

# **CHAPTER- I**

## **INTRODUCTION**

### **1.1 General Background**

Nepal is still in the least developed in the world. In another word economic condition of Nepalese people is very poor. Most of Nepalese people are still much below the poverty line. Their per capita income is around \$260. In this condition Nepalese people always focus their all activities to fulfill their basic needs. Saving after fulfillment

Their requirement is beyond their earning to invest in different areas of the productive sectors. That needs huge amount. Most people like to save a little money when they have a change because they can use it in the urgent need in the future. Saving money will be a great support to fulfill those needs.

Investment is defined simply to be the sacrifice of current consumption for future consumption whose main objective is to maximization of wealth. Investment decision is affected to different elements i.e. time, return and risk.

Commercial Bank plays a vital role in the economic development of the country. It occupies an important place in the framework of the every economy. It provides capita for the development of industry, trade, business and other resource deficit sector by investing the savings collected as deposits, beside this, commercial banks provide numerous services to their customers in view of facilitating their economic and social life. The other services performed by banks are payment of subscription, purchase and sale of securities, remittance of money, advisory services and assistance in foreign trade etc. Hence, the commercial bank plays an important role in the modern economy.

Financial management is a basic element that underlies for successful operation of every industry and organization. Management of money directs, determines and enhances the health and productivity of total financial sector hence reciprocating its performance directly to the growth of economy. So, financial development of country largely depends upon effective mobilization of its resources and investment upon good return. But it is often unreasonable to predict and realize the normal return on business investment due to the competitive market and other environment constraints which may serve sometime as opportunity and other times

threat. Changing nature of competition and increasing pressure of globalization on today's business world, investment management has become the most critical determinant of the economy. The most important fact of international business operation is continuous change in economic, political and social dimensions. These changes are beyond the control of international business concern. In recent years international investors are attracted towards the financial market of developing countries. As a result many joint ventures and multinational companies are being established in the country

## **1.2 Commercial Banks**

Commercial Bank is an institution, which accepts deposits, makes business loans, and offer related services. It raises funds by collecting deposits from businesses and consumers via checkable deposit, saving deposit, and time (or term) deposit. It buys corporate bonds and government bonds. Its primary liabilities are deposits and primary assets are loans and bonds.

It also allow for a variety of deposit accounts, such as checking, saving and time deposit. These institutions are run to make a profit and owned by a group of individuals or institutions. While commercial banks offer services to individuals, they are primarily concerned with receiving deposits and lending to businesses. Commercial banks can be contrasted with investment banking firms, such as brokerage firms, which generally are involved in arranging for the sale of corporate or municipal securities.

According to Nepal commercial Bank Act 2031" A Commercial Bank refers to such type of bank other than specified bank related to Cooperative, agricultural , industrial and other which deals in money exchange, accepting deposits and advancing loans etc. ( Commercial Bank Act: 2031)

Commercial Banks are those financial institutions that deal in accepting deposits of individual and institutions and giving loan against securities. They mobilize monetary resources from the savers to the users. They provide working

capital needs of trade, industries and even to agricultural sectors. Moreover Commercial Banks also provide technical and administrative assistance to industries, trade and business enterprises. Commercial Banks pool together the saving of the community and arrange them for the productive use. Apart from financing, they also render services like collection of bills and checks, safekeeping of the valuables, financial intermediaries etc.to their customers.

Commercial bank is a cooperation, which accepts demand deposit subject to check and makes short-term loans to business enterprises, regardless of the scope of its other services.

Commercial banks are the heart of the financial system. They make fund available through their lending and investing activities to borrower, individuals, business firms and services for producer to customers and financial activities of the government. Therefore, commercial banks are those financial institutions, which collects loan against proper securities for their productive purpose.

### **1.3 Concept of Risk Return Analysis**

It is common problem of investment manager how to maximize the expected return of the portfolio subject to some target level of volatility. This is investment is made to have best performance for an expected level of standard deviation. The targeted standard deviation is determined by the investor's tolerance for risk. Expected returns depend upon the firm's life cycle and return of major( mature) firm's with those of growth of mature firm than of growth firms. Effective risk and return management strategy should be applied in order to manage portfolio risk and return.

### **1.4 Brief Introduction of Commercial Bank**

#### **a. Nabil Bank limited (NABIL)**

Nabil Bank Limited is the first commercial bank established in joint venture investment in Nepal. This bank was established in 2041 B.S under the Commercial

Bank act, 2021. Dubai Bank Limited was initial foreign joint venture partner with 50% equity investment The shares owned by Dubai. Later on Emirates Bank international Limited sold its entire stock to National Bank Limited are held by National Bank Limited Bangladesh and out of another 50% shares; Financial institutions has taken 20% and remaining 30% were issued to general public in Nepal . Authorized capital and paid up capital of Nabil Bank Limited are Rs. 500 million and Rs. 491.6544million. The numbers of Shareholders of this bank are 5076 with par value of Rs. 100 each.

#### **b .Everest Bank Limited (EBL)**

Everest Bank Limited (EBL) started its operation in 1994 A.D with a view and objective of extending professionalized and efficient banking services to various segments of the society. In the beginning of its establishment, it was managed by united Bank of India Limited Later on EBL joined hands with Punjab National Bank (PNB). India is its joint venture partner since 1997 A.D.

The shareholding of Everest Bank Limited is consisted of three different investors namely the Nepalese Promoters 50% Punjab National Bank 20% and General Publish 30%. Initially at the time of establishment, the bank had an authorized capital of Rs. 752 million and paid up capital of Rs. 455 million. The numbers of shareholders are 24,222 with par value of Rs. 100 per share.

#### **c. Nepal Bangladesh Bank Limited (NBBL)**

Nepal Bangladesh Bank Limited was established in June 1994 with an authorized capita of Rs 240 million and paid up capital of Rs 60 million joint venture banks with IFIC bank of Bangladesh. The prime objective of this bank is render banking services to different sectors like industries, traders, businessman, priority sector, small entrepreneurs and weaker section of society and every other people who need banking services. During the period of 15 years of its operation, it has accommodated a large number of clients and has been able to provide excellent services to its clients.

Top Exporters and importers of the country have established banking relationship with the Bank with a substantial volume of foreign business which has enhanced the Bank's popularity in the international trade front. Bank has developed Agency and correspondent relationship with more than 200 prominent Foreign Banks in the world.

## **1.5 Statement of Problems**

Capital market investment in this present context plays the major role in the socio-economic development of the country. Having the sensitive nature, economic, social and political interference would directly affect on it. The stage of development of capital market in any country and its effective growth is depended upon the aggregate economic condition, saving and investment opportunity etc.

"Although there are various institution involved in capital market, they have not been able to show good performances according to the fact that investors are responsible for not having self-control, self-judgment in the choice of securities for investment. Thus having lack of adequate knowledge about the securities of certain in companies, investors are haphazardly investing in shares.

Similarly most of the organizations are found ignoring investor's preference and are also indifferent about secondary market like information dissemination system and transparency in operation. Similarly insufficient skilled manpower and development of human resources are problems in the capital market. Again low price and low trading volume of the companies have directly related to market value of firm. Thus, the investors whether professional or amateur, should analyze the securities in terms of price and volume before investing on them regarding the share price movement in the market, one assumes that market is inefficient in pricing of shares. In which the technical analysis they argues that the analysis of the historical prices and trading of stocks provides meaningful information, which provides a picture of future price movements to the investors. It attempts to explain and forecast changes in security prices by studying the market data rather than information about a company or its prospects." (Bhalla; 1997:358)

"Fundamental analysis theory argues that at any point of time there exists an intrinsic value of the stocks, which helps to select the right stock at a time.

On the other hand, efficient market theory argues that market is efficient in pricing the shares. In a situation where stock prices movement follows random works and at every point in time actual prices represent good estimate of its intrinsic values general investors tend to select any security randomly to form his/her optimum portfolio." (Fama; 1965: 40) As the best investment strategy in such market will be random selection of securities the investment decision is easier. In essence in a random walk market, the security analysis problem of the average investors is greatly simplified.

In an efficient market condition, stock price is equal to the intrinsic value of stock. When required rate of return and expected rate of return are not equal, then intrinsic value and market value of stock will not be equal. It is also assumed that all stock remain in security market line and if the case is not so the strive towards this line. But theoretical and practical knowledge may not always each other.

Therefore it needs courage and at the some time faith to invest in common stock. In most of the time which can be generated through proper evaluation with giving view to the prevailing market atmosphere. But what are the criteria for evaluation that the stock they are holding will give them favorable return? What should be the compensation they have to receive for bearing risk? How can investors make higher return through lower risk?

Some research problems are as follows. They are:

- a. What are the evaluation criteria for investing in the stocks to get accurate measurement of return?
- b. How the return is measured? How can higher return be achieved assuming low in risk?
- c. What kind of relationship (positive or negative) exists between dividend and stock prices?
- d. Does the portfolio investment reduce the risk the sector what is the proper weight of stocks in portfolio?
- e. What kind of risk exists on the stock investment of Nepalese commercial banks?

## **1.6 Objectives of the Study**

The main objective of this study is to evaluate the risk and return on common stock investment of listed commercial banks. In consonance with main objective, the special objectives are as follows:

- i. To present the status of risk return associated with common stock of selected commercial banks individually.
- ii. To analyse the portfolio risk and return of selected banks.
- iii. To collect and analyze investor's opinion regarding company's dividend and return.
- iv. To compare the risk and return on investment of the commercial bank
- v. To suggest and recommend some measure on the basis of analyzing data and findings.

## **1.7 Signification of Study**

Traditional investment analysis emphasizes the projection of prices and dividends. That is, the potential price of a firm's common stock and the future dividend stream are forecast and then discounted back to the present. This intrinsic value is then compared with the security's current market price. If the current market price is above the intrinsic value, a purchase is recommended conversely, if the current market price is below this intrinsic value, a sale is recommended.

Modern security analysis emphasizes the risk and return estimates rather than more price and dividend estimates. The risk and return estimates, of course, are dependent on the share price and the accompanying dividend stream.

This study is conducted to provide basic and necessary information about investment and investment process. This current study will help to take an appropriate decision about how to set investment worth while over the different time period.

The focus of the study is on the analysis of risk, return and portfolio, which will enable investors to guide the investment activities. Security business persons, issue

managers, brokers marketing managers and general investor will be the valuable assets for the further research work.

### **1.8 Limitation of Study**

This study is conducted for partial fulfillment of the requirements for the degree of Masters in Business studies. It is fully dependent on the data provided by different sources. Because of limited secondary data, sample techniques are used to analyze the data. Therefore, it possesses some limitations, which are as follows:

a. The study is made for partial fulfillment of the requirements of master of business study in short of time. Therefore, following banks are taken in this study.

1. Nabil Bank Ltd.
2. Nepal Bangladesh Bank Limited.
3. Everest Bank Ltd.

b. This study covers only 5 years period. Data of fiscal year 2004/2005 to 2008/2009 of EBL, NABIL, and NBBL are used for the study.

c. The study is based on secondary data consequently the result depends on the reliability of secondary data.

d. This study is basically concerned with risk and return of commercial bank. It does not consider other financial analysis of the banks.

### **1.9 Organization of the Study**

The whole study has been divided into five chapters as follows:

The rationale behind this kind of organization is to follow a simple research methodology approach. The contents of each chapter of this study are briefly mentioned below:



**Chapter 1: Introduction**

First chapter is introduction, which includes General background, statement of problem, objective of the study, significance of the study and organization of the study.

**Chapter 2: Review of Literature**

This chapter is directed towards the review of literature of related studies, which contains conceptual framework and review of related studies in general review of the theories of the concerned topic, review of book, review of related articles and review of legislation related to commercial bank.

**Chapter 3: Research Methodology:**

This chapter describes the research methodology employed in the study. It includes research design, nature and source of data, population and samples, method of data analysis, various statistical and financial tools, definition of key terms.

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

This chapter devoted to presentation, analysis, interpretation and scoring the empirical findings out of the study through definite course of research methodology. It consists of investment operation of commercial banks trend analysis, ratio analysis of risk and return on investment.

**Chapter 5: Summary of findings, Conclusion and Recommendation.**

This chapter contains summary, conclusion and recommendation of the study. This chapter presents the major findings. It also offers recommendation and several directions for future research.

## **CHAPTER- II**

### **REVIEW OF LITERATURE**

In this chapter theoretical aspect of risk and return has been explored. The role of risk on financial management and financial decision-making is great. In this chapter some academic course book, journals and other related studies have also been review . In addition, independent studies carried out by well-known Nepalese financial exports and others are also taken in to consideration.

This chapter has been divided into two main sections. First section deals with conceptual & theoretical framework and second section deals with reviews of empirical studies under taken in Nepal.

#### **2.1 Conceptual Framework**

##### **2.1.1 Common Stock**

“The main elements of the capital structures are ordinary shares, preference share and debenture. Among them, the most important from is equity share, ordinary share or common stock. Common stock is the first security of a corporation to be issued and in case of bankruptcy, the last to retired, common stock represents on ownership share in the firm. So they have the power to elect the board of directors. The common stock holders invest on the firm with the expectation of return in the future they have the lowest priority claim on earning and assets of all getting anything back from a bankrupt firm is minimal. But common stock has unlimited potential for dividend payments and price appreciation. When investors buy common stock, they can obtain certificates as proof of their parts as owners of the firm. Stock certificate sate the number of share purchased, the new owner and the number of share bought are noted in the stock purchased their par value and usually the transfer agent, when stock is record book the transfer agent.” (Clark; 1991:50)

“Equity capita represents ownership capita as equity shareholders collectively own the company. They enjoy the rewards as well as bear the risk of ownership. However,

their liability, unlike the liability of the owner in a proprietary firm and the partners in a partnership concern, is limited to their capital contribution.”( Chandra; 1994: 521)

“The common stock holders of a company are its ultimate owners, collectively, may own the company and assume the ultimate risk associated with ownership. Their liability however is restricted to the amount of their investment. In the company, after the claims of all creditors and preferred stock holders are settled in full common stock, like preferred stock, has no maturity date.” (Van Horne; 1996:560)

“Common equity in a corporation or partnership or proprietorship interest in an unincorporated firm constitutes the first source of funds to a new business and base of support for borrowing by existing Arms.” ( Weston and Copeland; 1996:931)

### **2.1.2 Risk**

Risk and return are the determinant for the valuation of securities. However, risk means that we do not know what is going to happen even through. We occasionally have a good idea of the range of possibilities that we face. In the other words, when the firm should recognize that the forecast return may or may not be achieved . This is the elements of risk in the decision making process.

“Therefore, risk may be defines as the likelihood the actual return from an investment will be less than the forecast returns. Stared differently, is the variability of return from an investment.” (Hampton; 1996:65)

“Risk is defined in Webster’s Dictionary as "a hazard; exposure to loss or injury". Thus, risk refers to the chance that some unfavorable event will cover. If any body engage in skydiving, such people is making chance with his life skydiving, such people is taking chance with his life skydiving is risky.’

