Ratio
2060/61	840	0	20	168	49.05	17.12
2061/62	920	11.58	20	290.536	47.91	19.2
2062/63	1100	30	5	385	59.24	18.57
2063/64	1740	15	25	696	60.66	28.69
2064/65	1980	25	20	891	62.74	31.56
2065/66	1760	12	31.56	766.656	61.9	28.43

Source: (AGM Report of HBL FY 2060/61 to 2065/66)

Table 4.5 shows that HBL is paying stock dividend every year and 2060/61 did not pay cash dividend. Highest total dividend is paid in the year 2064/65 i.e. Rs 891 and lowest is in the year 2060/61 i.e. Rs 168. P/E ratio of HBL is maximum in the year 2064/65 i.e. 31.56 and minimum in the year 2060/61 i.e. 17.12. P/E ratio is in increasing trend from starting year 2060/61 to the ending

year 2064/65. The closing MPS of HBL is maximum of Rs. 1980 in the year 2064/65 and minimum of Rs. 840 in the year 2060/61.

Figure 4.5
Year and Market Price Movement of HBL



Source: (Table no 4.5)

Figure 4.5 shows the trend line of market price in several year of HBL. It can be seen in the fluctuating trend. The minimum is in the year 2060/61 i.e. Rs. 840 and maximum in the year 2064/65 i.e. Rs. 1980.

4.3.3 Expected Return (R_j), standard Deviation (σ) and Coefficient of variation (C.V) of HBL

Table 4.6

Expected Return, Standard Deviation and Coefficient of Variation of HBL

FY	MPS (in Rs)	Total Dividend	R_j	$(R_j - \bar{R}_j)$	$(R_j - \bar{R}_j)^2$
2060/61	840	168	0.000	-0.533	0.284
2061/62	920	290.536	0.441	-0.092	0.008
2062/63	1100	385	0.614	0.081	0.007
2063/64	1740	696	1.215	0.682	0.465
2064/65	1980	891	0.650	0.117	0.014
2065/66	1760	766.656	0.276	-0.257	0.066
	Total		3.196		0.843

The detail calculations of R for each fiscal year are given in Annex 1.

$$\text{Expected Return } \bar{R} = \frac{\sum R}{N} = \frac{3.196}{6} = 0.533$$

The detail calculation of $(R_j - \bar{R}_j)$ and $(R_j - \bar{R}_j)^2$ for each fiscal year are given in Annex 2.

$$\begin{aligned} \text{Standard Deviation } (\sigma) &= \sqrt{\frac{(R_j - \bar{R}_j)^2}{N-1}} \\ &= \sqrt{\frac{0.843}{6-1}} \\ &= 0.411 \end{aligned}$$

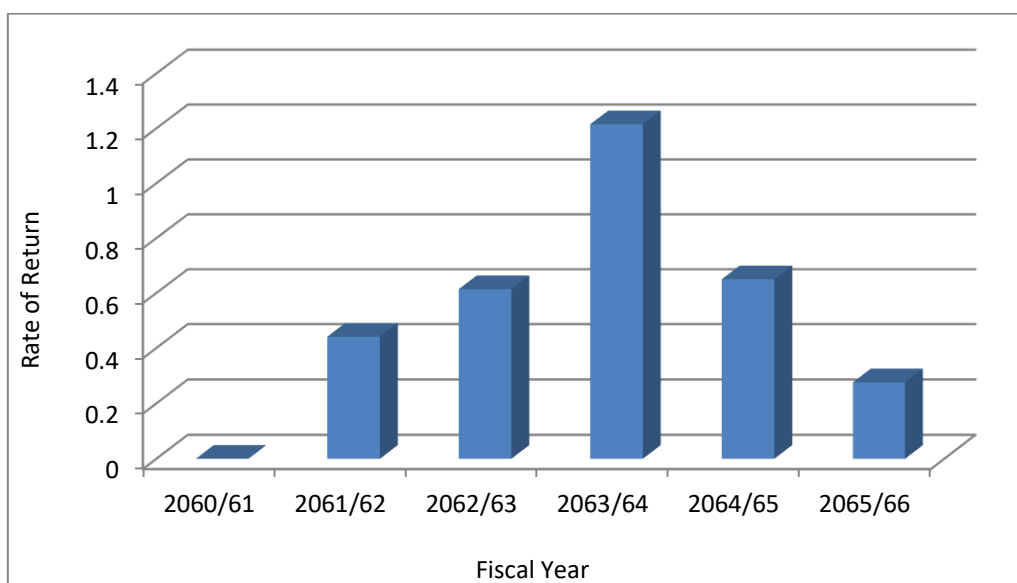
Coefficient of Variance

$$CV = \frac{\sigma}{\bar{R}} = \frac{0.411}{0.533} = 0.771$$

Expected return of HBL is 0.533 with the total risk (measured by S.D) of 0.411. The C.V of HBL is 0.771 which denotes that to get per unit return 0.771 risk must be sacrificed.

Figure 4.6

Realized Rate of Return of per share of Himalayan Bank Ltd.



Source: (Table no 4.6)

The figure 4.6 shows that the annual rate of return of HBL in several years. The rate of return is maximum on 2063/64 i.e. 1.215 which shows highest return profitable while the return is negative in the year 2065/66 i.e. 0.276.

4.4 Everest Bank Limited (EBL)

4.4.1 Introduction

Everest Bank Limited (EBL) started its operation from 1994 with a view and objective of extending professionalized and efficient banking services to various segments of the society. This bank is joint venture with Punjab National Bank India. The head office of EBL is located in Lazimpat. This bank is providing customer-friendly services through its branch network and over 250 correspondent banks across the globe. All the branches of the banks are connected through Anywhere Branch Banking System (ABBS), which enables customers to do all their transactions from any branches other than where they have their account. On equity holding PNB has 20% equity participation in its total share holding and also has under taken management responsibility under a technical service agreement and promoter holding 50% and rest 30% held by general public. The main purpose of EBL is to extend professional banking services to various sectors of the society of Nepal and thereby contributing in the economic development of the country.

4.4.2 Analysis of Total Dividend

Table 4.7
MPS, DPS and P/E Ratio of EBL

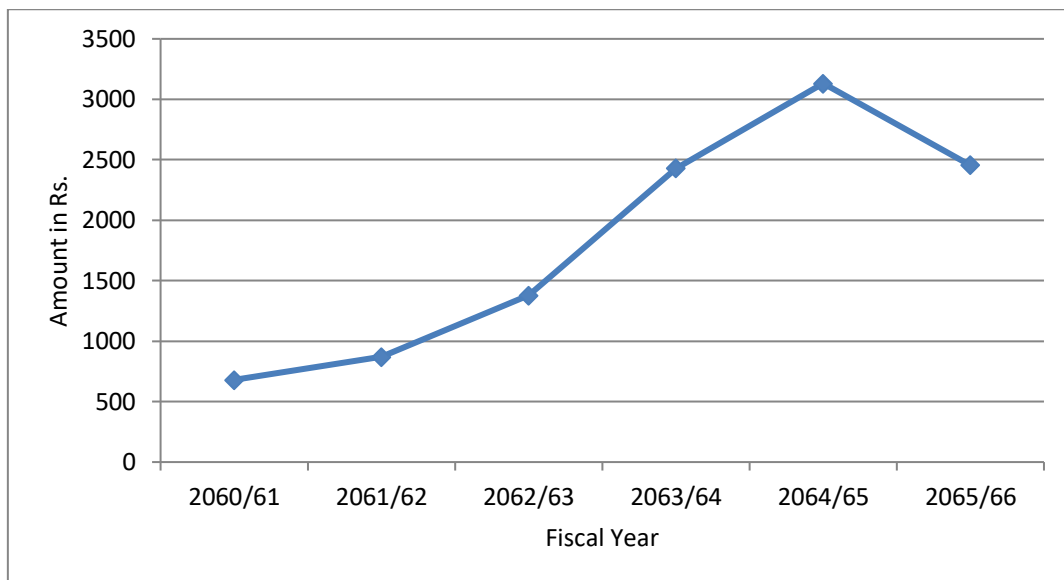
FY	MPS	Cash DPS	Dividend (%)	Total Dividend	EPS	P\ E Ratio
2060/61	680	20	-	136	45.6	14.9
2061/62	870	-	20	174	54.22	16.04
2062/63	1379	25	-	344.75	62.78	21.97
2063/64	2430	10	20	729	78.42	30.99
2064/65	3132	20	10	939.6	91.82	34.11
2065/66	2455	30	-	736.5	99.99	24.55
	Total			3059.85		

Data Source: AGM Report of EBL Fiscal Year 2060/61 to 2065/66

According to table, there is no cash dividend in the year 2061/62 and not paying stock dividend in the year 2060/61, 2062/63 and 2065/66. In the year 2063/64 and 2064/65 paying both cash and stock dividend. Highest total dividend is paid in the year 2064/65 i.e. Rs. 939.60 and lowest total dividend in 2060/61 i.e.136. P/E ratio of EBL is maximum in the year 2064/65 i.e. 34.11 and minimum in the year 2060/61 i.e. 14.90.. The closing MPS of EBL is maximum of Rs.3132 in the year 2064/65 and minimum of Rs. 680 in the year 2060/61.