(Bringham, Gapenshi and Ehrhardt; 2001:160)

### 2.1.2.1 Models of Risk used to measurement (Van Horn; 1998:205)

I) **Beta Coefficient** : This is a mathematical value that measure the risk of one asset in term of its effects on the risk of a group of assets called a portfolio. It is concerned solely with market related risk, as would be the concern for an investor holding stocks and bonds. It is derived mathematically so that a high beta indicates a high level of risk, whereas a low beta represents a low level or risk, mathematically, "bi" denotes it.

II) **Standard Deviation**: This is a measurement of the dispersion of forecast returns when such return approximate a normal probability distribution. It is a statistical concept and is widely used to measure risk from holding a single asset. The standard deviation is derived so that a high standard deviation represents a large dispersion of return and is a high risk. On the other hand, a low standard deviation is small dispersion and represents low risk mathematically; it is denoted by ( ).

III) **Subjective Estimate**: A subjective risk measure occurs when qualitative rather than quantitative estimates are used to measure dispersion. An example; an analyst may estimate that an offers a "low " level of risk. This means that, in the analyst view the dispersion of return will not be very wide. Similarly, a "high" risk level will accompany a project whose forecast return may very a great deal.

### 2.1.2.2 Components of risk

I) **Business Risk**: Business risk may be defined as the chance that the firm will not have ability to complete successfully with the assets that it purchases. For an example; the firm may acquire a machine that may not operate properly, that may not produce stable products or that may face other operating or market difficulties that causes losses. Any operational problems are grouped as business risk.

**II) Financial Risk:** This is the chance that an investment will not generate sufficient cash flows either to cover interest payment on money borrowed to finance it or principal repayments on debt or to provide profits to the firm.

### **2.1.2.3 Fundamentals of Risk Management (Van Horne; 1996:228)**

Risk management by defining some commonly used term that describes different risks; some of these risks can be changed.

- I. Pure Risk:** It is such type of risk that offers only the prospects of a loss example include the risk that a plant will be destroyed by fire.
- II. Speculative Risk :** Speculative risks are situation that offers than chance of gain but might result in a loss. Thus, investment in new project and marketable securities evolved speculative risks.
- III. Demand Risk:** Demand risk are associated with the demand for a firm's product or services . Because sales are essential to all business, demand risk is one of the most significant risks that firms faces.
- IV. Financial Risk:** Financial risks are seeks that result form financial transaction if firms plan to issue new bonds, if it faces the risk that interest rates will raise before the bonds can be bought to market.
- V. Property Risk:** Property risks are associated with destruction of productive assets. Thus, the threat of fire, floods and riots imposes property risk on a firm.
- VI. Personnel Risk:** Personal Risk is that risk 'that result from employee's action.
- VII. Environmental Risk:** Environmental risks include risk associated with polluting the environment, public awareness in recent years,

coupled with the huge cost of environmental cleanup, has increased the importance of this risk.

#### **2.1.2.4 The Risk on Common Stock**

Having briefly discussed about the procedure of qualifying the return following paragraph will explore on risk and shows how it is perceived by uncertainties and risks indifferent ways. For some uncertainty is simply a lack of definite outcomes; it is any thing that could happen any unknown event which may be favorable or unfavorable . To other, it is risk, many people consider risk as a chance of happening some unfavorable event or danger of losing some value. The trouble of uncertainty and risk, people after use them interchangeably.

Although it is not quite clear what precisely there two terms mean, authorities in the field of finance and propel concern about finance do degree that the risk is the product of uncertainty. If we interpret certainty as future out-come which is one hundred percent sure to happen, uncertainty is then just the opposite of certainty that refers to all possible future outcomes none of which is known for sure to happen. Risk , in the other hand is the product of all potential outcomes terms of the degree of variability in the probability distribution of such outcomes uncertainty and risk are treated separately in financial analysis. The practice is to translate the uncertainty in all mathematical value which represents the best estimate of all uncertainty values. In other words uncertainty is taken care of by calculation the expected value of all possible uncertain outcomes. But risk is treated differently. Although risk arises from uncertainty its magnitude depends upon the degree of variability in uncertain cash flow, and it is an indication of chance of loosing investment value. The word chance here refers to the probability of loss in the investment project. In other word, project risk indicated the probability of return being less than the expected value-higher the probability of such loss and less returns, higher the project risk. (Van Horn; 1998:205)

#### **2.1.3 Return**

The concept of return has different meaning to different investors. Some investor seek near term cash inflows and gives less value to more distant return such an investor might purchase the stock of other firm that pays a large cash dividends.

Other investors are concerned primarily with growth. They would seek projects that offer the promise of long term, higher than average growth of sales, earning and capital appreciation.

“An investor is ready to sacrifice his present consumption for the future return or reward. Investment can be made in various securities. Therefore motivation for the investment is the return. The return is difference between the terminal wealth (what an investor received ) and initial wealth (what an investor invest). The invested wealth of investor may be increase or decrease or remains the same in the future. If the terminal wealth is greater then the initial wealth there is positive return from the investment. If terminal wealth is less the initial wealth there is negative return from the investment if terminal wealth is equal to initial wealth there is zero return. Investor always wants to higher return other things being the same.” ( Manandhar et.al.; 2063:42)

With most investments, individual or business money today with the expectation of earning even more money in the future. Thus, the concept of return provides investor with a convenient way of expressing the financial performance of an investment.

One way of expressing an investment returns in rupees terms. The return is simply the total rupees received from investment fever amounts invested.

### **2.1.3.1 The Return on Common Stock**

The cash payoff to owners of common stocks comes in two forms;

- 1. Cash dividend**
- 2. Capital Gain( Losses)**

To make it clearer, example derived from the book of Brealy and Myers ( page 63) is taken where writers have added, " If current price of a share is  $P_0$  that the expected price at the end of a year is  $P_1$  and that the expected dividend per share is  $Div_1$  . The rate of return that investors expect from this share over the next year is

defined as the expected dividend per share Div1 plus the expected price appreciation per share  $p_1 - p_0$  all divide by the price at the start of the year  $p_0$ . This cash show in the form of;

$$\text{Expected return} = r = \frac{\text{Div1} + P_1 - P_0}{P_0}$$

The return from holding an investment over some period say a year is simply any each payments received due to ownership, plus change in market price divided by the beginning price. Thus, the return comes from two sources; income and price appreciation. For example stock we can decline one-period return as;

$$\text{Expected return} = r = \frac{\text{Div1} + P_1 - P_{t-1}}{P_{t-1}}$$

Where,

R = Actual (Expected) return

T = Particular time period in the past (future)

P1= Stock price at time, period t

Pt-1= Stock price at time , period t-1

Above formula can be used to determine both actual one period return (when based on historical figure) as well as expected on period return (when based on future expected dividends and prices). The term in the parenthesis in the numerator of an above question represents the capital gain or loss during the period.

“Holding period return measure mentioned above is useful with an investment horizon of one year or less. For longer periods, it is better to calculate rate of return as an investment yield. The yield calculation is presented value based and this considers the time value of money.” (Van Horne and Wachowicz ; 1997:90)

“Return is defined as the dividend yield plus the capital gain or loss. The relationship between different levels of return or their relative frequencies is called a



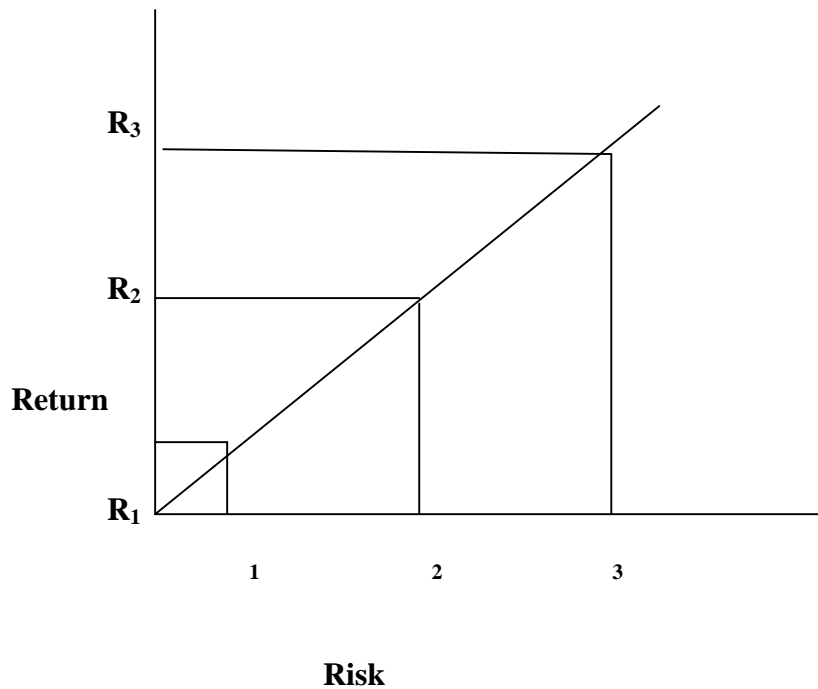
probability distribution. We could formulate a probability distribution for the relative frequency of a firm annual return by analyzing its historical return over the over the previous year. But we know that history never repeats itself exactly. Hence, after analyzing relative frequencies of historical return for the individual company. We can form probability distribution based on historical data plus the analysis for the outlook for the firm in its industry and another factors.” (Van Horne and Wachowicz: 1997:90).

#### **2.1.4 Relationship between Risk and Return**

Risk is a complicated subject and need to be properly analyzed. The relationship between risk and return is described by investor perception about risk and their demand for compensation. No investor will like to invest in risky assets unless he/ she is assured of adequate compensation for the assumption of risk. Therefore, it is the investor’s required risk premium that establishes a link between risk and return. In a market dominated by rational investor’s higher risk will command by rational premium and the trade off between the two assume 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.” (Loric, Dodd and Kimpton: 1983:3)

**Fig. no. 2.1**  
**Relationship between Risk and Return**



**(Source: Van Horne; 1998: 245)**

The figure represents higher premium for higher risk in linear indicating a premium of  $(P_1 - RF)$  for  $r_1$ , Degree of risk  $(R_2 - RF)$  for  $r_2$  degree of risk and soon.

The assumption of linear relationship states the risk premium increase or decrease in proportion to a change in level of risk. RF stands for return on risk-free security. The partial interest is the difference in rates of return across securities, since they provide valuable clues to market's trade-off between risk and return.

"Scientific progress in any field depends on occur measurement many measurements are interesting in them, by their most important scientific rate is to test the validity of theory. Since most financial theory is focused on an explanation of the level, structure and behavior of rules of rates of return, their accurate measurement is essential if the theory is to be tested and improved." (Loric, Dodd and Kimpton; 1983:3)

Rational investor would agree that investments required return should increase as the risk of investment increase. Most investors would also agree how the expected rate of return should be calculated. For all except risk-free securities, the return we expected may be different from return we receive. For risky securities, the return we expected may be different from return we receive. For risky security (common stock) the actual rate of return can be viewed as a random variable subject to a probability distribution.

The expected return  $= R = \sum_{j=1}^n (R_j) (P_i)$

Where,

$R_j$  = Return for the  $j^{\text{th}}$  Possibility

$P_i$  = Probability of  $i^{\text{th}}$  Possibility and

$N$  = Total no of possibility

Then the expected return is simply a weighted average of the return with the weights being the probabilities or occurrence.

Another parameter of return distribution is a measure of dispersion of variability around expected return. The conventional measure of dispersion is the standard deviation. The standard deviation ( ) can be expressed mathematically as;

$$\sigma = \sqrt{\sum (R_i - R)^2 (P_i)}$$

Operationally, we generally first calculate dispersion variance or the weighted average of square deviations of possible occurrence. The square root of the figures will provide standard deviation.

A standard deviation can sometimes be misleading in comparing the risk or uncertainty surrounding alternatives if they differ in size. To adjust for the size or scale, or scale problem, the standard deviation can be divided by the expected return to compute the coefficient of variance (CV).

$$\text{Coefficient of variance (CV)} = \frac{\sigma}{R}$$

Thus, the coefficient of variance is a measure of relative dispersion (risk) measure of risk " per unit of expected return". The larger the c.v. the larger the relative risk of the investment.

c.v. = the ratio of the standard deviation of a distribution to the mean of that distribution which is the measure of relative risk.

While consulting the different book it is found that one assumption (generally accepted view) is made, that is the investors are by and large risk averse and in other words investors that have been studied are characteristically those who demands a higher expected return for the assumption higher risk. This implies that risky investment must higher expected return then less risky investment for investors to buy and holds them. In short, there is no free touch when it comes to investment . Any claims for higher return produced by low -risk investments should be viewed skeptically.

Investors rarely place their entire wealth in to a single assets or Investment. Rather they construct a portfolio or group of investments. Therefore, it is needed to extend analysis of risk and return to include portfolio-A combination of two or more securities or assets is a portfolio.

The expected return of a portfolio those portfolios. The weights are equal security (the weight must be sum to 100 percent). The general formula for expected return of a portfolio,  $R_p$  is as follows;

$$R_p = \sum_{j=1}^n W_j R_j$$

Where,

$W_j$  = proportion or weight of total funds invested in security j.

$R_j$  = Expected return for security j. and

$N$  = total no of different securities in the portfolio.

While the portfolio of return on the individual security, where as portfolio standard deviation is not the weighted averaged of individual security standard deviation. To take a weighted average of individual security standard deviation would be to ignore the relationship or correlation between the returns of the two securities. This correlation however has no effect on the portfolio expected return. Correlation between security return complicated the calculation of portfolio, standard deviation by forcing to calculate the covariance between return for every possible pair wise combination of securities in the portfolio. But this dark cloud of mathematical complication contains a silver correlation between securities provide the possibility of elimination some risk out reducing potential return.

The standard deviation of probability distribution of possible portfolio return,  $\sigma_p$  is

$$\sigma_p = \sqrt{\sum_{j=1}^m \sum_{k=1}^m W_j W_k \sigma_{jk}}$$

Where,

$m$  = total no of different securities in the portfolio

$w_j$  = proportion of total funds invested in security  $j$

$w_k$  = proportion of total funds invested in security  $k$

$\sigma_{jk}$  = covariance between possible returns for securities  $j$  and  $k$

The covariance of the possible returns of two securities is a measure of the extent to which they are expected to vary together rather than independently of each other.

The covariance term in above formula can be written as below;

$$\text{Cov}_{jk} = r_{jk} \sigma_j \sigma_k$$

Where,

$r_{jk}$  = the expected correlation coefficient between possible returns for securities j and k

$\sigma_j$  = standard deviation for security j, and

$\sigma_k$  = standard deviation for security k, and

When,  $j = k$  coefficient is 1.0 as variables movement correlate perfectly with it self, and  $r_{jk}$ ,  $\sigma_j$ , becomes  $\sigma_j^2$  once of again it will be seen that our concern along the diagonal of matrix is with each security own variance.

This correlation coefficient always lies in the range from -1.0 to + 1.0 A positive correlation coefficient indicates that the returns from two securities generally move in the same direction while a negative correlation coefficient implies that they generally move in positive direction. The stronger the relationship, the closer the correlation is to one of he two extreme values. A o (zero) correlation coefficient implies that the returns form two securities are un -correlated; they show no tendency to vary together in either a positive or negative in linear fashion.

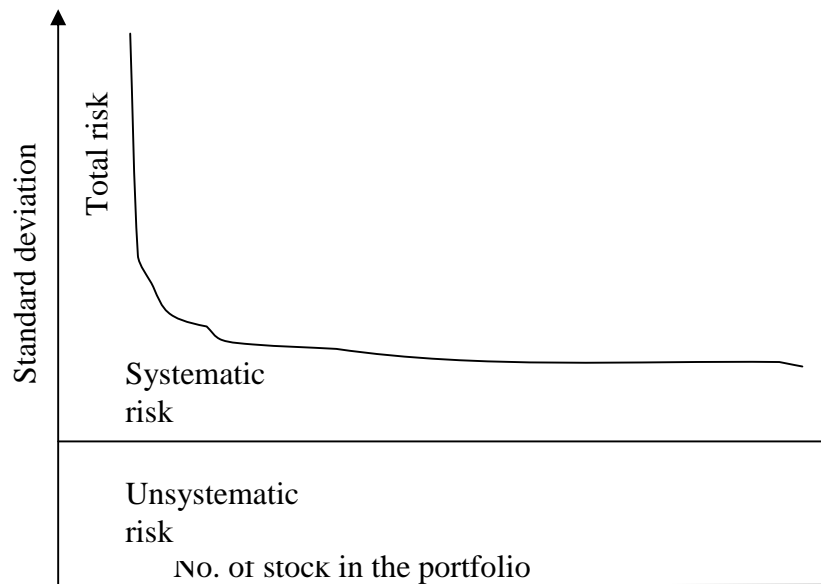
Most stock return tend to move together but not perfectly. Therefore the correlation coefficient between two stock is generally positive, but less than 1.0. The important principle to grasp is that as long as the correlation coefficient between two securities is less than 1.0 , the standard deviation of the two portfolios will be less than the weighted average of the two individual standard deviation. Hence, everything, else being equal, risk- averse investors may want to diversify their holding to include securities that have less than perfect, positive correlation ( $r_{jk} < 0$ ) among themselves. To do otherwise would be to expose one self to needless risk.

Meaningful diversification involves combining securities in a way that will reduce risk. Risk reduction occurs as long as the securities combined are not perfectly positively correlated.

Systematic and unsystematic risks are the terms frequently used in portfolio context combining securities that are not perfectly positively correlated help to lesson the risk of the portfolio to some extent. How much risk reduction is reasonable to

expect and how different security holding in portfolio would be required? Answer to the question will be explained in following paragraphs.

**Fig.no. 2.2**  
**Total, systematic and unsystematic Risk**



In the case of single stock, the risk of portfolio is the standard deviation of that stock. As the randomly selected stock held in the portfolio are increased, the total risk of the portfolios reduced. Such a reduction is at decreasing rate. Thus a substantial proportion of the portfolio risk can be eliminated with a relatively moderate amount of diversification.

$$\text{Total risk} = \text{systematic risk} + \text{unsystematic risk}$$

The first part, systematic risk is due to risk factors that affect the overall market such as changes in national economy, tax reform by the government or changes in the world's energy situation. There are risks that affect securities overall and consequently, can not be diversified away. In other words over an investor who holds a well diver field portfolio will be expected to this type of risk.

The second component, unsystematic risk is risk unique to a particular company or industry. It is independent of economic, political and other factors that affect all

securities in a systematic manner. A wild cast risk may affect only one company a new competitor may begin to produce essentially the same product or a technological break through can make a existing product absolute. For most stocks, unsystematic risk accounts for between 60 to 70 percent of stocks total risk or standard deviation.

However by diversification, this kind of risk can be reduced and ever eliminated if diversification is efficient. Therefore, not all the risk involved in holding a stock is relevant since past of their risk can diversify away. The important risk of stock is its unavoidable of systematic risk. Investor will be compensated for bearing this systematic risk . They should not, however expect the market to provide any extra compensation for bearing avoidable risk. It is that lies behind capital assets pricing model (CAPM).

### **2.1.5 Investment**

“An investment is a commitment of funds made in the expectation of some positive rate of return. If the investment is property undertaken, the return will be commensurate with the risk the investor assumes.” ( Fisher and Jordan; 2002:2)

Investments generally involve real assets of financial assets. Real assets are tangible, material things such as buildings, automobiles, and text books. Financial assets are pieces of paper representing an indirect claim to real assets held by someone else. These pieces of paper represent debt or equity commitments in the form of bond or stock certificates.

Among the many properties that distinguish real from financial assets, one of special interest investors is liquidities. Liquidity refers to ease of converting an asset into money quickly, conveniently and at little exchange cost. Real assets are more heterogeneous, often peculiarly adapted to a specific use, and yield benefits only in cooperation with other productive factors. In addition, returns on real assets are frequently more difficult to measure accurately, owing to the absence of board , ready, and active markets.



An investment involves the sacrifice of current rupees for future rupees. The sacrifice takes place in the present and certain but the reward comes later and is generally uncertain. Return, risk and time are generally involved in the investment.

Investors may buy and sell financial assets in order to earn return on them. The return better known as reward from investments includes both current income capital gains and losses that arise by increase or decrease of the security price. Return is the income received in investment. People invest their wealth with an expectation of getting some reward for leaving its liquidity, they only invest in those opportunities where they can get higher return. Hence, investor wants favorable return to be yield by its stock, and go for those, which yield more.

Risk is inseparable from return. Risk in fact an indication of chance of losing investment values. Different people interpret risks in different ways. To some, it is simply a lack of definite outcome, which can be any unknown event, which may be unfavorable. It is chance of happening some unfavorable event or danger or losing some material value. Risk in holding securities is generally associated with the possibility that realized will be less than the returns that were expected. The source of such disappoint is failure of dividends (interest) and /or the security's price to materialized as expected. The investment process must be considered in terms of both aspects risk and return.

Another important factor in investment is the time, which offers several different case of action. Time, period depends on the attitude of the investor who follows a "buy and hold" policy. As time moves on, analysts believe that conditions changes and investors reevaluate, expected return and risk for each investment.

"The investment process describes now an investor should go about making decisions with regard to what marketable securities to invest in, how extensive the investment should be, and when the investment should be made. A five step procedure for making decisions forms the basis of investment process." ( Sharpe, Alexander and Bailey: 1996: 10 )

## **Set Investment Policy**

The first step of investment process is to the investment policy which involves determining the investor's objective and the amount of invest able wealth. Investor objective should be stated in terms of both risk and return. This step involves the identification of potential categories of financial assets for consideration in the ultimate portfolio. This identification is based on the investment's objectives, amount of invest able wealth and tax status of investor.

## **Securities Analysis**

The second step in the investment process is to perform security analysis, involves examining a number of individual securities (or group of securities) with in the board categories of financial assets. The purpose of conducting such examination is to identify those securities that correctly appear to be mispriced. There are two main approaches to study analysis. They are (1) Technical analysis (2) Fundamental Analysis.

Technical analysis involves the study of stock market price in an attempt to predict future price movements for the common stock of a particular firm. First, past prices are examined in order to identify recurring trends or patterns in price movements. Then more recent stock prices are analyzed in order to identify. Emerging trends or patterns that is similar to past ones.

Fundamental analysis begins with intrinsic value of any financial asset equals to present value of all cash flows that the owner of the asset expects to receive. Once the intrinsic value of the common stock of a particular firm has been determined, it is compared with the security's current market price of the common stock. If the current market price of the common stock is below the intrinsic value, a purchase is recommended.

Conversely, if the current market price is above this intrinsic value, a sale is recommended.

### **Portfolio Construction**

The third step of the investment process is construction of portfolio. Construction of portfolio involves identification of specific securities in which to invest, along with the proportion of invest able wealth to be put into each security. Hence, selectivity, timing and diversification need to be addressed by the investors.

### **Portfolio Revision**

The four step of investment process portfolio revision which involves both realizing that the currently held portfolio is not optimal and specifying another portfolio to hold with superior risk- return characteristics. The investor must balance the costs of moving to the new portfolio against the benefits of revision.

### **Portfolio performance Evaluation**

The fifth step in the investment process, portfolio performance evaluation, involves determining periodically how the portfolio performed. In terms of risk and return , and compares the performance with that of an opportunity "benchmark" portfolio.

### **Portfolio**

A portfolio is a combination of investment assets. The portfolio is the holding of securities and investment in financial assets i. e bond, stock , individual securities have risk-return characteristics of their own. Portfolios may or may not take on the aggregate characteristics of their individual part. Portfolio analysis thus takes the ingredients of effects of combining securities and considers the blending or interactive effects of combining securities. Tradition approach and modern approach characterize the portfolio management.

In traditional approach, portfolio planning called for the selection of those securities that best fit the personal needs and desires for the investors. For example, a young, an aggressive, single adult would be advised to buy stocks in newer dynamic,

rapidly growing firms. A retired would be advised to purchase stocks and bonds in old-line, established, stable companies, such as utilities.

Modern approach suggests that the traditional approach to portfolio analysis, selection and management may well yield less than optimal results that a more scientific approach is needed, based on estimates of risk and return of the portfolio and the attitudes of the investor toward a risk in trade – off stemming from the analysis of the individual securities.

The return of the portfolio is nothing more than the weighted average of the returns of the individual stocks. The weights are based on the percentage composition of the portfolio. The total risk of the portfolio is more complex. Here we need only point out that securities when combined may have a greater or lesser risk than the sum of their component risks. This fact arises from the degree to which the returns of individual securities move together or interact.

### **2.1.7 Security Market**

Security market exists in order to bring together buyers and sellers of securities. It means the market where the securities are traded. In such market, buyers and sellers are mechanisms created to facilitate the exchange of financial assets. It can be distinguished as;

- ) Primary and Secondary Market
- ) Money and Capital Market

#### **Primary Market (NIM)**

Securities available for the first time are offered through the primary securities markets. The issuer may be a brand new company or one that has been in business for many years. The key is that securities absorb new funds for the coffers of the issuer. It is also known as New Issue Market (NIM).

## **Secondary Market**

“ The secondary market is not keeping pace with the growth of the primary market. This is mainly due to lack of the needed efforts on the concerned authority to advise suitable package of measure do encourage the growth of broker’s networks in the country’s growing stock exchange.”(Shrestha ; 1992;18)

## **Money Market**

Money market is also called short term financial market which is the set of supplying short term debt or working capital needed for industries, business or incorporated etc.

### **Capital Market**

Capital Market is the market where the transaction of long –term finance is made. The funds colleted in this market are raised and trade by long-term financial instruments such as equities and bonds.

## **2.1 Review of Relevant Studies**

### **2.2.1 Review of Independent Studies**

**Pradhan** (1993) carried out a study on *"Stock Market Behavior on small Capital Market; a case in Nepal"*. The study was base on the data collected for seventeen enterprises from 1990. The major objectives of this study were to access the stock market behavior in Nepal. He derived the findings that dividend per share and market price per share was positively correlated and higher the earning on stocks, larger the ratio of dividends per share to market price per share Likewise, he got positive relationship between dividend payout and liquidity.

**Bhatta** (1995) has conducted a study on *"Assessment of the Performance of Listed Companies"*. The study was based on 10 listed companies with data from 1990 to 1995. In his study, he has focused on the performance of listed companies in terms of I) company’s performance in market. PE Multiples, dividend yield, liquidity, leverage and profitability. ii) Risk and return in term of expected rate of return and internal rate of return, systematic risk and diversification of risk through portfolio. He has analyzed the companies; performance in relation to the market price of shares. He

found that highly significant positive correlation between risk and return characters of the company.

**Shrestha** (1997) carried out the study on "*shareholders Democracy Annual General Meeting(AGM) feedback*". This study critically analyzed the situation of common stock investors and found that the situation is not improved significantly till that time, Thought, the size of the shareholders population in Nepal has been growing constantly the government seems to have not taken any initiation in formulating the separate the investors interest," The encouraging and growing confidence of shareholders over their investment seek an independent inquiry of disclosed contents of prospectus. This helps to satisfy a minimum standard of faith on investment in share through relying on pros and cons of prospectus, which could reasonably influence the mind of the prudent investors. Various annual general meeting held by different public limited companies reveal a greater gap between disclosures made in prospectus and the actual results, which were reported. In this context in prospectus need to be reconciled to check and growing problems in the development of the capital market in Nepal.

**Shrestha** (1998) in her article, "*Lending Operation of Commercial Banks of Nepal and its impact on GDP*" has presented with the objective to make an analysis of contribution of commercial bank's lending to the gross domestic product(GDP) of Nepal. Thus, in conclusion, she has accepted the hypothesis i.e. there has been positive impact by the lending of commercial banks in various sectors of economy, except service sector investment.

**Ojha** (2000) in his research, "*Financial Performance and Common stock Pricing*" has concluded that an investment in common stock of a corporate firm neither ensures annual return nor ensures the return of principle. Therefore, investment in common stock is very sensitive on the ground of the risk. Dividend to common stockholders is paid only if the firm makes an operating profit after tax and preference dividend.

**Poudel** (2004) has carried out study "*Investing in Shares of Commercial Banks in Nepal*" An assessment of return and risk elements. He has concluded that,

larger standard deviation seem to be able to produce higher rate of return. The portion of unsystematic risk is very high with the shares having negative beta co-efficient. The risk per unit of return, as measured by beta co-efficient of variation, is less than that of the market as a whole for all the individual shares. Most of the shares falls under the category of defensive stocks (having beta co-efficient less than 1), except the shares of Bank of Kathmandu Ltd. Return on the shares of Nepal Arab Bank Ltd is negatively co-related with the return on the market portfolio and, therefore. It has negative beta co-efficient. From the analysis it appears that none of the shares are correctly priced. Theoretically, the market price of overpriced shares (under priced ) will fall (raise) in order to increase the expected return such that the expected return equals the required return. Therefore, shares of Nepal Arab Bank Ltd, Nepal Indosuez Bank Ltd and Himalayan Bank Ltd which are overpriced relative to equilibrium thus market focus, will decline. The remaining shares appear to be under- priced indicating a possible positive long term price trends.