Figure 4.7

Year and Market Price Movement of EBL



Source: (Table no 4.7)

Figure 4.7 shows the trend line of price of EBL which is in increasing trend from 2060/61. The price is minimum in the year 2060/61 i.e. Rs. 680 and maximum in the year 2064/65 i.e. Rs. 3132. It is shown that there is pick point 2064/65 then after decreased.

4.4.3 Expected Return (R_j), Standard Deviation (σ) and Coefficient of Variation (C.V) of EBL

Table 4.8

Expected Return, Standard Deviation and Coefficient of Variation of EBL

FY	MPS (in RS)	Total Dividend	R_j	$(R_j - \bar{R}_j)$	$(R_j - \bar{R}_j)^2$
2060/61	680	136	0.000	-0.584	0.341
2061/62	870	174	0.535	-0.048	0.002
2062/63	1379	344.75	0.981	0.398	0.158
2063/64	2430	729	1.291	0.707	0.500
2064/65	3132	939.6	0.676	0.092	0.008
2065/66	2455	736.5	0.019	-0.565	0.319
	Total		3.502		1.328

The detail calculations of R for each fiscal year are given in Annex 1.

Now,

$$\begin{aligned} \text{Expected Return } \bar{R}_j &= \frac{\sum R}{N} \\ &= \frac{3.502}{6} = 0.584 \end{aligned}$$

The detail calculation of $(R_j - \bar{R}_j)$ and $(R_j - \bar{R}_j)^2$ for each fiscal year are given in Annex 2.

$$\begin{aligned} \text{Standard Deviation } (\sigma_j) &= \sqrt{\frac{\sum (R_j - \bar{R}_j)^2}{N-1}} \\ &= \sqrt{\frac{1.328}{(6-1)}} \\ &= 0.515 \end{aligned}$$

Coefficient of Variance

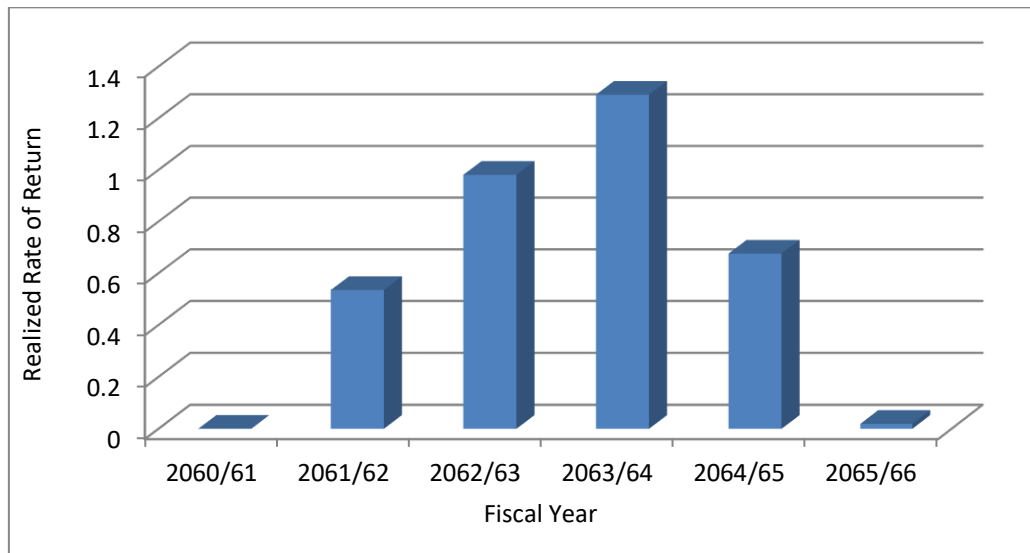
$$CV = \frac{\sigma}{\bar{R}} = \frac{0.515}{0.584} = 0.883$$

Expected return of EBL is 0.584 with the total risk (measured by S.D) of 0.515. The C.V of EBL is 0.883 which indicates the investor needs to sacrifice 0.883 unit of risk for per unit return.

Following figure shows the market price per share of EBL in the various years under study.

Figure 4.8

Annual Rate of Return of Himalayan Bank Limited



Source: (Table no 4.8)

The figure 4.8 shows that the annual rate of return of EBL in several years. There is highest return of 1.291 in the year 2063/64 and lowest return of 0.019 in the year 2065/66. There is fluctuation of returns.

4.5 Comparison of Expected Returns, Standard Deviation and the Coefficient of Variance between the Sampled Banks

The following table shows the expected returns, standard deviation and the coefficient of variance of the sampled banks in various years under studied.

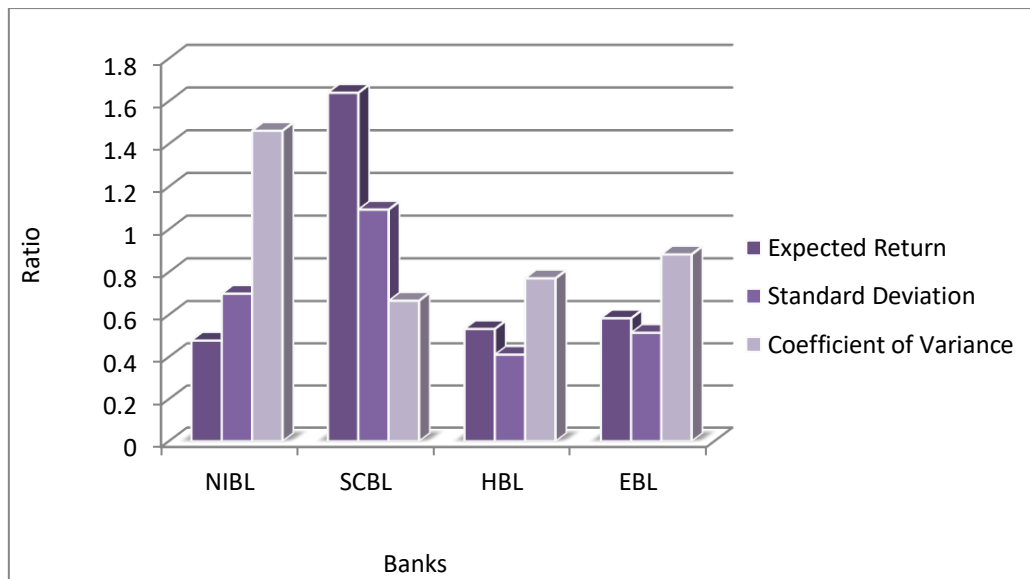
Table 4.9
Expected Return, Standard Deviation and Coefficient of Variance of the Sampled Banks

S.N	Bank	Expected Return	Standard Deviation	Coefficient of Variance	Remarks
1	NIBL	0.478	0.699	1.462	Highest C.V
2	SCBL	1.64	1.093	0.666	Return Highest, Risk Highest and Lowest C.V
3	HBL	0.533	0.411	0.771	Lowest Risk
4	EBL	0.584	0.515	0.883	

According to the table 4.9 the statistical results imply that over the period SCBL has highest expected return. The lowest expected return is 0.478 of NIBL. Based on the standard deviation, the NIBL and SCBL can be considered as high risk securities. The standard deviation of the returns on the shares of HBL is the lowest one. Looking at the coefficient of variance, the share of the SCBL has the lowest risk per unit of return; the highest being is of NIBL. Investment in SCBL is desirable because its return is higher and risk is lowest compared to others.

Figure 4.9

Expected Return, Standard Deviation and Coefficient of Variance of the Sampled Banks



Source: (Table no 4.9)

By observing the figure 4.9, the comparison of the sampled banks in terms of risk and return can be clearly seen. It clarifies the expected return, standard deviation and coefficient of variation of each individual bank.

4.6 Study of Co-variance and Beta Coefficient of the Commercial Banking Sector with that of Market (NEPSE)

Table 4.10

Expected Return, Standard Deviation and Coefficient of Variance of the Market Index

Fiscal Year	NEPSE Index (NI)	R_m	(R_m- \bar{R}_m)	(R_m- \bar{R}_m)²	Remarks
2060/61	199.9	0.000	-0.297	0.088	
2061/62	231.97	0.160	-0.137	0.019	
2062/63	386.83	0.668	0.371	0.137	
2063/64	683.95	0.768	0.471	0.222	
2064/65	963.36	0.409	0.111	0.012	
2065/66	749.1	-0.222	-0.519	0.270	
Total		1.782		0.748	

Source: Various Annual Reports of NEPSE. Fiscal Year 2060/61 to 2065/66

The detail calculations of R for each fiscal year are given in Annex 3.

$$\begin{aligned} \text{Expected Return of Market } (\bar{R}) &= \frac{\sum R_m}{N} \\ &= \frac{1.782}{6} = 0.297 \end{aligned}$$

The detail calculation of $(R_m - \bar{R}_m)$ and $(R_m - \bar{R}_m)^2$ for each fiscal year are given in Annex 4.

$$\begin{aligned} \text{Standard Deviation } (\sigma_j) &= \sqrt{\frac{\sum (R_m - \bar{R}_m)^2}{N-1}} \\ &= \sqrt{\frac{0.784}{(6-1)}} \\ &= 0.387 \end{aligned}$$

Coefficient of Variance

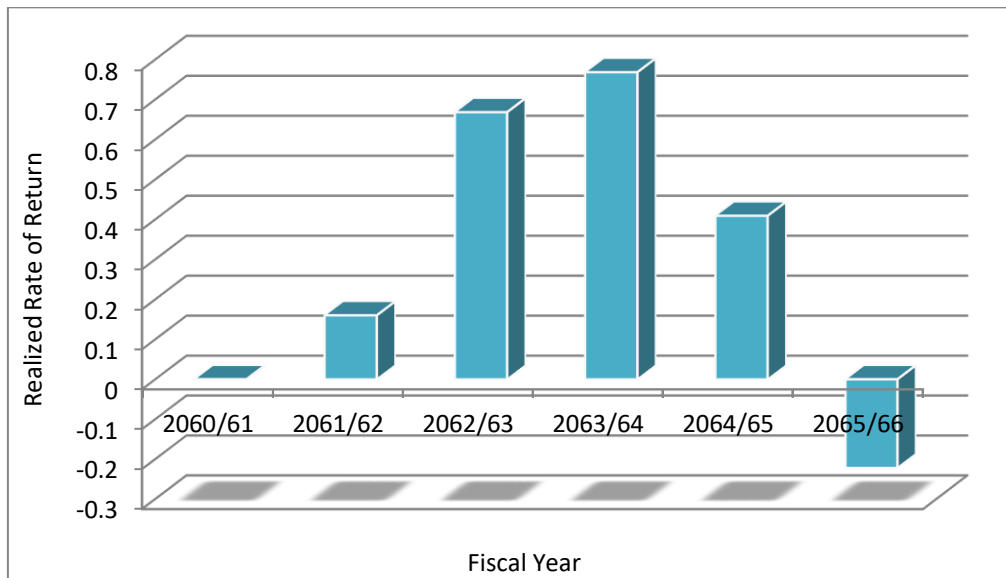
$$CV = \frac{\sigma}{\bar{R}} = \frac{0.387}{0.297} = 1.302$$

Table 4.10 shows the return of Market in several years. There is highest return of market in the year 2063/64 i.e. 0.7682 and there are negative returns in the year 2065/66 i.e. -0.222. The expected return of the market is 0.297 with the

total risk (measured by S.D) of 0.387 and C.V is 1.302, which means. 1.302 risks must be sacrificed to get per unit market return.

Figure 4.10

Annual Rate of Return of Market



Source: (Table no 4.10)

The figure 4.10 shows that the annual rate of return of Market in several years. There is highest return of 0.768 in the year 2063/64 and negative return of in the year 2065/66 i.e.-0.222. There is fluctuation of returns.

4.7 Analysis of Market Sensitivity

Market sensitivity of stock is explained by term of beta coefficient. Higher the beta greater is the sensitivity and higher the reaction to the market movement and vice-versa. Beta measures the systematic risk, which cannot be eliminated through the means of diversification. Some of benchmark betas follow:

B=0.5 stock is only half as volatile

B= 1.0 stock is of average risk

B= 2.0 is twice as risky as the average stock

Stock's beta coefficient determines how it affects the riskiness of a diversified portfolio. Beta is the most relevant measure of a stocks risk.

Beta coefficient of market is always 1. This statement can be proved as follows:

$$\beta = \frac{\text{Cov } R_j R_m}{\sigma_m^2}$$

where,

$\text{Cov } R_j R_m$ = covariance between market return and stock return.

Hence,

$$\beta_m = \frac{\text{Cov } R_m R_m}{\sigma_m^2} = \frac{\sigma_m \sigma_m \rho_{mm}}{\sigma_m^2} = 1$$

Hence: Beta coefficient of market is always equal to 1.

4.7.1 Analysis of Co-Variance (Cov_{jm}), Correlation of coefficient (ρ_{jm}) and Beta (B_j) of NIBL

Table 4.11

Co-Variance (Cov_{jm}), Correlation of coefficient (ρ_{jm}) and Beta (B_j)

Fiscal Year	$(R_j - \bar{R}_j)$	$(R_m - \bar{R}_m)$	$(R_j - \bar{R}_j)(R_m - \bar{R}_m)$
2060/61	-0.478	-0.297	0.142
2061/62	-0.52	-0.137	0.071
2062/63	0.971	0.371	0.360
2063/64	0.306	0.471	0.144
2064/65	0.518	0.111	0.058
2065/66	-0.798	-0.519	0.415
Total			1.189

The detail calculation of $(R_j - \bar{R}_j)$ and $(R_m - \bar{R}_m)^2$ for each fiscal year are given in Annex 5.

$$\begin{aligned} \text{Co- variance } (\text{Cov}_{jm}) &= \frac{(R_j - \bar{R}_j)(R_m - \bar{R}_m)}{N-1} \\ &= \frac{1.189}{(6-1)} \\ &= 0.238 \end{aligned}$$

$$\begin{aligned} \text{Correlation of coefficient } P_{jm} &= \frac{\text{Cov}_{jm}}{\sigma_j \sigma_m} \\ &= \frac{0.238}{0.699 \times 0.387} = \frac{0.238}{0.2705} = 0.88 \end{aligned}$$

Beta of NIBL

$$\begin{aligned} \text{Beta (bj)} &= \frac{\text{Cov } R_j R_m}{\sigma_m^2} \\ &= \frac{0.238}{0.387^2} \\ &= 1.588 \end{aligned}$$

$$\begin{aligned} \text{Systematic Risk} &= b_j^2 \sigma_m^2 \\ &= 1.588^2 \times 0.387^2 \\ &= 2.522 \times 0.150 \\ &= 0.378 \end{aligned}$$

$$\begin{aligned} \text{Unsystematic Risk} &= \text{Total Risk} - \text{Systematic Risk} \\ &= \sigma_j - b_j^2 \sigma_m^2 \\ &= 0.699 - 0.378 \\ &= 0.321 \end{aligned}$$

Here the covariance is 0.238, correlation of coefficient is 0.88 and beta-coefficients is 1.588 of NIBL with comparing of the market the which seems good enough for the general investors to invest in this sector.