**Poudel and Koirala** (2006) carried out the study on, "*Application of Markowitz and Sharpa models in Nepalese Stock Market*" concludes that as securities are added to a portfolio, the expected return and standard deviation change in very specific ways, based on the way. In which the added securities co-vary with the other securities in the portfolio. According to the Markowitz model, an investor who can live with a lot of risk might choose portfolio A , while a more risk - averse investor would be more likely to choose portfolio B. One of the major insights to the Markowitz model is that is a security's expected return, coupled with how it added to investor portfolios- Markowitz's primary contribution consisted of developing a rigorously formulated, operational theory for portfolio selection under uncertainty. Due to the possibility of reducing the risk through diversification, the risk of the portfolio, measured as its variance, will depend not only on the individual variances of the return of different assets but also on the pair wise covariance of all assets. Hence, the essential aspect pertaining to the risk of an asset is not the risk of each asset in isolation but the contribution of each asset to the risk of the aggregate portfolio. However, the law of large numbers is not wholly because the returns on different assets are correlated in practice. Thus, in general, risk cannot be eliminated, regardless of how many types of securities represented in a portfolio.

**Baniya (2008)**, Has made his Master's Degree thesis on "Risk and Return Analysis on Common Stock Investment of Commercial Banks listed in NEPSE". Baniya's study is concerned on Risk and Return Analysis of Common Stock of sampled commercial banks of Nepal.

Baniya addressed the following findings in risk return behaviours from the analysis of different stock.

- a. Over the period included in the sample for study, the share of EBL offers the highest average rate of return where as the share of HBL offers the lowest rate of return. The different shares have different rate of returns ranging from 18.45% to 30.93%. On the basis of average rate of return, the share of EBL seems to be the best for the investment. Considering the overall market, however the shares of all the commercial banks are attractive for investment.
- b. Correlation between the returns of the common stock of NABIL with HBL, SCBNL, EBL, NIBL, and BOK is 0.9446, 0.8651, 0.9991, 0.5604 and 0.8980 respectively. Likewise, correlation between the returns of stock of HBL with SCBNL, EBL, NIBL and BOK 0.9750, 0.9290, 0.7673 and 0.9759 respectively. Correlation between returns of the stock of SCBNL with EBL, NIBL and BOK is 0.8409, 0.7917 and 0.9326 respectively. Correlation between the returns of the stock of EBL with NIBL and BOK is 0.5302 and 0.8817 respectively. Similarly correlation between the returns of the stock of NIBL and BOK is 0.8369.
- c. Out of total risks, the unsystematic risks of NABIL, HBL, SCBNL, EBL NIBL and BOK are 7.94%, 2.60%, 9.40%, 10.37%, 56.58% and 10.99% respectively.

Rana, Ravi (2009) has made his Master's Degree Thesis on "Risk and Return analysis of common stock investment". Rana's study is concerned on Risk and Return Analysis of common stock investment of commercial banks in Nepal.

Rana pointed out the following findings in risk return behaviours from the analysis of different stock.

- a. Nabil Bank appears to be aggressive stock as beta coefficient more than one, it indicates that the share are more risky that the market. Himalayan Bank, Standard Chartered Bank and Everest Bank appear to be defensive stock as beta coefficient are less than one, it indicates that the share are less risky that the market . All stocks have positive alpha value. All the stocks can generate income even market does earn nothing.



- b. Maximum return of Nabil Bank under the review period is 129.91% in year 2063/64 where as the same period market has highest return that is 80.31%. Maximum return of Everest Bank under the review period is 76.94% in year 2063/64 where as Himalayan Bank has lowest return that is 4.73% in the year 2059/60.
- c. Based on the standard deviation of the returns on stocks, the stocks of Nabil Bank can be considered as high-risk securities. The standard deviation of the returns on stocks of Himalayan bank is the lowest one. However, the realized rate of returns are not the same and in such case the used of standard deviation may not provide meaningful basis for meaningful risk. Looking at the coefficients of variation, the stocks of Everest Bank has the lowest risk per unit of return, the highest being with the stocks of Nabil Bank. The systematic part of the total risk is due to the individual stocks correlation coefficient with the market portfolio. All the stocks have systematic risk less than total risk. Only a portion of the total risk is rewarded by the bank share's returns and the unrewarded portion of the risk is the unsystematic risk. The unsystematic risk with the stocks of Standard Chartered Bank is highest and the stock of Himalayan is lowest in review period.
- d. Returns on all the stocks have positive correlation with the returns on market. However, the correlation coefficient ranges from -1 to +1 which indicates that return on individual stocks move less than the proportionate movements of the returns on market portfolio consisting of all shares.

### **2.2.2 Review of Journals and Articles**

In the field of finance in Nepal it is very difficult to get advanced and research based journal. There are very limited numbers of journals available in the subject of management and it is also hard to find any article in the subject matter of finance. Almost no articles about the risk and return analysis on common stock investment are found.

Hence some foreign well known recently published journals of finance has been reviewed here. However, it helps to build the conceptual framework on this topic.

**Shrestha (Oct. 1995)**, has studied on “*Shareholder’s Democracy and Annual General Meeting Feedback*”, with the objective to find the views on the rights of the shareholders regarding how they can exercise them in democratic perspective, and the issues raised by shareholders at different annual general meeting of the public limited companies and financial institutions.

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

In many cases the existing authoritarian mentality of management seems to have not considered the share holders 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 plate-form for shareholders to express their opinions and grievance in front of the management and board of directors.

Many general meeting feedback reveal no serious response so the feelings of shareholders. Thus it reflects unwillingness of the management and board of director to change their traditionally held activities towards shareholders.

Shrestha has expressed his deep concern to the government for not taking my initiative formulating the separate act which protects the shareholders right despite the increase in population of shareholders in Nepal and questioned the need of separate act are regarding the protection of shareholders right.

He has further quoted as writing company and other acts relating to financial and industrial sector have provisioned rights of the shareholders as: (1) voting rights, (2) participation in general meeting, (3) rights of getting information, (4) Electing as aboard of director, (5) participation in the profit and loss of the company, (6) transferring share, (7) priory representation.

The collective rights or the shareholders are

1) Amend the internal by laws

- 2) Authorized the sales of assets
- 3) Enter into merger
- 4) Change amount of authorized capital

As reviewed above, Nepalese stock being in emerging state; study conducted previously in Nepal in relation with the subject was no in specific issues but in broad manner. An article published in business age by Nawaraj Pokharel (Oct.-Nov. 1999) “*Stock Market Doing Pretty Well*” is reviewed here.

In this article he has found that the investment on the shares of manufacturing and processing was more attractive than of the banks. He found that the share of individual companies showed very good performance from October 1998 to 1999. NEPSE index showed upward trend for all the shares in this period. He gave following reasons behind the appreciation of share price.

- a. Companies have rewarded shareholders.
- b. Reduction of interest rate of money market.
- c. Healthy speculation and loan has made the market interesting by providing loan to the stock investors their share as collateral.
- d. Investors are appearing more rational in their investment decision.

Finally, the concludes that the capital market needs more infrastructure investment than institution investment once the required infrastructure can facilitate the market, the size of the market could be made even bigger by introducing new instruments such as government bonds.

**Elton, Edwin J. (May 1999)**, has studied on “*Expected Return, Realized Returns and Assets Pricing Tests*” with the objectives to find out the factors that affect expected return on assets, to find out the sensitivity of expected return to those factors, and the reward for bearing this sensitivity. There is along 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 there is ample evidence that this belief is misplaced. There are periods longer than 10 years during which stock market realized returns are on average less than the risk free rate (1973 to 1984). There are periods longer than 50 years in which risk long term bonds on average under perform the risk free rate (1927 to 1981). Having a risky asset with expected return above the risk free 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 long time 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.

**Rouwenhast, Geert K. (August 1999)**, has studied "*Local Return factors and Turnover in Emerging Stock Markets*", with the objective to examine the sources of return variation in emerging stock markets.

He attempts two sets of questions to answer. The first set of three questions concern the existence of expected return premiums. (i) Do the factors that explain expected return differences in developed equity markets also describe the cross section of expected returns of emerging market firms? (ii) Are the return factors in emerging markets primarily local or do they have global components as well? (iii) How does the emerging market evidence contribute to the international evidence from developed markets that similar return factors are present in markets around the world? The set of questions of the paper include, (iv) is there a cross sectional relation between liquidity and average returns in emerging markets? Are the return factors in emerging markets cross sectionally correlated with liquidity?

Total returns are calculated as the sum of the dividend return and price appreciation using prices scaled by a capital adjustment factor, which the IFC computes to correct for price effects associated with stock splits, stock dividends and rights issues. Many emerging market firms with multiple share classes are treated as a single value weighted portfolio of the outstanding equity securities. In this paper, Rouwenhorst has made a detailed analysis of the data and he interprets the result in each section. Lastly, he has concluded his findings as "The first conclusion is that the return factors in emerging markets are qualitatively similar to those in developed markets: Small stocks outperform growth stocks and emerging market stocks exhibit momentum."

There is no evidence that local market betas are associated with average returns. The low correlation between the country return factors suggest that the premium have a strong local character. Furthermore, global exposure cannot explain the average factor returns of merging market. This is little evidence that the correlation between the local factor portfolios have increase, which suggests that the factors responsible for the increase of emerging market country correlation are separated from those drives the difference between expected return within these markets. A Bayesian analysis of Premiums in developed and emerging markets shows that unless one has strong prior belief to the contrary. The empirical evidence favors the hypotheses that size, momentum and values strategies are compensated for in expected returns around the world. Finally, the paper documents the relationship between expected returns and share turnover and examines the turnover characteristics of the local factors portfolios. There is no evidence of relation between expected returns and turnover, in emerging markets. However, beta, size momentum and value are positively cross sectionally correlated with turnover in emerging markets. This suggests that return premium do not simply reflect a compensation for liquidity.

**Ghimire (June 2001)**, has studied “*Nepal share market and investors prospect*” with the objective to trace out the important trends our capital market.

He has concluded that the Nepalese share price is decreasing because of many unbalanced factors. The major reason behind the movement in the index is the domination of the banking sector scrip in the Nepalese stock market transactions. Mismanagement practices cannot help the growth of share market. The general public has invested recklessly. They just believe what one broker or the investor says about scrip. On of the prime motives for the investment is to earn return on it. Finally he concludes that the general investors should be alert and aware of the situation. They must receive the financial information before they make investment and act rationally.

**Poudel (2001)**, also carried out another study in a topic of “*Investing in Shares of Return and Risk Elements*”. The study was based on the data collected for eight banks from mid July 2001. The main objectives of the study was to determine whether the

shares of commercial banks in Nepal are over or under priced by analyzing risk and return characteristics of the individual share.

Poudel summarized the following finding:

- a. Most of the individual share's appeared to be defensive as beta coefficients were less than one. Data shares were less volatile than market as a whole. Only the return of share of Bank of Kathmandu had beta coefficient of greater than one, indicating that the share was more risky than the market.
- b. Nepal Arab Bank Ltd., Nepal Indosuez Bank Ltd., Himalayan Bank Ltd. Had higher expected equilibrium return than expected rate or return. And standard Chartered Bank Ltd., Nepal SBI Bank Ltd., Nepal Bangladesh Bank Ltd., Bank of Kathmandu Ltd. Had lower equilibrium return than expected rate or return.
- c. From this study we get Nepal Arab Bank Ltd., Nepal Indosuez Bank Ltd. And Himalayan Bank Ltd. was overpriced and other were under priced.

### 2.2.3 Review of Previous Thesis

**Gurung (1999)**, has also carried out a study on "*Share Price Behavior of Listed Companies*". He applied statistical tool like percentage, correlation coefficient, bar graphs and line charts for analyzing the data. The market capitalization value was in erratic trend for every group in each year. The proportion of market capitalization of banking group was highest among other groups. During the study, the number of transaction in banking group was highest which showed that investment in this group was highly attractive and liquid.

The present study significantly differs in its objectives and methods from those of the above studies in the grounds that it basically concerns with both types of financial institutions e.g. commercial banks and finance companies whereas past studies were concentrated only with single type of financial institution.

**Pandy (2000)**, in the title of "*Risk and Return Analysis of Common Stock Investment*." In her study, she has taken 7 listed insurance companies data from 2049 to 2056.

She focused on following objectives:-

- ) To understanding and identify problems faced by an individual investor and insurance company.
- ) To calculate the risk and return of common stocks and their portfolio.
- ) To analyze the volatility of different stock of insurance companies and other variables that should be considered while deciding investment in stock.

She has used Study design, Population & Sample and Secondary data collection techniques as the methodology.

Her research findings are:

Based on market capitalization, size of NIC is the biggest one. Expected return on the common stock of NLGI is maximum (i.e. 65.39% ). This high rate of return is due to unrealistic annual return in 2050\51. Expected return on common stock of HGL and ELC is lowest with negative value. In overall industrial sector, expected return of finance and industrial sector is highest. Overall , market expected return is 50%. Annualized return is unexpectedly high FY2050\51 and then declines in the preceding years. This is all about return.

When risk and return compared to different industries, finance and insurance is best as per highest expected return with higher degree of risk whereas trading industry has minimum return and risk.

In Nepal, however, in terms of the volume of transaction the situation of the capital market, according to NEPSE source has remained quite optimistic, in aggregate, commercial banks occupy large percentage of traded amount whereas insurance sector is being low responsive to wards its trading Though it is difficult to estimate the exact volume of business potential in insurance, one can have a rough idea by looking at the insurance depth compared to the potentials in the business, the figure is too low, which is also agreed by both the insurance board and insurance companies they accuse government for not doing enough to realize the potentials. Premium collection per capital of population is quite less not even a dollar.

**Upahaya (2001)** "*Risk and Return on Common Stock Investment of Commercial Bank in Nepal*" With the objectives to evaluate the common stock of the listed commercial banks in terms of risk and return and to perform sector wise comparison on the basis of market capitalization from study. Mr. Upadhaya found the common stock of Nepal Grindlays Bank (Now standard Chartered Bank) bears the maximum rate of return (127.84%) and SBI Bank has minimum(7.77%) rate of return . In the context of industries or sector is found least performer.

**Mishra (2002)** in his thesis paper, "*Risk and Return on Common Stock Investment of Commercial Bank in Nepal*" has concluded that the relationship between risk and return is described by investor's perception about risk and their demand for compensation for the acceptance of risk. Hence, risk plays a central role in analysis of investment. Risk and return is getting considerable attention in financial field. Financial relations have been used for centuries as rule of thumb to aid in understanding trade of between risk and return but they only scratch the surface.

This study had analyzes that "High Risk High Return" because in this study it has found common stock of NGBL is most risky and Nepal SBI is least risky. Common stock of Everest Bank is most volatile. common stock of Nepal Indosuez Bank is the least volatile and common stock of all the commercial banks is overpriced . Mr. Upadhay has recommended for the portfolio construction , to select the stock that have higher return with not correlated or negatively correlated stocks otherwise stock can not be diversity risk properly."

**Bhatta (2002)** in his master's thesis, "*Assessment of the Performance of Listed Companies in Nepal*" studied performances of listed companies is based on 10 listed companies data from 1990 to 1995.

The objective of his research is " To analyze the performance of listed companies in terms of risk and return i.e. excepted rate of return, systematic risk and diversification of risk through portfolio context."

Bhatta addressed the following findings in risk return behavior form the analysis of different stocks. The returns on these companies is not satisfactory but



carry high risk. These companies doesn't maintain proper portfolio management for diversification or risk.