4.7.2 Analysis of Co-Variance (Cov_{jm}), Correlation of coefficient (ρ_{jm}) and Beta (B_j) of SCBL

Table 4.12
Co-Variance (Cov_{jm}), Correlation of coefficient (ρ_{jm}) and Beta (B_j)

Fiscal Year	(R _j - \bar{R}_j)	(R _m - \bar{R}_m)	(R _j - \bar{R}_j) (R _m - \bar{R}_m)
2060/61	-1.640	-0.297	0.487
2061/62	0.316	-0.137	-0.043
2062/63	1.224	0.371	0.453
2063/64	0.955	0.471	0.450
2064/65	0.023	0.111	0.003
2065/66	-0.880	-0.519	0.457
Total			1.807

The detail calculation of $(R_j - \bar{R}_j)$ and $(R_m - \bar{R}_m)$ for each fiscal year are given in Annex 5.

$$\begin{aligned} \text{Co- variance (Cov}_{jm}) &= \frac{(R_j - \bar{R}_j)(R_m - \bar{R}_m)}{N-1} \\ &= \frac{1.807}{(6-1)} \\ &= 0.361 \end{aligned}$$

$$\begin{aligned} \text{Correlation of coefficient } P_{jm} &= \frac{\text{Cov}_{jm}}{\sigma_j \sigma_m} \\ &= \frac{0.361}{1.093 \times 0.387} = \frac{0.361}{0.423} = 0.853 \end{aligned}$$

Beta of SCBL

$$\begin{aligned} \text{Beta (b}_j) &= \frac{\text{Cov } R_j R_m}{\sigma_m^2} \\ &= \frac{0.361}{0.387^2} \\ &= 2.41 \end{aligned}$$

$$\begin{aligned} \text{Systematic Risk} &= b_j^2 \sigma_m^2 \\ &= 2.41^2 \times 0.387^2 \\ &= 5.808 \times 0.150 \\ &= 0.871 \end{aligned}$$

Unsystematic Risk = Total Risk – Systematic Risk

$$\begin{aligned} &= \sigma_j - b_j^2 \sigma_m^2 \\ &= 1.093 - 0.871 \\ &= 0.222 \end{aligned}$$

Here the covariance is 0.361, correlation of coefficient is 0.853 and beta-coefficients is 2.41 of SCBL with comparing of the market.

4.7.3 Analysis of Co-Variance (Cov_{jm}), Correlation of coefficient (ρ_{jm}) and Beta (B_j) of HBL

Table 4.13
Analysis of Co-Variance (Cov_{jm}), Correlation of coefficient (ρ_{jm})
and Beta (B_j) of HBL

Fiscal Year	(R _j - \bar{R}_j)	(R _m - \bar{R}_m)	(R _j - \bar{R}_j) (R _m - \bar{R}_m)
2060/61	-0.533	-0.297	0.158
2061/62	-0.092	-0.137	0.013
2062/63	0.081	0.371	0.030
2063/64	0.682	0.471	0.321
2064/65	0.117	0.111	0.013
2065/66	-0.257	-0.519	0.133
Total			0.668

The detail calculation of (R_j - \bar{R}_j) and (R_m - \bar{R}_m) for each fiscal year are given in Annex 5.

$$\begin{aligned} \text{Covariance (Cov}_{jm}) &= \frac{(R_j - \bar{R}_j)(R_m - \bar{R}_m)}{N-1} \\ &= \frac{0.668}{(6-1)} \\ &= 0.134 \end{aligned}$$

$$\begin{aligned} \text{Correlation of coefficient } \rho_{jm} &= \frac{\text{Cov}_{jm}}{\sigma_j \sigma_m} \\ &= \frac{0.134}{0.411 \times 0.387} = \frac{0.134}{0.159} = 0.841 \end{aligned}$$

Beta of HBL

$$\begin{aligned} \text{Beta}(b_j) &= \frac{\text{Cov } R_j R_m}{\sigma_m^2} \\ &= \frac{0.134}{0.387^2} \\ &= 0.893 \end{aligned}$$

$$\begin{aligned} \text{Systematic Risk} &= b_j^2 \sigma_m^2 \\ &= 0.893^2 \times 0.387^2 \\ &= 0.797 \times 0.150 = 0.120 \end{aligned}$$

Unsystematic Risk = Total Risk – Systematic Risk

$$\begin{aligned}
 &= \sigma_j - b_j^2 \sigma_m^2 \\
 &= 0.411 - 0.120 \\
 &= 0.291
 \end{aligned}$$

Here the covariance is 0.134, correlation of coefficient is 0.841 and beta-coefficients is 0.893 of HBL with comparing of the market which seems good enough for the general investors to invest in this bank.

4.7.4 Analysis of Co-Variance (Cov_{jm}), Correlation of coefficient (ρ_{jm}) and Beta (B_j) of EBL

Table 4.14

Table of Co-Variance (Cov_{jm}), Correlation of coefficient (ρ_{jm}) and Beta (B_j)

Fiscal Year	(R _j - \bar{R}_j)	(R _m - \bar{R}_m)	(R _j - \bar{R}_j) (R _m - \bar{R}_m)
2060/61	-0.584	-0.297	0.173
2061/62	-0.048	-0.137	0.007
2062/63	0.398	0.371	0.147
2063/64	0.707	0.471	0.333
2064/65	0.092	0.111	0.010
2065/66	-0.565	-0.519	0.293
Total			0.964

The detail calculation of (R_j - \bar{R}_j) and (R_m - \bar{R}_m) for each fiscal year are given in Annex 5.

$$\begin{aligned}
 \text{Co- variance (Cov}_{jm}) &= \frac{(R_j - \bar{R}_j) (R_m - \bar{R}_m)}{N-1} \\
 &= \frac{0.964}{(6-1)} = 0.193
 \end{aligned}$$

$$\begin{aligned}
 \text{Correlation of coefficient } \rho_{jm} &= \frac{\text{Cov}_{jm}}{\sigma_j \sigma_m} \\
 &= \frac{0.193}{0.515 \times 0.387} = \frac{0.193}{0.199} = 0.968
 \end{aligned}$$

Beta of EBL

$$\begin{aligned}
 \text{Beta (b}_j) &= \frac{\text{Cov } R_j R_m}{\sigma_m^2} \\
 &= \frac{0.193}{0.387^2} = 1.287
 \end{aligned}$$

$$\begin{aligned}
\text{Systematic Risk} &= b_j^2 \sigma_m^2 \\
&= 1.287^2 \times 0.387^2 \\
&= 1.656 \times 0.150 \\
&= 0.248
\end{aligned}$$

$$\begin{aligned}
\text{Unsystematic Risk} &= \text{Total Risk} - \text{Systematic Risk} \\
&= \sigma_j - b_j^2 \sigma_m^2 \\
&= 0.515 - 0.248 \\
&= 0.267
\end{aligned}$$

Here the covariance is 0.193, correlation of coefficient is 0.968 and beta-coefficients is 1.287 of EBL with comparing of the market which seems good enough for the general investors to invest in this bank.

4.7.5 Comparison of Co-variance, correlation coefficient and the Beta between the Sampled Banks

The following table shows the Co-variance, correlation coefficient and the Beta between the sampled banks in various years under studied.

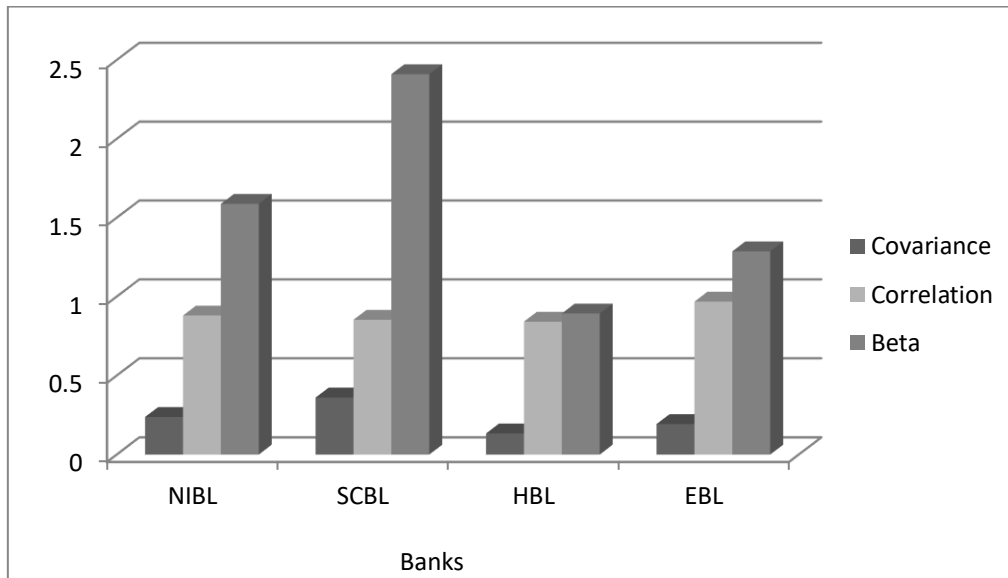
Table 4.15

Covariance, correlation coefficient and Beta of the Sampled Banks

S.N	Bank	Covariance	Correlation	Beta	Remarks
1	NIBL	0.238	0.88	1.588	
2	SCBL	0.361	0.853	2.41	Highest beta
3	HBL	0.134	0.841	0.893	Lowest Beta, lowest covariance and lowest correlation
4	EBL	0.193	0.968	1.287	

According to the table 4.15 shown the highest covariance is 0.193 of EBL and Lowest Covariance is 0.134 of HBL. The correlation of coefficient between bank and market of EBL is highest i.e. 0.968 and lowest is 0.841 of HBL .The SCBL have highest beta coefficient i.e. 2.41.

Figure 4.11
Co-variance, Correlation Coefficient and the Beta between the
Sampled Banks



Source: (Table no 4.15)

By observing the figure 4.11, the comparison of the sampled banks in terms of covariance and Beta can be clearly seen. It clarifies covariance, correlation and beta coefficient of each individual bank.

4.7.6 Risk Analysis of NIBL bank

Table 4.16
Risk Analysis of NIBL

Indicators	Results of NIBL Bank
Average rate of return	0.478
Variance	0.489
Standard deviation	0.699
Coefficient of Variance	1.462
Covariance	0.238
Correlation	0.88
Beta	1.588
Systematic Risk	0.378
Unsystematic Risk	0.321

Beta of NIBL is 1.588. It reveals that the stock has positive correlation with market i.e. NEPSE. As Beta of the stock is measured 1.588, the positive changes in NEPSE. If it will be one percent, the stock will have positive response by 1.588 from the view point of volatility, the stock is less volatile than the market, and the stocks therefore can be categorized as defensive stock. There is 69.90 percent chance of deviation around the average rate of return. It means there is chance of variability in return by 69.90 percent. NIBL has minimized the unsystematic risk by 32.10 percent only.

4.7.7 Risk analysis of SCBL Bank

Table 4.17

Risk Analysis of SCBL

Indicators	Results of NIBL Bank
Average rate of return	1.640
Variance	1.195
Standard deviation	1.093
Coefficient of Variance	0.666
Covariance	0.361
Correlation	0.853
Beta	2.41
Systematic Risk	0.871
Unsystematic Risk	0.222

Beta of SCBL is 2.41. It reveals that the stock has highly positive correlation with market i.e. NEPSE. As Beta of the stock is measured 2.41, the positive changes in NEPSE. If it will be one percent, the stock will have positive response by 2.41. From the view point of volatility, the stock is less volatile than the market. The stocks therefore, can be categorized as defensive stock. There is 109.3. percent deviation around the average rate of return. It means there is chance of variability in return by 109.3 percent. SCBL has the high diversifiable risk i.e. 0.222.

4.7.8. Risk Analysis of HBL Bank

Table 4.18
Risk Analysis of HBL

Indicators	Results of HBL Bank
Average rate of return	0.533
Variance	0.169
Standard deviation	0.411
Coefficient of Variance	0.771
Covariance	0.134
Correlation	0.841
Beta	0.893
Systematic Risk	0.120
Unsystematic Risk	0.291

Beta of HBL is 0.841. It reveals that the stock has positive correlation with market i.e. NEPSE. As Beta of the stock is measured 0.841, the positive changes in NEPSE. As Beta of the stock is measured 0.841, the positive changes in NEPSE. If it will be one percent, the stock will have positive response by 0.841. From the view point of volatility, the stock is less volatile than the market. The stocks, therefore, can be categorized as defensive stock. There is 41.10 percent deviation around the average rate of return. It means there is chance of variability in return by 41.10 percent. HBL has the lowest diversifiable risk i.e. 0.291. The risk per unit return is 0.771. It means an investor could hold 0.771 unit risks to earn one unit of return.

4.7.9 Risk Analysis of EBL Bank

Table 4.19
Risk Analysis of EBL

Indicators	Results of EBL Bank
Average rate of return	0.584
Variance	0.265
Standard deviation	0.515
Coefficient of Variance	0.883
Covariance	0.193
Correlation	0.968
Beta	1.287
Systematic Risk	0.248
Unsystematic Risk	0.267

Beta of EBL is 1.287. It reveals that the stock has highly positive correlation with market i.e. NEPSE. As Beta of the stock is measured 1.287, the positive changes in NEPSE. If it will be one percent, the stock will have positive response by 1.287. From the view point of volatility, the stock is less volatile than the market. The stocks therefore, can be categorized as defensive stock. There is 51.5. percent deviation around the average rate of return. It means there is chance of variability in return by 51.5. percent. EBL has the high diversifiable risk i.e. 0.267. The stock has to bear 0.193 unit risk to earn per unit rate of return.

4.8 Z- Test

Null Hypothesis (H₀):- Average return of common stock of selected commercial bank is equal to the market return.

Alternative Hypothesis (H₁):- Average return of common stock of selected commercial bank is not equal to the market return.

Under H₀, the test statistic is

$$Z = \frac{X - \mu}{\frac{\sigma}{\sqrt{n}}}$$

Where,

X = Average return of selected four commercial banks

$$(i.e. 0.478+1.64+0.533+0.584)/4$$

$$=3.235/4$$

$$=0.809$$

μ = Average rate of return of overall market (i.e.0.297)

n = Number of observation

σ = Average standard deviation of selected commercial banks.

$$(i.e. 0.699+1.093+0.411+0.515)/4$$

$$= 2.718/4$$

$$=0.6795$$

According to the formula,

$$Z = \frac{0.809 - 0.297}{\frac{0.6795}{\sqrt{4}}}$$
$$= \frac{0.512}{0.339}$$
$$= 1.507$$

Critical Value: The critical value of Z at 5% level of significance is 1.96.

Decision: - Since the calculated of Z is less than the tabulated value so that the null hypothesis H_0 is accepted and hence the alternative hypothesis H_1 is rejected.

4.9 Major Findings of the Study

This study enables investors to keep the returns they can expect and the risk they may take into better perspective. Nepalese stock market is in effect of openness and liberalization in national economy. But Nepalese individual investors cannot analyze the securities as well as market properly because of the lack of information and poor knowledge about the analysis of securities for investment.

The return is the income received on a stock investment, which is usually expressed in percentage. Expected return of is maximum (164%) of SCBL bank. Similarly expected return of NIBL, HBL and EBL are 47.8%, 53.3% and, 58.4% respectively.

Risk is the variability of returns which is measured in terms of standard deviation. On the basis of standard deviation, common stock of SCBL is most risky since it has high S.D i.e. 0.1.093. Common stock of HBL has least risk because of its low S.D of 0.411.

On the other hand we know that C.V is more rational basis of investment decision. This measures the risk per unit of return. On the basis of CV,

common stock of SCBL is best among all other banks. EBL has 0.666 unit of risk per 1 unit of return. But common stock of NIBL has the highest risk per unit of return i.e. 1.462 units.

Systematic risk of NIBL, SCBL, HBL and EBL are 0.378, 0.871, 0.120 and 0.241 respectively. And unsystematic risk of NIBL, SCBL, HBL and EBL are 0.321, 0.222, 0.291 and 0.267 respectively.