**Khadka (2004)**, has made his Master's thesis on "*Analysis of Risk and Return on Selected Nepalese Commercial Banks listed in NEPSE*" with special reference to 7 listed commercial banks is also relevant to this study. The main objective of the study is to analyze the risk, return and other relevant variables that help in making decision about investment on securities of the listed commercial banks. This study will also target to determined whether the share of commercial banks are correctly priced or not by analyzing the required rate of return using the CAPM.

Khadka addressed the following findings in risk return behavior from the analysis of different stock.

- a. The share of Bangladesh Bank offered highest realized rate or return. Amongst them NABIL bank is the lowest having 5.23% which is less than required rate or return. NBL, which is hard hit by the events (Return = -0.8809), the ranking of the bank is placed as the highest return earner. The study showed that the realized rate or returns of the samples banks do not have the some features being with in the range of 5.23% to 16.12%.
- b. Return on the average tock is 5.51% over the period. All the shares under review generated higher rate of return than the market portfolio except NABIL Bank Ltd. The price of shares of banks under review except NABIL Bank Ltd. are under priced. The unsystematic risk of NBL is the highest one amongst the shares under review which is 95.59% and SCB of Nepal has the lowest one being 45.14%. The negative correlation coefficient of NBL (-0.21) revealed that the return on the bank goes down if the market goes up. The rest of the shares moved in the direction the market moves. By observing the individual shares beta coefficient, most of the shares appear to be defensive as beta coefficient are less than one. However, beta of the stocks NB bank SCB are greater than one indicating that the shares are more riskier than the market..

On the basis of finding, Khadka concluded that in Nepalese capital market, the contribution of real sector is negligible. Though the shares of commercial Banks of Nepal are heavily traded in NEPSE, none of the share NABIL Bank will have positive trend towards the equilibrium.

**Surendra (2005)**, has made his Master's thesis on "*A Study of Risk and Return Analysis on Common Stock Investment*" with special reference to six listed commercial banks. The main objective of the study is to evaluate common stock of listed commercial bank in terms of risk and return and to perform sector wise comparison on the basis of market capitalization, to identify whether the share of commercial banks are overpriced, under priced or at equilibrium price, to identify the correlation between returns of commercial banks, & to construct optimum portfolio from listed common stock.

Major findings of the study are as follows:

- a. The return is the income received on a stock investment, which is usually expressed in percentage. Expected return on the common stock of EBL is maximum (44.44%) which is very high rate of return. In reality this rate exists only due to effect of unrealistic annual return because of the issues of banks share and increase in share price. Similarly expected return of the NIBL is found minimum (24.21%).
- b. Risk is the variability of return which is measured in terms of standard deviation on the basis of S.D. common stock of NSBI is most risky since it had high S.D. and C.S. of NIBL is least risky because of its lowest S.D. on the other hand, we know that coefficient of variation is more rational basis of investment decision. Which measures the risk per unit of return on the basis of CV; CS of NIBL is the best among all banks. NIBL has 1.4977 unit of risk per 1 unit of return. But CS of SBI has the highest risk per unit return i.e. 3.5495.
- c. Diversification of fund by making a portfolio can reduce unsystematic risk of individual security significantly. If investors select the securities for investment, which have highly negative correlation of returns, the risk can be returns of two stocks in highly positive, risk reduction is not so significant. So, portfolio between the C.S. of same industry cannot reduce risk properly. In this study, SBI and EBL have negative correlation between their returns, which is favorable with the viewpoint of the diversification. And all other banks have positive correlation among their returns. So, the portfolio construction among their returns. So, the portfolio construction of the common

stock of these banks will not completely reduce any risk, which is not favorable as portfolio construction is concerned.

**Ramji (2007)**, Has made his Master's Degree thesis on "Risk and Return Analysis on Common Stock Investment of Commercial Banks listed in NEPSE". Baniya's study is concerned on Risk and Return Analysis of Common Stock of sampled commercial banks of Nepal.

Baniya addressed the following findings in risk return behaviours from the analysis of different stock.

- d. Over the period included in the sample for study, the share of EBL offers the highest average rate of return where as the share of HBL offers the lowest rate of return. The different shares have different rate of returns ranging from 18.45% to 30.93%. On the basis of average rate of return, the share of EBL seems to be the best for the investment. Considering the overall market, however the shares of all the commercial banks are attractive for investment.
- e. Correlation between the returns of the common stock of NABIL with HBL, SCBNL, EBL, NIBL, and BOK is 0.9446, 0.8651, 0.9991, 0.5604 and 0.8980 respectively. Likewise, correlation between the returns of stock of HBL with SCBNL, EBL, NIBL and BOK 0.9750, 0.9290, 0.7673 and 0.9759 respectively. Correlation between returns of the stock of SCBNL with EBL, NIBL and BOK is 0.8409, 0.7917 and 0.9326 respectively. Correlation between the returns of the stock of EBL with NIBL and BOK is 0.5302 and 0.8817 respectively. Similarly correlation between the returns of the stock of NIBL and BOK is 0.8369.
- f. Out of total risks, the unsystematic risks of NABIL, HBL, SCBNL, EBL NIBL and BOK are 7.94%, 2.60%, 9.40%, 10.37%, 56.58% and 10.99% respectively.

**Rana (2009)**, has made his Master's Degree Thesis on "Risk and Return analysis of common stock investment". Rana's study is concerned on Risk and Return Analysis of common stock investment of commercial banks in Nepal.

Rana pointed out the following findings in risk return behaviours from the analysis of different stock.

- e. Nabil Bank appears to be aggressive stock as beta coefficient more than one, it indicates that the share are more risky that the market. Himalayan Bank, Standard Chartered Bank and Everest Bank appear to be defensive stock as

beta coefficient are less than one, it indicates that the share are less risky than the market . All stocks have positive alpha value. All the stocks can generate income even market does earn nothing.

- f. Maximum return of Nabil Bank under the review period is 129.91% in year 2063/64 where as the same period market has highest return that is 80.31%. Maximum return of Everest Bank under the review period is 76.94% in year 2063/64 where as Himalayan Bank has lowest return that is 4.73% in the year 2059/60.
- g. Based on the standard deviation of the returns on stocks, the stocks of Nabil Bank can be considered as high-risk securities. The standard deviation of the returns on stocks of Himalayan bank is the lowest one. However, the realized rate of returns are not the same and in such case the used of standard deviation may not provide meaningful basis for meaningful risk. Looking at the coefficients of variation, the stocks of Everest Bank has the lowest risk per unit of return, the highest being with the stocks of Nabil Bank. The systematic part of the total risk is due to the individual stocks correlation coefficient with the market portfolio. All the stocks have systematic risk less than total risk. Only a portion of the total risk is rewarded by the bank share's returns and the unrewarded portion of the risk is the unsystematic risk. The unsystematic risk with the stocks of Standard Chartered Bank is highest and the stock of Himalayan is lowest in review period.
- h. Returns on all the stocks have positive correlation with the returns on market. However, the correlation coefficient ranges from -1 to +1 which indicates that return on individual stocks move less than the proportionate movements of the returns on market portfolio consisting of all shares.

### **2.3 Research Gap**

Most of the previous theses are done by selecting only commercial banks and finance company for analysis.

None of any previous work had done primary analysis but this thesis includes primary analysis also.

In this thesis work data have been updated to fiscal year 2008/ 2009.

Most of the previous researches reviewed have been carried out with less than seven year data. Here, in this research seven year's data has been taken for analysis. Similarly, the number of sample firms takes by the previous researchers is five or more. But this research has been conducted with reference to three sample firms which give the clear vision for all the investors who invest in common stock investment of commercial banks listed in NEPSE. However, almost effort has been put upon to save it from allegation of being copy of previous research works done in the similar topic.

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

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

#### **3.1 Research Design**

Research design is necessary to fulfill the objectives of well-set research. Research design may be defined as framework, plan and structure for collecting, analyzing and evaluating data. It is a procedure and techniques, which provide ways for research viability. This research belongs to risk and return analysis so that this research is based on recent historical data, which covers the five years period data from the FY 2004/2005 to 2008/2009. It deals with the common stocks of commercial banks on the basis of available information. As the title of the study suggests, it is more analytical and empirical but less descriptive. For the analytical purpose reports of different agencies and sample institutions were collected.

#### **3.2 Sources of Data**

The data required for the research is collected from the secondary as well as primary sources. During the study, informal opinion survey has also been taken with the individual's investors, bank officials, staff of Nepal stock exchange and stockbrokers. Data related to the market prices of stocks, market prices of stocks, market capitalization, movement of NEPSE index etc. it is taken from the trading

report published by NEPSE and the website of Nepal Stock Exchange ( i.e. www. Nepal stock. com). Annual report of commercial banks and financial statement are also collected from the respective sample banks. NEPSE periodicals, articles and previous research report etc. has also been considered.

### **3.3 Population and Samples**

The population of the study is all the commercial banks listed NEPSE. Until now total numbers of commercial banks listed in NEPSE are 18. Hence these 18 commercial banks are the population of the study. For this study, three commercial banks are taken as samples are selected by lottery method. The selected sample banks for the analysis are as follows:

S.N	Name
1	Nabil Bank Limited
2	Everest Bank Limited
3	Nepal Bangladesh Bank Limited

Likewise for primary data purpose out of the total investors 40 investors were selected randomly as samples.

### **3.4 Data collection Procedure**

Almost the data necessary for the research is collected from secondary sources. However opinion has also been taken from the concered officers or authorities to obtain more information and reality about the various published data. Investment policies of the banks, porolio concept in the field of investment etc. Similarly official publucation like economic survey, annual reports, bankig and non-banking financial statistics, economic buletin etc. were obtained from respective offices.

### **3.5 Data Analysis Tools**

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

#### **3.5.1 Market price of Stock (P)**

Market price of stock is one of the major data of this study. These are three prices high, low and closing price of each year are available. We can be used average price ( of high and low) or closing price of the Stock. Closing price or average price represents the price of whole year. But, to get the real average volume and price of each transaction in the stock and duration of time of each transaction in the whole year are essential. It is very difficult to obtain and include these all information and average of high and low price is not reliable and representative information. The closing price of stock is used as market price of stock.

#### **3.5.2 Dividend (D)**

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

Total dividend amount = Cash dividend + Stock dividend% x Next years MPS.

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

Total dividend amount = Cash dividend + Right share% [ Next yeat MPS - Price of right share]



### 3.5.3 Return on Common Stock( $R_j$ )

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

Symbolically

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

Where,

R = annual rate of return

$D_t$  = Cash dividend received at time t.

$P_t$  = Price of a stock at time t.

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

### 3.5.4 Expected Rate of Return on Common Stock $E(R_j)$

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

Symbolically,

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

Where,

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

$R_j$  = Return on stock j.

$n$  = number of years that the return is taken.

$\Sigma$  = Sign of summation.

### 3.5.5 Return on market

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

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

Where,

$R_m$  = Return on Market

$NI_t$  = NEPSE index at time t

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

### 3.5.6 Expected return on market, $E(R_m)$

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

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

Where,

$E(R_m)$  = Expected return on market.

$R_m$  = Summation of market return.

$N$  = Number of samples period.

### 3.5.7 Standard Deviation (S. D)

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

If data given as time series

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

If data is probability distribution

$$\sigma_j = \sqrt{\sum [R_j - E(R_j)]^2 P_j}$$

Where,

$\sigma_j$  = Standard Deviation on of return stock j during the time period n.

$P_j$  = Probability distribution of the observation.

$R_j$  = Single Period rate of return on stock j.

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

n = Number of years that the returns are taken.

### 3.5.8 Coefficient of Variation (C. V.)

It is the relative measurement of risk with return. It measure the risk per unit of return. It provides a more meaningful basis for comparison when the expected returns on two alternatives are not the same. The higher coefficient of variation, higher the risk. It is calculated as

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

Where,

C.V. = Coefficient of variation of stock.

$\sigma_j$  = Standard deviation of return on stock j.

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

### 3.5.9 Beta Coefficient ( $\beta$ )

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

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

Where,

$\beta_j$  = Beta coefficient of stock j.

$\text{Cov}(R_j, R_m)$  = Covariance between return on stock j and return on market.

$$= \frac{\sum [R_j - E(R_j)] [R_m - E(R_m)]}{n-1}$$

$\sigma_m^2$  = Variance of market return.

### 3.5.10 Correlation Coefficient ( $\rho_{ij}$ )

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

$$\rho_{ij} = \frac{\text{Cov}_{ij}}{\sigma_i \sigma_j}$$

Where,

$\rho_{ij}$  = Correlation coefficient for securities i and j.

$\text{Cov}_{ij}$  = Covariance between securities i and j.

$\sigma_i \sigma_j$  = Standard deviation of returns for securities i and j.

### 3.5.11 Partitioning of Total Risk

$$\text{Systemic risk proportion } (\rho^2) = \frac{S_j^2 \sigma_m^2}{\sigma_j^2}$$

$$\text{Unsystematic risk proportion } (1-\rho^2) = \frac{\text{var}(e)}{\sigma_j^2}$$

Where,

$\sigma_j^2$  = Variance of stock j.

$S_j^2$  = Square beta of stock j.

$\sigma_m^2$  = Variance of market return.

Var (e) = residual variance.

### 3.5.12 Portfolio Risk and Return

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

#### Portfolio Return, E (RP)

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

Symbolically,

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

Where,

$E(RP)$  = Expected return on portfolio

$W_i$  = Proportion of wealth invested in  $i$  assets.

$W_j$  = Proportion of wealth invested in  $j$  assets.

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

## Portfolio Risk

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

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

Where,

$P$  = Standard deviation of stock  $i$  &  $j$ .

$\sigma_i^2$  = Variance of assets  $i$ .

$w_i$  = proportion of assets  $i$ .

$\sigma_j^2$  = Variance of assets  $j$ .

$w_j$  = Proportion of assets  $j$ .

$\text{cov}(R_i, R_j)$  = Covariance between the return of assets  $i$  &  $j$ .

## Risk Minimizing Portfolio

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

$$w_i = \frac{\sigma_j^2 - \text{Cov}(R_i, R_j)}{\sigma_i^2 + \sigma_j^2 - 2\text{cov}(R_i, R_j)}$$

$$w_j = 1 - w_i$$

Where,

$w_i$  = optimal weight to invest in stock  $i$ .

$w_j$  = optimal weight to invest in stock  $j$ .

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

### **3.6 Method of Analysis and Presentation**

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



## CHAPTER- IV

### DATA PRESENTATION AND ANALYSIS

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

#### 4.1 Risk and Return of Sample Banks

##### 1. NABIL BANK Ltd.

NABIL is the first joint venture commercial bank in Nepal. This is the joint venture of Nepali promoters and Emirates Bank International (Dubai) in 1984 under the company Act 1996. Following table 1 represents the market price and dividend per share of NABIL bank for the purpose of risk and return analysis.