Most of the investors invest only keeping the return in the mind but they are found unable to calculate the risk factors of the security. Most of the Nepalese private Investors invest in single security. Some of the investors use their fund in two or more securities. But it is found that they don't make any analysis of portfolio before selecting security. They invest their fund in different securities on the basis of expectation and assumption of individual securities rather than analysis of the effect of portfolio. It seems that they don't have knowledge of the risk diversification by using portfolio of their investment.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

In a developing economy like Nepal, capital market plays a vital role in making a sustained and self-reliant growth of the economy. Capital market helps in the collection and mobilization of the saving of the people which is much true even in case of Nepal. Among the capital market too, the role of the security market is immense in the sense that it offers a platform for the transaction of securities. In Nepal, NEPSE acts as a security market where the transactions of the listed shares are performed. The NEPSE has 159 companies listed by the end of 2009. Among these listed companies, commercial banks dominate the position in terms of amount traded, number of transactions and market capitalization. Today, there are twenty nine commercial banks listed in the NEPSE. Simply saying, these banks collect deposits from the people and lend the same for investment and thereby gain the profit in the transactions. Banks are making good profit in recent years that is why general investors are more interested in making their investment in these Banks' shares.

But most of the general Nepalese investors are investing in the shares merely because of the nice facts they have heard of or just for the sake of their interest. Proper analysis of risk and return to decide their investment is nearly absent in the practice. They hardly care for the risk- return behavior of the stocks before investing in them. Lack of knowledge of the stocks' risk and return among the general investors and their investment habit without thorough analysis of the coefficient of variance together with the relationship between risk and return of a particular industry with that of total market risk and return has been pinpointed as a major problem of this study.

Thus, describing the risk, return and other relevant variables that play role in stock investment together with the analysis of risk, return and coefficient of

variance have been the major objectives of this report. And on the based of findings, the reports has presented some valuable suggestions.

Risk of an investor in investment is nothing but the chance that his investment brings less or no return and also the chance of losing all his investment. Return, on the other hand is the gain an investor make from his investment in the stocks. Coefficient of variance calculates risk per unit of return, useful especially in making investment decisions when there are equal risks but different returns or equal returns but different risks among the various stocks. In this aspect, expected rate of return for any stock is the weighted average rate or return using the probability of each rate of return as the weight whereas required rate of return is composed of a risk-free interest rate and a risk premium rate.

The study has adopted historical and analytical research design. The data utilized are mostly secondary in nature. Various financial and statistical tools are applied to synthesize and present the data. Among the fifteen commercial banks listed in the NEPSE, four established banks are taken as the sample for the study. Data of the last six year are used for the study. Market price per share and dividend per share of the banks are used to analyze the risk and returns of the banks together with the NEPSE index of the banking sector and other industries are used.

The expected return of the bank for the period studied was 47.8% with standard deviation of 66.9% and coefficient of variance 1.462 of Investment Bank Limited. Similarly, returns and risks of SCBL, HBL and EBL were 164%, 53.3%, 58.4% and 109.3%, 41.1%, 51.5% respectively. The coefficients of variance for these banks were 0.666, 0.771 and 0.883 respectively for the period studied.

The expected return, standard deviation and coefficient of variance of market index were 29.7%, 38.7% and 1.302. The Covariance, correlation of coefficient

and beta coefficient of NIBL bank with market index were 0.238, 0.88 and 1.588 respectively which seems good enough for the general investors to invest in this sector. The Covariance, correlation of coefficient and beta coefficient of SCBL bank with market index were 0.361, 0.853 and 2.41 respectively .which seems good enough for the general investors to invest in this sector. The Covariance, correlation of coefficient and beta coefficient of HBL bank with market index were 0.134, 0.841 and 0.893 respectively. The Covariance, correlation of coefficient and beta coefficient of HBL bank with market index were 0.193, 0.968 and 1.287 respectively.

The systematic risk of NIBL bank were 0.378 and unsystematic risk was 0.312. Systematic risk i.e. 0.871 of SCBL bank is more than unsystematic risk i.e. 0.222. EBL bank bears the 0.267 systematic risks and 0.267 unsystematic risk. Here the unsystematic risk of HBL bank is more than the systematic risk.

5.2 Conclusion

The expected return of SCBL and EBL are highest among the sampled banks i.e. 164% and 58.4% respectively. However, NIBL has lowest expected rate of return which is 47.80% followed by HBL with 53.30% expected rate of return. Analyzing the standard deviation of the sampled banks, HBL is in the best position with standard deviation of 0.411. SCBL is in the worst position with standard deviation as high as 1.093. The coefficient of variance is worst for NIBL which is 1.462 but the better position of C.V of SCBL. All the sampled joint-venture commercial banks have positive expected rate of return. Systematic risk of SCBL and NIBL is most higher then the HBL and ECL bank. It can not be diversifiable through the bank it is due to the market situation such as war, inflation, high interest rates, depression etc. Unsystematic risk of NIBL (32.1 %) is most higher then the SCBL, EBL and HBL bank. It can be diversifiable through the bank. It is due to the an industrial dispute and discovers of new technology etc. However, the commercial banking sectors have positive return together with market sector. Most of the

Nepalese investor is replaced back adequate awareness on risk and return involved in share investment in commercial bank.

5.3 Recommendation

Mainly this study is focused on individual investors. Other related components of stock are also taken into account to some extent. The following recommendation and suggestion are prescribed on the basis of data analysis and major findings of this research.

1. Shares of commercial banking sector are more lucrative for the investors to invest. It is safer for the Nepalese investors to invest in this sector.
2. The covariance and beta-coefficient of the commercial banking sector with that of the market are also good enough for the general investors to invest in this sector.
3. Among the commercial banking sector too, investors should invest in shares of SCBL as their coefficient of variance are good than other sampled commercial banks. However, NIBL and EBL are more risky at the present time to invest in its share than other selected banks.
4. Analysis of personal risk, attitude, needs and requirements will be helpful before making an investment in stock market. Investors should make several discussions with stock holder before reaching at the decision. Investors should make their decision on the basis of reliable information rather than the imagination and rumors.
5. Broker firms are good way to exchange and share investment ideas. Mutual fund is worthwhile for people with little interest in investment. Investors are recommended to share experience, ideas and take view of expert before investing in stocks of individual banks.

BIBLIOGRAPHY

Books:

- Brigham, E.F., & Houston, J.F. (1996). *Managerial Finance*. London: Hold-Saunders International Edition.
- Francis, J.C. (1997). *Investment Analysis and Management*. New York: McGraw Hill Publication.
- Hampton, J. (1998). *Financial Decision Making*. New Delhi: Prentice Hall of India Pvt. Ltd.
- Horne, V. & Copland, J. (2000). *Financial Management and Policy*. New Delhi: Prentice Hall of India Private Limited.
- Joshi, P.R. (2002). *Research Methodology*. Kathmandu: Buddha Academic Enterprises Pvt. Ltd.
- Lawrence, L.G. (1995). *Principle of Managerial Finance*. New York: Harper Collins Publishers.
- Loric, J.D. & Kempton, F. (1985). *The Stock Market Theories and Evidence*. Ne Delhi: Prentice Hall of India Pvt. Ltd.
- Sharma, P.K. & Chaudhary, A.K. (2002). *Statistical Methods*. Kathmandu: Khanal Books Prakashan.
- Sharpet, W.F., Alexander, G.J. & Bailey, G.V. (1995). *Investment*. USA: Prentice Hall of India.
- Sheridon, T., & Grinblantt, M. (1998) *Financial Management*. New York: McGraw-Hill Publication.
- Shrestha, M.K. & Gurung R. (2065). *Financial Institutions & Markets*. Kathmandu: Asmita Books Publishers & Distributer.
- Sthapit, A.B., Gautam, H & Dangol, P.M. (2006). *Statistical Methods*. Kathmandu: Buddha Academic Enterprises Pvt. Ltd.
- Van Horne, J.C. (1997). *Financial Management and Policy*. New Delhi: Prentice Hall of India Pvt. Ltd.
- Weston and Brigham (1982). *Managerial Finance*. London: Hold-Saunders International Edition.

Wolff, H.K. and Pant, P.R. (2005). *A Hand Book for Social Science Research and Thesis Writing*. Kathmandu: Buddha Academic Enterprises Pvt. Ltd.

Journals, Reports and Articles:

Everest Bank Limited. (2060/61-2065/66). *Annual Report*. Kathmandu.

Himalayan Bank Limited. (2060/61-2065/66). *Annual Report*. Kathmandu

Nepal Investment Bank Limited. (2060/61-2065/66). *Annual Report*.
Kathmandu

Rouwenhost, K. G. (1999). Local Return Factors and the Turnover in Emerging Markets. *The Journal of Finance*.

Security Board of Nepal. (2060/61-2065/66), *Annual Report*, Kathmandu:
SEBON

Standard Chartered Bank Limited (2060/61-2065/66). *Annual Report*.
Kathmandu

Thesis:

Gautam, S. (2001). *Risk and Return Analysis of Common Stock Investment of Commercial Banks in Nepal*. Kathmandu: An Unpublished Master Degree Thesis submitted to Faculty of Management, Tribhuvan University.

Khatriwada, M (1996). *Risk Analysis of Commercial Banks*. An Unpublished MBA Thesis submitted to Tribhuvan University.

Pandey, P. (2002). *Risk and Return Analysis of Common Stock Investment*. Kathmandu: An Unpublished Master Degree Thesis submitted to Faculty of Management, Tribhuvan University.

Sapkota, J.B. (2001). *Risk and Return Analysis of Commercial Bank*. Kathmandu: An Unpublished Master Degree Thesis submitted to Faculty of Management, Tribhuvan University.

Shankya, A (2009). *Risk and Return Analysis of the Commercial Banks*. Kathmandu: An Unpublished MBA Thesis submitted to Tribhuvan University.

Shrestha, S. (2003). *Stock Market and Investment*. Kathmandu: An Unpublished Master Degree Thesis submitted to Faculty of Management, Tribhuvan University.

Thapa, M. (2004). *Risk and Return Analysis Special Reference of Listed Commercial Banks*. Kathmandu: An Unpublished Master Degree Thesis submitted to Faculty of Management, Tribhuvan University.

Websites:

www.everestbankltd.com

www.hbl.com.np

www.nibl.com.np

www.nrb.org.np

www.standardchartered.com

ANNEXURE

ANNEX-1

Calculation of R

Nepal Investment Bank Limited (NIBL)

FY	MPS (in RS)	Total Dividend	R	Remarks
2060/61	940.000	141.000	-	
2061/62	800.000	100.000	(0.043)	
2062/63	1260.000	698.796	1.448	
2063/64	1729.000	518.700	0.784	
2064/65	2450.000	1,000.335	0.996	
2065/66	1388.000	277.600	(0.320)	
	Total		2.865	

Where,

R is calculation with the use of following formula.

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

The detail calculations of R for each fiscal year:

FY 2061/62

$$R = \frac{100 + 800 - 940}{940} = -0.043$$

FY 2062/63

$$R = \frac{698.796 + 1260 - 800}{800} = 1.448$$

FY 2063/64

$$R = \frac{518.70 + 1729 - 1260}{1260} = 0.784$$

FY 2064/65

$$R = \frac{1000.335+2450-1729}{1729} = 0.996$$

FY 2065/66

$$R = \frac{277.60+1388+ 2450}{2450} = -0.320$$

$$\text{Expected Return (R)} = \frac{\sum R}{N} = \frac{2.865}{6} = 0.478$$

Standard Chartered Bank Limited

FY	MPS in Rs	Total Dividend (in Rs)	R
2060/61	1745	1919.5	0.000
2061/62	2345	2814	1.956
2062/63	3775	5285	2.864
2063/64	5900	7670	2.595
2064/65	6830	8879	1.663
2065/66	6010	6010	0.760
	Total		9.837

The detail calculations of R for each fiscal year:

FY 2061/62

$$R = \frac{2814 + 2345 - 1745}{1745} = 1.956$$

FY 2062/63

$$R = \frac{5285 + 3775 - 2345}{2345} = 2.864$$

FY 2063/64

$$R = \frac{7670 + 5900 - 3775}{3775} = 2.595$$

FY 2064/65

$$R = \frac{8879 + 6830 - 5900}{5900} = 1.663$$

FY 2065/66

$$R = \frac{6100 + 6010 - 6830}{6830} = 0.760$$

$$\text{Expected Return (R)} = \frac{\sum R}{N} = \frac{9.837}{6} = 0.1640$$

Himalayan Bank Limited (HBL):

FY	MPS in Rs	Total Dividend	R	Remark
2060/61	840	168	0.000	

2061/62	920	290.536	0.441	
2062/63	1100	385	0.614	
2063/64	1740	696	1.215	
2064/65	1980	891	0.650	
2065/66	1760	766.656	0.276	
	Total		3.196	

The detail calculations of R for each fiscal year:

FY 2061/62

$$R = \frac{290.536 + 920 - 840}{840} = 0.441$$

FY 2062/63

$$R = \frac{385 + 1100 - 920}{920} = 0.614$$

FY 2063/64

$$R = \frac{696 + 1740 - 1100}{1100} = 1.215$$

FY 2064/65

$$R = \frac{891 + 1980 - 1740}{1740} = 0.650$$

FY 2065/66

$$R = \frac{766.656 + 1760 - 1980}{1980} = 0.276$$

$$\text{Expected Return (R)} = \frac{3.196}{6} = 0.533$$

Everest Bank Limited:

FY	MPS	Total Dividend	R	Remark
2060/61	680	136	0.000	
2061/62	870	174	0.535	
2062/63	1379	344.75	0.981	

2063/64	2430	729	1.291	
2064/65	3132	939.6	0.676	
2065/66	2455	736.5	0.019	
	Total		3.502	

The detail calculations of R for each fiscal year:

FY 2061/62

$$R = \frac{174+870-680}{680} = 0.535$$

FY 2062/63

$$R = \frac{344.75+1379-870}{870} = 0.981$$

FY 2063/64

$$R = \frac{729+2430-1379}{1379} = 1.291$$

FY 2064/65

$$R = \frac{939.6+3132-2430}{2430} = 0.676$$

FY 2065/66

$$R = \frac{736.5+2455-3132}{3132} = 0.019$$

$$\text{Expected Return (R)} = \frac{3.502}{6} = 0.584$$

ANNEX - 2

Calculation of Square of Deviation of Realized Rate of Return from the Expected Rate of Return

Nepal Investment Bank Limited (NIBL)

FY	R	(R-R)	(R-R) ²
2060/61	-	$(0-0.478)=-0.478$	$-0.478 \times -0.478 = 0.228$
2061/62	(0.043)	$(-0.043-0.478)=-0.520$	$-0.520 \times 0.520 = 0.270$
2062/63	1.448	$(1.448-0.478)= 0.971$	$0.971 \times 0.971 = 0.943$
2063/64	0.784	$(0.784-0.478)= 0.306$	$0.306 \times 0.306 = 0.094$
2064/65	0.996	$(0.996-0.478)=0.518$	$0.518 \times 0.518 = 0.268$
2065/66	(0.320)	$(-0.320-0.478)=(0.798)$	$-0.798 \times 0.798 = 0.636$
	2.865		2.440

Standard Chartered Bank

FY	R	(R-R)	(R-R) ²
2060/61	0.000	$(0-1.640)=-1.640$	$-1.640 \times -1.640 = 2.690$
2061/62	1.956	$(1.956-1.640)=0.316$	$0.316 \times 0.316 = 0.100$
2062/63	2.864	$(2.864-1.640)=1.224$	$1.224 \times 1.224 = 1.497$
2063/64	2.595	$(2.595-1.640)=0.955$	$0.955 \times 0.955 = 0.911$
2064/65	1.663	$(1.633-1.640)=-0.023$	$0.023 \times 0.023 = 0.001$
2065/66	0.760	$(0.760-1.640)=-0.880$	$-0.880 \times -0.880 = 0.775$
	9.837		5.973

Himalayan Bank Limited (HBL)