**Table No. 4.1**  
**Market Price per Share and Dividend per share Data of NABIL**

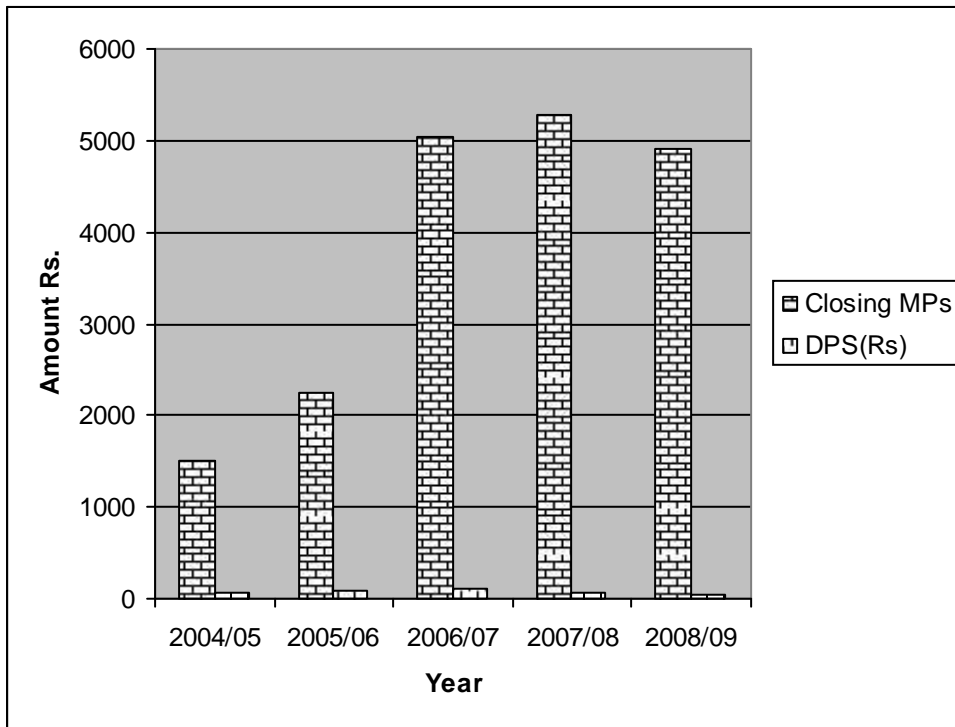
FY	Closing MPs (Rs.)	Cash (Rs)	Stock (%)	DPS(Rs)
2004/05	1505	70	0	70
2005/06	2240	85	0	85
2006/07	5050	100	0	100
2007/08	5275	60	0	60
2008/09	4899	35	0	35

Data Source; AGM report of NABIL

) Value of stock dividend = Dividend % \* Next year closing MPS

**Fig. no. 4.1**

**Market price of Share and Dividend Per Share of NABIL**



Market price per share is maximum in FY 2007 / 08 and lowest in FY 2004/05

The largest amount of dividend was paid in FY 2006/07.

**Rate of Return, Expected Return, Standard Deviation, Coefficient of Variation of NABIL**

Rate of return for each year are calculated for the basis of closing price of common stock and dividend amount of respective year. Table 2 shows the calculation of year wise rate of return, expected rate of return , standard deviation and coefficient of variation of return.

**Table No. 4.2**  
**Rate of Return, Expected Rate of Return, S.D., CV, of the Common Stock of**  
**NABIL Bank**

FY	Return
2004/05	0.575
2005/06	0.545
2006/07	1.299
2007/08	0.056
2008/09	-0.065
E(r)	0.48200
( )	0.4818277
(C.V)	0.999642

Source: Annex I

## 2. Everest Bank Ltd (EBL)

Everest Bank Ltd. Was established in 1992 under the company act 1964 under the company Act 1964 with an objective of carrying out commercial banking activities under technical services agreement signed between it and Nepali Promoter was managing the bank till November 1996.

Following Table 3 represents the market price and dividend per share of EBL for the purpose of risk and return analysis.

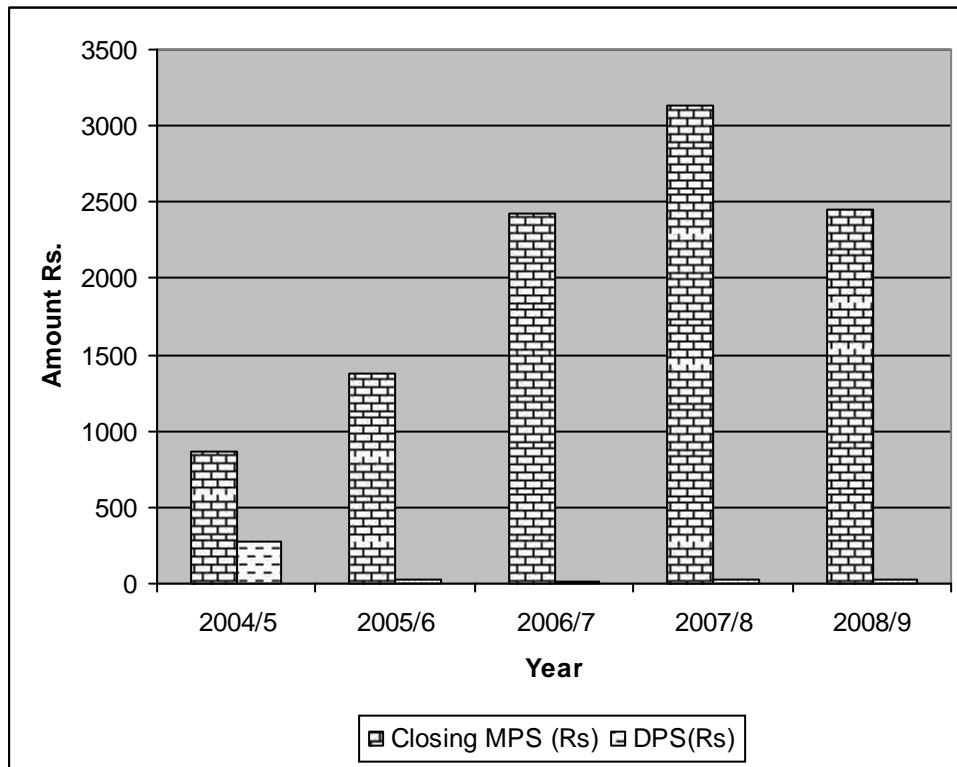
**Table No. 4.3**  
**Market Price Per Share and Dividend Per Share Data of EBL**

FY	Closing MPS (Rs)	Cash Dividend (Rs)	Stock Dividend (	DPS(Rs)
2004/5	870	-	20	275.8
2005/6	1379	25	-	25
2006/7	2430	10	0	10
2007/8	3132	20	0	20
2008/9	2455	30	0	30

Data Source: AGM report of EBL

) Value of stock dividend = Dividend % \* Next year closing MPS

**Fig. no. 4.2**  
**Market price of share and Dividend Per Share of EBL**



Market price per share is maximum in FY 2007/08 and Lowest in 2004/05 and the largest amount of dividend was paid in FY 2004/05.

**Rate of Return, Expected Return, Standard Deviation, Coefficient of Variation and of EBL.**

Rate of return for each year are calculated for the basis of closing price of common stock and dividend amount of respective year. Table 4.4 shown the calculation of year wise rate of return expected rate of return, standard deviation and coefficient of variation of return.

**Table No . 4.4**  
**Rate of Return, Expected Rate of Return, S.D., CV, of Common**  
**Stock of EBL**

FY	return
2004/05	0.68500
2005/06	0.61379
2006/07	0.76287
2007/08	0.29712
2008/09	-0.20657
E(r)	0.43044
( )	0.35565
(C.V)=	0.826247

Source; Annex

### 3. Nepal Bangladesh Bank Ltd (NBB)

Nepal Bangladesh Bank Limited was established in June 1994 with an authorized capital of Rs 240 million and paid up capital of Rs 60 million joint venture with IFIC bank of Bangladesh.

**Table No . 4.5**  
**Market Price Per Share and Dividend Per share Data of NBB**

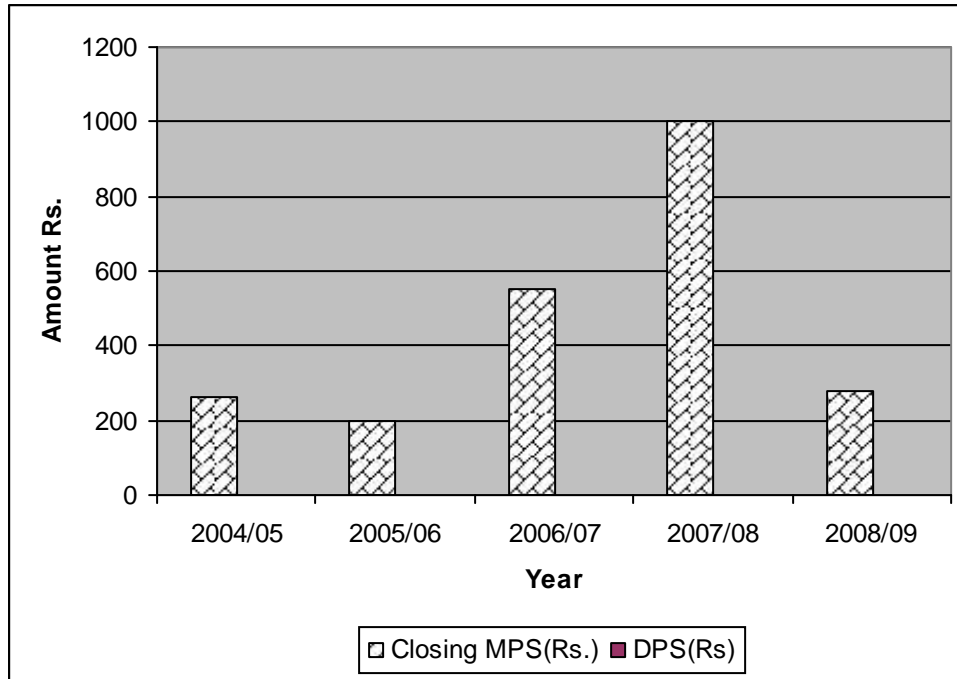
FY	Closing MPS(Rs.)	Cash Dividend (Rs.)	Stock Dividend(%)	DPS(Rs)
2004/05	265	0	0	0
2005/06	199	0	0	0
2006/07	550	0	0	0
2007/08	1001	0	0	0
2008/09	280	0	0	0

Data Source: AGM report of NBB

) Value of stock dividend = Dividend % Next Year closing MPS

**Fig. No. 4.3**

**Market Price Per Share and Dividend Per share Data of NBB**



Market price per share is maximum in FY 2007/2008 and lowest in FY 2005/06.

**Rate of Return, Expected Return, Standard Deviation, Coefficient of Variation and of NBB**

Rate of return for each year are calculated for the basis of closing price of common stock and dividend amount of respective year. Table 6 shows the calculation of year wise rate of return, expected rate of return, standard deviation and coefficient of variation of return.

**Table No. 4.6**  
**Rate of Return, Expected Rate of Return, S.D., C.V, of the common**  
**Stock of NBB**

FY	Return
2004/05	-0.25797
2005/06	-0.24905
2006/07	1.76381
2007/08	0.82000
2008/09	0.72027
E(r)	0.27121
( )	0.90141
(C.V)=	0.30087

Source: Annex I

## 4.2 Analysis of Market Risk and Return

In Nepal there is only one stock market, namely Nepal Stock Exchange. Overall market movement is represented by NEPSE index. To calculate annual return, expected return on market, market standard deviation and coefficient of variation of overall market is presented below in table 7.

**Table No. 4.7**  
**Rate of Return, Expected Return, S.D. and C.V. of market**

FY	Return
2003/04	-
2004/05	-0.02786
2005/06	0.03046
2006/07	0.44915
2007/08	0.08959
2008/09	-0.54133
E(r)	0.31893
( )	0.71027
(C.V.)	2.22706

#### **4.4 Comparison of Sample Banks with Market**

##### **4.4.2 NABIL Bank Ltd.**

**Table No. 4.8**  
**Summary of Risk and Return for NABIL and Market**

Statistics	NABIL	
Expected Return, E(R)	<b>0.48200</b>	<b>0.31893</b>
Variance ( $\sigma^2$ )	<b>1.160792</b>	<b>0.50449</b>
Standard Deviation ( $\sigma$ )	<b>1.077400</b>	<b>0.71027</b>
Coefficient of Variation ( C.V. )	<b>2.235270</b>	<b>2.22706</b>
Systematic risk ( $\sigma^2_m$ )	<b>0.1249</b>	-
Unsystematic risk (e)	<b>0.107258</b>	-
Beta ( $\beta$ ) = Index of Systematic risk	<b>1.0027</b>	<b>1</b>
Correlation with market ( $\rho$ )	<b>0.73061</b>	-
Proportion of Systematic Risk ( $\beta^2$ )	<b>0.53379</b>	
Proportion of Unsystematic risk (1- $\beta^2$ )	<b>0.46621</b>	

Source: Appendix-I and II



Expected return of NABIL bank is higher than the market return (i.e.  $48.20\% > 31.89\%$ ) higher than the market return. Standard deviation of NABIL bank is higher than the market standard deviation, which means total risk on return of NABIL bank is 1.512 times (i.e.  $1.077440/0.71027$ ) higher riskier than the market return on common stock.

Coefficient of variation is better measure of risk because it measures per unit risk. C.V. of NABIL bank is lower than market ( $0.826247 < 2.22706$ ) which means NABIL bank has low risk per unit return than the market return.

Beta of NABIL bank is 1.1127, based on the yearly return during FY 2004/05 to 2008/09. A beta of 1.1127(  $> 1$ ) means that return of NABIL bank is more volatile than the market return. Hence, the stock of NABIL bank has most undiversifiable risk. The correlation with market is 0.73061. The positive correlation indicates that the market return up; return of NABIL bank also goes up or vice versa.

The coefficient of determination or proportion of systematic risk is 0.1249. It indicates that the percentage of the variance of NABIL' s return explained by the change in the market return . Thus the market explains 12.49 percent risk of NABIL BANK. It is known, as systematic risk it is cannot diversified.

The 48.62 percent ( $1 - 0.1249$ ) residual variances specific risk of the firm, It is called unsystematic risk and it is diversifiable . The values of systematic risk and unsystematic risk are shown above table.