FY	R	R-R	(R-R) ²
2060/61	0.000	$(0-0.533)=-0.533$	$-0.533 \times 0.533 = -0.284$
2061/62	0.441	$(0.441-0.533)=-0.092$	$-0.092 \times -0.092 = 0.008$
2062/63	0.614	$(0.614-0.533)=0.081$	$0.081 \times 0.081 = 0.007$
2063/64	1.215	$(1.215-0.533)=0.682$	$0.682 \times 0.682 = 0.465$
2064/65	0.650	$(0.650-0.533)=0.117$	$0.117 \times 0.117 = 0.014$
2065/66	0.276	$(0.650-0.276)=-0.257$	$-0.257 \times -0.257 = 0.066$
	3.196		0.843

Everest Bank Limited

FY	R	R-R	(R-R) ²
2060/61	0.000	$(0-0.584)=-0.584$	$-0.584 \times -0.584 = 0.341$
2061/62	0.535	$(0.535-0.584)=-0.048$	$-0.048 \times -0.048 = 0.002$
2062/63	0.981	$(0.981-0.584)=0.398$	$0.398 \times 0.398 = 0.158$
2063/64	1.291	$(1.291-0.584)=0.707$	$0.707 \times 0.707 = 0.500$
2064/65	0.676	$(0.676-0.584)=0.092$	$0.092 \times 0.092 = 0.008$
2065/66	0.019	$(0.019-0.584)=-0.565$	$-0.565 \times -0.565 = 0.319$
	3.502		1.328

ANNEX-3

Market Index

Fiscal Year	NEPSE Index (NI)	R _m
2060/61	199.9	0.000
2061/62	231.97	0.160
2062/63	386.83	0.668
2063/64	683.95	0.768
2064/65	963.36	0.409
2065/66	749.1	-0.222
Total		1.782

Expected Return

$$(R_m) = \frac{\text{Ending Index} - \text{Beginning Index}}{\text{Beginning Index}}$$

Fiscal Year 2061/62

$$(R_m) = \frac{231.97 - 199.9}{199.9} = 0.160$$

Fiscal Year 2062/63

$$= \frac{386.83 - 231.97}{231.97} = 0.668$$

Fiscal Year 2063/64

$$= \frac{683.95 - 386.83}{386.83} = 0.768$$

Fiscal Year 2064/65

$$= \frac{963.36 - 683.83}{683.83} = 0.409$$

Fiscal Year 2065/66

$$= \frac{749.10 - 963.33}{963.33} = -0.222$$

ANNEX - 4

Calculation of Square of Deviation of Realized Rate of Return from the Expected Rate of Return

Fiscal Year	R_m	$R_m - R_m$	$(R_m - R_m)^2$
2060/61	0.000	$(0 - 0.297) = -0.297$	$-0.297 \times -0.297 = 0.088$
2061/62	0.160	$(0.160 - 0.297) = -0.137$	$-0.137 \times -0.137 = 0.019$
2062/63	0.668	$(0.668 - 0.297) = 0.371$	$0.371 \times 0.371 = 0.137$
2063/64	0.768	$(0.768 - 0.297) = 0.471$	$0.471 \times 0.471 = 0.222$
2064/65	0.409	$(0.409 - 0.297) = 0.111$	$0.111 \times 0.111 = 0.012$
2065/66	-0.222	$(-0.222 - 0.297) = -0.519$	$-0.519 \times -0.519 = 0.270$
Total	1.782		0.748

ANNEX- 5

Covariance of NIBL

Fiscal Year	(R-R)	Rm- Rm	(Rj-RJ)(Rm-Rm)
2060/61	-0.478	-0.297	-0.478×0.297=0.142
2061/62	-0.52	-0.137	-0.52×-0.137=0.071
2062/63	0.971	0.371	0.971×0.371=0.360
2063/64	0.306	0.471	0.306×0.471=0.144
2064/65	0.518	0.111	0.518×0.111=0.058
2065/66	-0.798	-0.519	-0.798×-0.519=0.415
Total			1.189

$$\text{Co- variance (Covjm)} = \frac{(Rj-Rj)(Rm-Rm)}{N-1} = \frac{1.189}{(6-1)} = 0.238$$

Covariance of SCBL

Fiscal Year	(R-R)	Rm- Rm	(Rj-Rj)(Rm-Rm)
2060/61	-1.640	-0.297	-1.640×-0.297=0.487
2061/62	0.316	-0.137	-0.316×-0.137=-0.043
2062/63	1.224	0.371	1.224×0.371=0.453
2063/64	0.955	0.471	0.955×0.471=0.450
2064/65	0.023	0.111	0.023×0.111=0.003
2065/66	-0.880	-0.519	-0.880-0.519=0.457
Total			1.807

$$\text{Co- variance (Covjm)} = \frac{(Rj-Rj)(Rm-Rm)}{N-1} = \frac{1.807}{(6-1)} = 0.361$$

Covariance of HBL

Fiscal Year	(R-R)	(Rm- Rm)	(Rj-Rj)(Rm-Rm)
2060/61	-0.533	-0.297	-0.533×-0.297=0.158
2061/62	-0.092	-0.137	-0.092×-0.137=0.013
2062/63	0.081	0.371	0.081×0.371=0.030
2063/64	0.682	0.471	0.682×0.471=0.321
2064/65	0.117	0.111	0.117×0.111=0.013
2065/66	-0.257	-0.519	-0.257×-0.519=0.133
Total			0.668

$$\text{Co- variance (Covjm)} = \frac{(\text{Rj-Rj})(\text{Rm-Rm})}{\text{N-1}} = \frac{0.668}{(6-1)} = 0.134$$

Covariance of EBL

Fiscal Year	R-R	(Rm- Rm)	(Rj-Rj)(Rm-Rm)
2060/61	-0.584	-0.297	-0.584×-0.297=0.173
2061/62	-0.048	-0.137	-0.048×-0.137=0.007
2062/63	0.398	0.371	0.398×0.371=0.147
2063/64	0.707	0.471	0.707×0.471=0.333
2064/65	0.092	0.111	0.092×0.111=0.01
2065/66	-0.565	-0.519	-0.565×-0.519=0.293
Total			0.964

$$\text{Co- variance (Covjm)} = \frac{(\text{Rj-Rj})(\text{Rm-Rm})}{\text{N-1}} = \frac{0.964}{(6-1)} = 0.193$$

ANNEX - 6

A Survey on the risk and return on common stock from the investors’ perspective

Dear respondents,

I am collecting the data concerned with risk and return on common stock from the investors’ perspective for the project work in partial fulfillment of the requirements for the degree of MBA and it would be grant value of your help in this project work, if you help by filling up the following questionnaires.

Name (optional);

Position:

Experience: years.

Institution:

Address:

1. Have you invested in the common stock of commercial banks in Nepal?

(Tick one)

- a. Yes b. No

2. On what basis, you have made investment on common stocks of commercial banks?

(Tick one)

- a. Friends advice ()
b. Market survey ()
c. Financial statement review ()
d. Whim and rumor ()

3. What kind of investor are you?

- a. Risk seeker
- b. Risk averter
- c. Neither risk seeker nor risk averter
- d. Don't know

4. Do you consider return on common stocks of commercial banks while making investment? (Tick one)

- a. Yes
- b. No
- c. don't know

5. To what extent do you consider the return involved in investing on common stocks of commercial banks? Please indicate on the following scale:

6. Do you consider risk on common stock of commercial banks while making Investment? (Tick one)

- a. Yes
- b. No
- c. Don't know

7. To what extent do you consider the risk involved in investing on common stocks of commercial banks? Please indicate on the following scale:

- a. High
- b. Medium
- c. Low

8. What kind of analysis do you conduct for your investment decision? (Tick one)

- a. Financial analysis
- b. Market analysis
- c. Both

9. If you conduct financial analysis which of following factors do you prioritize? (Rank the following factor according to priority given) I for high priority IV for low priority.

- a. Return factor
- b. Risk factor
- c. Dividend policy
- d. Market price per share

10. If you conduct market analysis which of following factors do you prioritize? (Rank the following factor according to priority given) I for high priority..... IV for low priority.

- a. Market rumor
- b. Future expectation
- c. Goodwill and image of the commercial bank
- d. Share market performance

11. Do you think that Nepalese investors are aware adequately about the risk and return factors? (Tick one)

- a. Yes
- b. No
- c. Don't know