#### 4.4.3 Everest Bank Limited (EBL)

**Table No . 4.9**  
**Summary of Risk and Return for EBL and Market**

Statistics	EBL	Market
Expected Return, E (R)	<b>0.43044</b>	<b>0.31893</b>
Variance( $\sigma^2$ )	<b>0.126492</b>	<b>0.50449</b>
Standard Deviation ( $\sigma$ )	<b>0.35565</b>	<b>0.71027</b>
Coefficient of variation (C.V)	<b>0.826247</b>	<b>2.22706</b>
Systematic risk ( $\sigma^2_{\text{m}}$ )	<b>0.091606</b>	-
Unsystematic risk ( $e^2$ )	<b>0.034886</b>	-
Beta ( $\beta$ ) = Index of Systematic risk	<b>0.952861</b>	<b>1</b>
Correlation with market ( $\rho$ )	<b>0.851004</b>	-
Proportion of Systematic Risk ( $\beta^2$ )	<b>0.724208</b>	-
Proportion of Unsystematic risk $\sigma^2 (1-\beta^2)$	<b>0.275792</b>	

Source: Appendix- I and II

Expected return on common stock of EBL is higher than (43.04% > 31.89%). Similarly standard deviation of EBL is lower than the market standard deviation (i.e. 0.3556 < 0.71027), which means total risk on common stock of EBL is less risky than the market return.

Coefficient of variation is the best way of measure the risk, because it measures per unit risk. C.V. of EBL is less than market C.V. (i.e. 0.8262 < 2.2270) which means EBL has more risk per unit return than the market.

EBL has a beta (  $\beta$  ) of 0.9528 based on the yearly returns during FY 2004/05 to 2008/09. A beta of 0.952 (  $\beta < 1$  ) means that return of EBL is less volatile than the market return.

The correlation with market is 0.85100. The positive correlation indicates that the market return goes up; return of EBL also goes up or vice versa.

The proportion of systematic risk (  $R^2$  ) is 0.7242. It indicates the percentage of variance of EBL' s return explained by the change in the market returns. Thus 72.42 percent of EBL 's risk is explained by the market . It is called the systematic risk and It can not diversify.

The 27.58 percent(  $1 - R^2$  ) unexplained variance is the firm specific risk. It is called unsystematic risk are shown in above table 9.

#### 4.4.4 Nepal Bangladesh Bank Ltd (NBB)

**Table No. 4.10**  
**Summary of Risk and Return for NBB and Market**

Statistics	NBB	Market
Expected Return, E (R)	<b>0.27121</b>	<b>0.31893</b>
Variance( $\sigma^2$ )	<b>0.81255</b>	<b>0.50449</b>
Standard Deviation ( $\sigma$ )	<b>0.90141</b>	<b>0.71027</b>
Coefficient of Variation (C.V)	<b>0.30087</b>	<b>2.22706</b>
Systematic risk ( $\sigma^2_{m}$ )	<b>0.624580</b>	-
Unsystematic risk ( $e^2$ )	<b>0.18797</b>	-
Beta ( $\beta$ ) = Index of Systematic risk	<b>2.488015</b>	<b>1</b>
Correlation with market ( $\rho$ )	<b>0.8767</b>	-
Proportion of Systematic Risk ( $\beta^2$ )	<b>0.7686</b>	-
Proportion of Unsystematic risk ( $1 - \beta^2$ )	<b>0.2314</b>	-

Source: Appendix -I and II

Expected return on common stock of NBB is lower than the market return (i.e. 27.12 % < 31.89%). Similarly standard deviation of NBB is also higher than the market standard deviation (i.e. .90141 > 0.71027). It means NBB's stock total risk on return is more risky than the market return.

Coefficient of variation is best way of measure of risk because it measures per unit risk .C.V of market (i.e.  $0.30087 < 2.22706$ ). It means NBB has more risk per unit return than the market return.

NBB has a beta ( ) of 2.48801 based on the yearly return during FY 2004/ 05 to 2008/ 09 A beta of 2.48801( >1) means that return of NBB is more volatile than the market return and called a offensive assets.

The correlation with market is 0.8767. The positive correlation indicates that the market return goes up, return of NBB also goes up or vice versa.

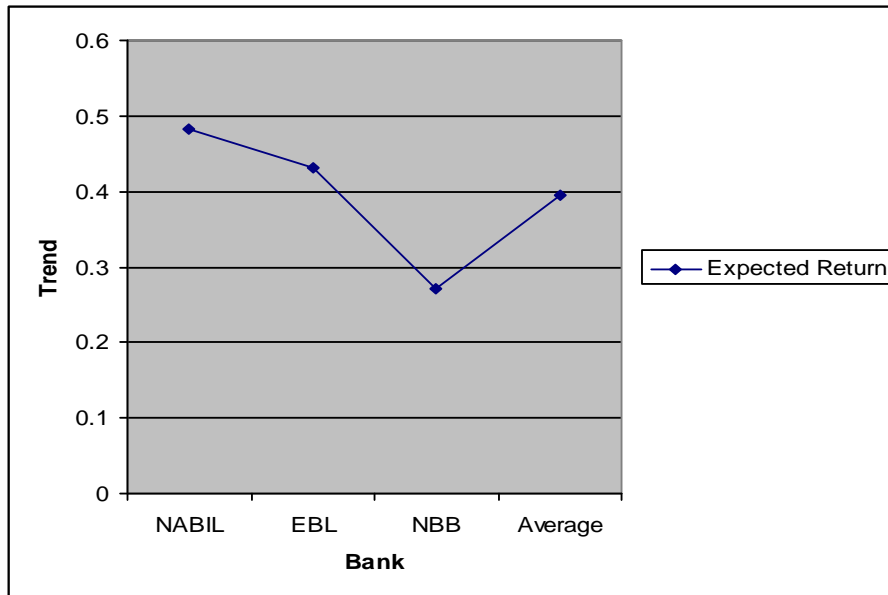
The proportion of systematic risk is 0.6245 (i.e. 62.45%). It indicates the percentage of variance of NBB's return explained by the change in the market returns. Thus 62.45 percent NBB's risk is of explained by the market. It is called the systematic risk and therefore it can not be diversified.

The 23.14 percent ( $1 - 0.6245$ ) is unexplained variance is the specific risk of the firm. It is called unsystematic risk and it is known as diversifiable risk. The value of systematic risk and unsystematic risk are shown above table.

**Table No. 4.11**  
**Summary and Comparison of Risk and Return for sample Banks**

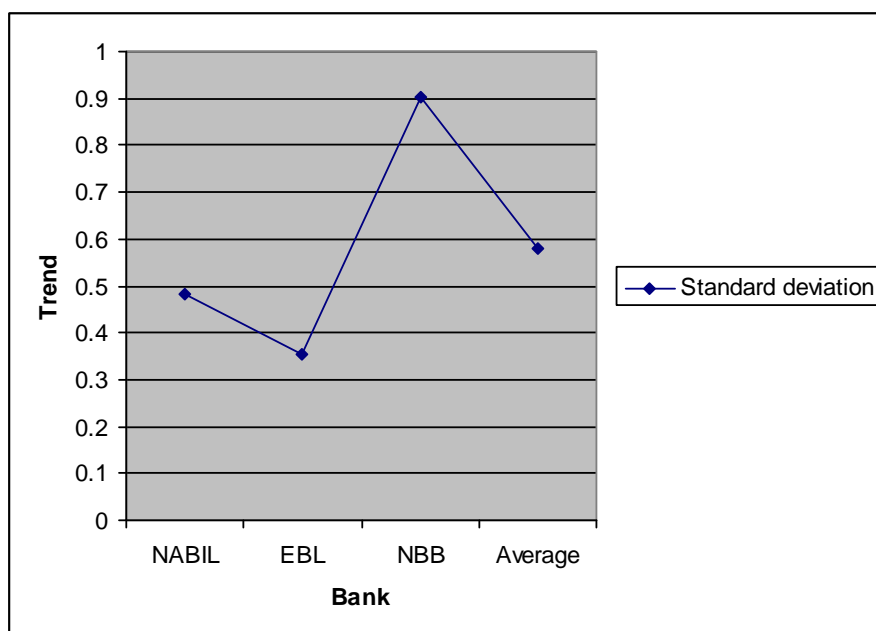
	<b>NABIL</b>	<b>EBL</b>	<b>NBB</b>	<b>Average</b>
Expected Return	0.48200	0.43044	0.27121	0.39455
Standard deviation	0.4818277	0.35565	0.90141	0.57962
Coefficient of variation	0.999642	0.826247	0.30087	0.70891
Systematic Risk	0.1249	0.091606	0.624580	0.28038
Unsystematic Risk	0.107258	0.034886	0.18797	0.11003
Beta	1.1127	0.952861	2.488015	1.51785

**Fig. no.4.4**  
**Expected Risk Return**



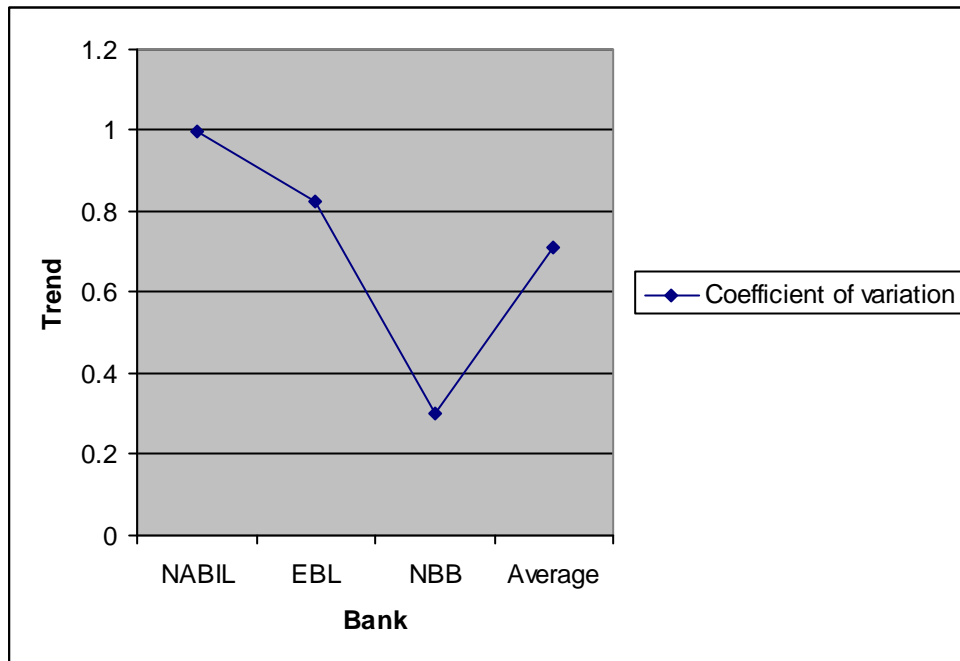
Average expected return of selected banks is 39.45 %. Under the review period table 11 shows NABIL has greatest value of expected return i.e. 48.20% that is more than the average return of selected banks. Like this, NBB has least value of expected return i.e. 27.12 % which is less than average return. EBL also has higher return than average return.

**Fig. no. 4.5**  
**Standard Deviation**



Average SD of selected banks is 57.96%. NBB has the greatest standard deviation i. e.90.14%, which is more than average risk and expected return. EBL has the least total risk than the average risk of selected banks but it has more than its expected return. NABIL has medium risk but more than it's expected return.

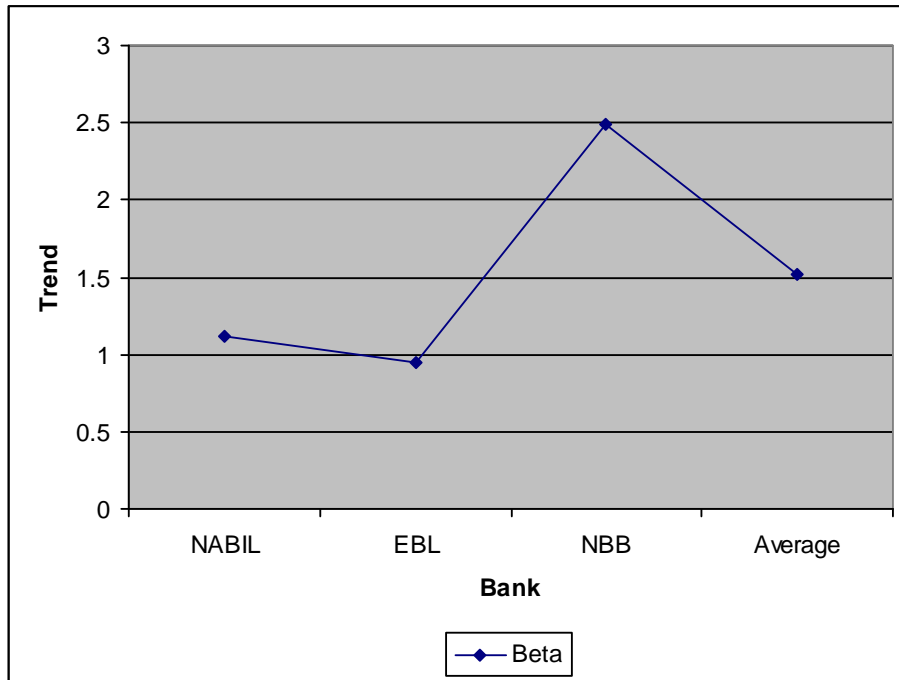
**Fig. no. 4.6**  
**Coefficient of Variation**



CV indicated per unit risk of return . Average CV of selected banks is 0.70891. Table 11 shows NABIL has the highest value of CV i.e. 0.9996, which indicates very higher degree of risk due to poor expect return. NBB has the lowest value of CV i.e. 0.3008 among them. EBL also higher value of CV than average.

**Fig. no. 4.7**

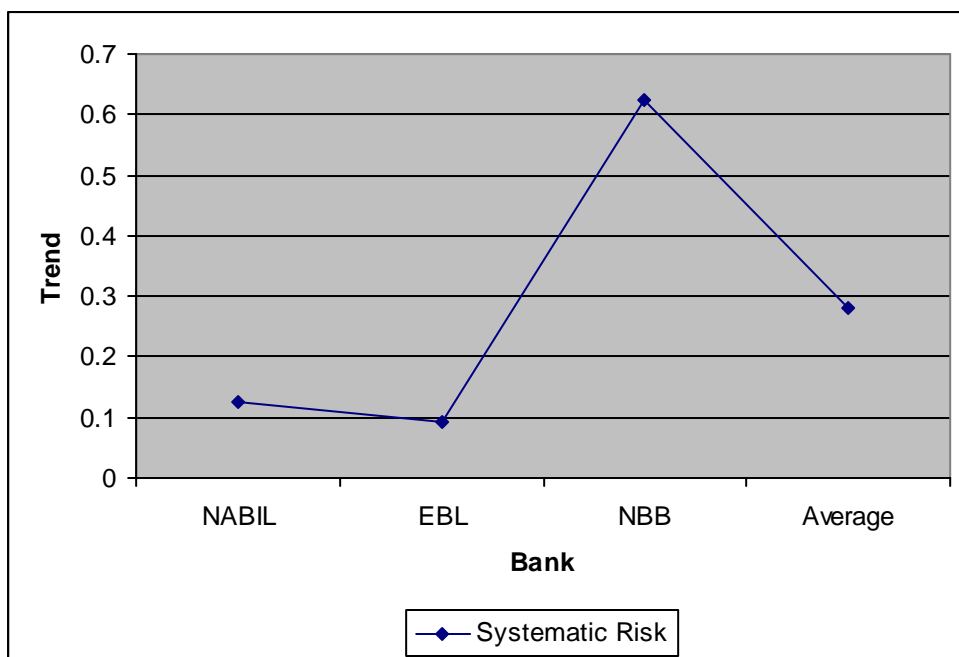
**Beta**



Average beta of selected banks is 1.517. NBB has greatest value of beta i.e. 2.488, which is more than average . EBL has least value of beta i.e. 0.9528 which is less than average Beta of NABIL i.e. 1.1127 is lower than average.

**Fig. no. 4.8**

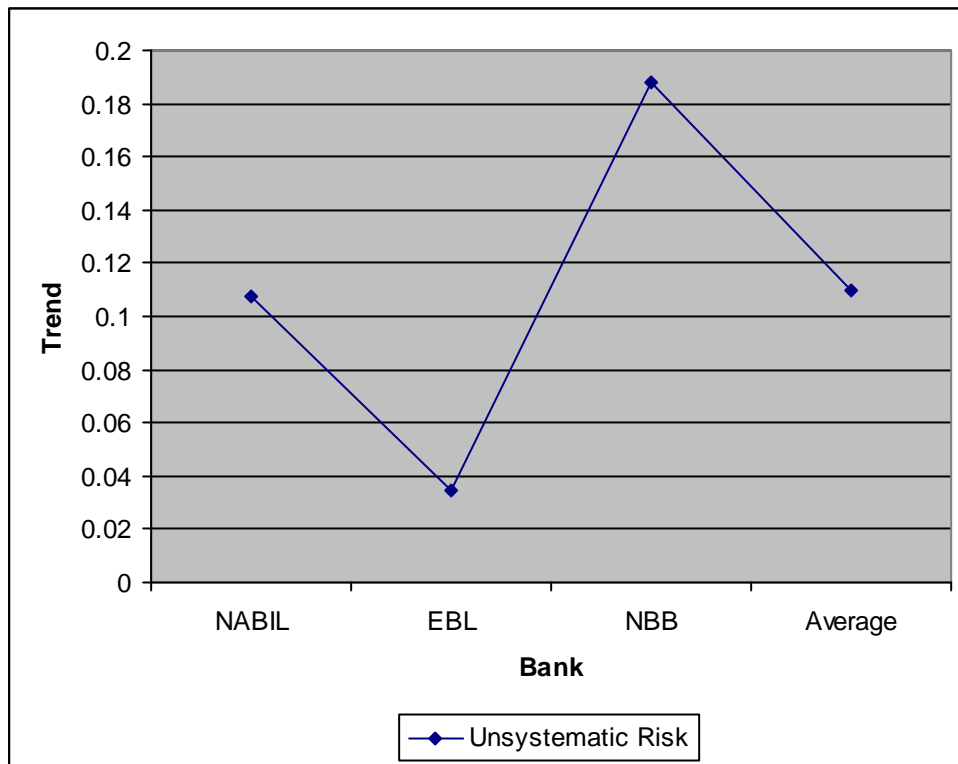
**Systematic Risk**





The average systematic risk of selected banks is 0.28038. EBL & NABIL have less value of systematic risk than average. Where, NBB has largest value of systematic risk i. e. 0.6245.

**Fig. no. 4.9**  
**Unsystematic Risk**



The average of unsystematic risk is 0.1100. Among selected banks NBB has largest unsystematic risk i.e. 18.79, which is more than average. EBL has least unsystematic risk than average Unsystematic risk of NABIL i.e. 0.1072 is lower than average.

#### **4.5 Price Evaluation of Selected Banks**

CAPM is model that assumes stock's required rate of return is equal to the risk free rate plus its plus its premium where risk is measured by the beta, coefficient . Beta coefficient play vital role in CAPM approach. If the required rate of return is less than expected rate of return, the stock is said to be under priced and required rate of return is more than expected rate of return, the stock is said to be over priced. For this analysis the risk free rate of return is needed, which is taken from the interest rate of

Treasury bill issued by Nepal Rastra Bank . NRB issued treasury bill, 91 days time duration. Table 12 shows the required rate of return, expected return and price evaluation. 91 days duration Treasury bill rate is taken as a risk free rate from website of NRB. The annual weighted average 91-day Treasury bill rate remained at 5.83 percent in 2008/09 compared to 4.21 percent in the previous year.

**Table No. 4.12**  
**Calculation of Required Rate of Returns and Price Evaluation**  
**by CAPM Model**

Banks	R <sub>f</sub>	E(R <sub>m</sub> )	beta	$E(R_i) = R_f + [E(R_m) - R_f] \beta_i$	E(R)	Price Situation
<b>NABIL</b>	5.83	31.89	1.11	34.72%	48.20%	<b>Under priced</b>
<b>EBL</b>	5.83	31.89	0.95	30.587%	43.04%	<b>Under priced</b>
<b>NBB</b>	5.83	31.89	2.49	70.72%	27.12%	<b>Over priced</b>

Where,

E(R) = Expected rate of return ( from table 11)

R<sub>f</sub> = Risk free rate of return

E(R<sub>m</sub>) = Market rate of return

= Beta of individual sample Banks (From table 11)

The stock of NABIL and EBL banks are under priced . The under priced stocks value will be increased in the near future providing the investors higher return. So investor should buy these stocks and who are holding they shouldn't sell. The

stock of NBB bank is over priced. The over priced stocks value will be decreased in future providing the investors lower return. So investor should sell these stocks.

## 4.6 Portfolio Analysis

The portfolio is the holding of securities and investment in financial assets i.e. bonds, stock. A portfolio is a combination of investment assets. Portfolio management is related to efficient portfolio investment in financial assets. If portfolio is being constructed they can reduce unsystematic risk without loosing considerable return. The portfolio analysis is performed to develop a portfolio that has the maximum return at whatever level of risk an investor thinks appropriate. Therefore, we need to extend our analysis risk and return to portfolio context.

The expected return on a portfolio is simply the weighted average of the expected returns on the individual assets in the portfolio with the weight being the fraction of the total portfolio invested in each asset. The weights are equal to the proportion of total funds invested in each security ( the sum of weight must be 1 to 100%).

The analysis is based on two assets portfolio and the tools for analysis are presented in the chapter, research methodology.

For the purpose of portfolio analysis stock is symbolized as

NABIL as ' A '

EBL as ' B '

NBB as ' C '

### Covariance between Stocks

$$\text{Cov}_{AB} = 0.14241$$

$$\text{Cov}_{Ac} = 0.289204$$

$$\text{Cov}_{BC} = 0.16490$$

Source : Appendix - II

<u>Variance of stocks</u>	<u>Expected return of stocks</u>
Variance of NABIL (A) = 0.2321	E(RA) = 0.4820
Variance of EBL (B) = 0.1264	E(RB) = 0.4304
Variance of NBB (C) = 0.8125	E(RC) = 0.2712

Source : Table No: 11

### **Weight for Portfolio**

The optimal portfolio weight of stock  $i$  and  $j$ , which minimized the risk, is given below:

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

$$W_j = 1 - W_i$$

Where,

$W_i$  = Optimal weight to invest in stock  $i$

$W_j$  = Optimal weight to invest in stock  $j$

$i^2$  = Variance of i

$j^2$  = Variance of j

(Optimum weight between A& B)	WA = 58%	& WB =42%
(Optimum weight between A&C)	WA = 16%	& WC =84%
(Optimum weight between B&C)	WB = 63%	& WC =37%

### **Portfolio Return**

It is a combination of two or more securities or assets and portfolio return is simply a weight average of the expected returns on individual returns.

$$\text{Portfolio Return (Rp)} = W_i R_i + W_j R_j$$

Where,  $R_p$  = Expected return on portfolio of stock i & j.

$R_i$  = Expected return of i

$R_j$  = Expected return of j.

Portfolio Return (Rp) between Stock A& B = 46.035

Portfolio Return (Rp) between Stock A& C = 44.82%

Portfolio Return (Rp) between Stock B & C = 37.14%

### **Source: Appendix IV**

Portfolio risk is a function of the proportions invested in the common stocks. It is measured by standard deviation and calculated by using this formula,

$$\sigma_p = \sqrt{(W_i^2 \sigma_i^2 + W_j^2 \sigma_j^2 + 2 W_i W_j \text{Cov}_{ij})}$$

Where,

$\sigma_p$  = the standard deviation of portfolio return of stock i and j.

$W_i$  = Optimal weight to invest in stock i.

$W_j$  = Optimal weight to invest in stock j.

$\sigma_i^2$  = Variance of i

$\sigma_j^2$  = Variance of j.

$\text{Cov}_{ij}$  = Covariance between stock i & j

Portfolio Risk ( $\sigma_p$ ) between stock A & B =41%

Portfolio Risk ( $\sigma_p$ ) between stock A & C =81.05%

Portfolio Risk ( $\sigma_p$ ) between stock B & C = 48.81%

Source: Appendix V

#### 4.7 Primary data analysis

Another measure applied to garner information relevant to the topic is questionnaire method. A number of questions were put up by means of 50 copies of questionnaire. Categorically, the questions raised through this means were of two types namely, Yes/ No Questions, Multiple Choice Questions. Questions were given to investors on Common stock of NABIL, EBL and NBB to find out the various aspects on their investment. Eighty percent of the questionnaires were collected during study period. The questionnaire so collected is thus related to find out the

opinion of investors on investment action for trading shares through secondary market. Their responses have been analyzed as follows:

a) Causes of holding the shares;

Investors were asked for their interest on investment motives if they were interested with dividend social status, marketability and all above, 62% said they were attached for dividend, 12.5% interested with marketability and remaining 15 % wanted to have above all and rest 10 % were interested with social status. The following table - 14 shows the purpose of owning the shares of company:

**Table no. 4.13**  
Causes of holding the shares of company

S. N	Research variables	No of investors	% of investors
a.	Dividend	25	62.5
b.	Social status	5	12..5
c.	Marketability	4	10
d.	Above all	6	15
Total		40	100

*Source: Field Survey*

**Table – 4.14**

**Basis of decision making on secondary market**

<b>S . N.</b>	<b>Research variables</b>	<b>No of Investors</b>	<b>% of investors</b>
<b>a.</b>	Market Index	<b>5</b>	<b>12.5</b>
<b>b.</b>	Company's Profit	<b>10</b>	<b>25.0</b>
<b>c.</b>	Market Price	<b>15</b>	<b>37.5</b>
<b>d.</b>	Advice of friends	<b>5</b>	<b>12.5</b>
<b>e.</b>	Others	<b>5</b>	<b>12.5</b>
	<b>Total</b>	<b>40</b>	<b>100</b>

Source: Field Survey

#### **4.8 Major Findings of the Study**

The major finding from the study of risk and return of selected commercial banks can be summarized as follows:

) All the banks have positive return which ranges from 27.12% to 48.20%.

The highest expected return is from NABIL whereas the lowest is from NBB. The average expected return from commercial banks is 39.45% which can be considered as better return.

) All the commercial banks have certain value of risk (SD) which ranges from 35.56% to 90.14%. The highest risk is from NBB, whereas the lowest is from EBL . The average risk for the commercial banks is 57.96%.



- ) All the three banks have positive CV ranges from 0.9996 to 0.3008 . The highest CV is from NABIL whereas the lowest is from NBB. The average CV from commercial banks is 0.7089.
- ) The highest value beta for commercial banks is 2.48 for NBB and lowest is 0.955 for EBL. The average value of beta for selected commercial banks is 1.51. NBB has more than average i.e. 1.51. EBL's beta( 0.9528)has less then average beta. NBB and NABIL have beta more than 1 it shows its stock volatility is more than market volatility and it is offensive stock. EBL has beta less than 1 it shows its stock volatility is less than market volatility and it is defensive stock.
- ) Systematic risk portion in returns of selected commercial banks ranges from 12.49% to 62.45% . The average systematic risk of selected commercial banks is 28.03%.
- ) Unsystematic risk portion in returns of selected commercial banks are varied from 3.48% to 18.79% for EBL and NBB. The average unsystematic risk is 11.0%.
- ) The stock of NABIL and EBL are under priced. The stock of NBB is overpriced
- ) Portfolio Return of NABIL and EBL is highest i.e.45.035% while portfolio return of NBB is lowest i.e.37.14%
- ) Portfolio risk of NABIL and EBL is lowest i.e 41% while portfolio return of NBB is highest i.e 81%
- ) It was found that the investor's motive for owning shares of company is to receive the dividends from the shares.
- ) Most of the investor think that price fluctuation factors of common stock N Rumors.
- ) Most of the important consider market price for investing common stock.

# **CHAPTER-V**

## **SUMMARY, CONCLUSION AND RECOMMENDATION**

### **5.1 Summary**

Common stock is a source of capita which is considered to be riskier and lifeblood of stock market. Therefore, investment in common stock is very sensitive on the ground of its uncertainty nature. Dividends to common stocks holders are only paid it the firm makes profit after tax and preference shareholder dividend. The company can return the principal in case of its liquidation only to the extend of the residual assets after satisfying to all its preference shareholders. Besides this, the investors have to sacrifice the return on their investment in common stock which would be earned investing elsewhere.

Risk and return in getting considerable attention in financial management. The central focus of finance is trade off between risk and return. Development in the field of finance has led to the application of many new concepts and models to deal with various related to financial management.

The relationship between risk & return is described by investor's attitude about risk and their demand for compensation. No investor will like to invest risky asset unless he is assured of adequate compensation for the acceptance of risk. Hence, they invest in those opportunities which have certain degree of risk is associated with it. Therefore, risk plays a vital role in the analysis of investment. It can be said that the rate of return on investment is a function of many factors including the real cost of money, inflation risk etc the investors willingly offer more capital at higher rate of return, whereas users of capital always their readiness to use more capital of lower rate.

The main objective of the study is to analyze the risk and return of commercial banks. Only seventeen commercial banks are operation in Nepal. Among the listed commercial banks only three banks. NABIL, EBL and NBB are taken as reference to analyze the risk and return. While analyzing the risk and return, research variables and tools viz, expected return, portfolio risk and return, required rate of return, standard deviation, coefficient of variance, coefficient of correlation have been used

for the analysis and interpretation of the data which are employed in this research as secondary in nature

## **5.2 Conclusion**

The study made on risk analysis of common stocks of listed commercial banks is based on secondary data from fiscal year 2004/05 to fiscal year 2008/09. In this study, expected rate of return of NABIL has highest return in commercial banks. Like wise in terms of standard deviation, NBB has the highest risk i.e .90.14% in commercial bank But, generally standard deviation is not used to determining risk, as there may be different expected return. Therefore, the coefficient of variance is considered as the best mechanism to measure the risk. On the basis of CV NABIL stock seem to be the most risky with 0.999 whereas NBB has 0.3008 . On the other hand, it is found that the required rates of return of all the above mentioned banks companies are lower than its expected rate of return. It means NABIL and EBL stocks are under priced and NBB stocks is overpriced. Similarly, the study made to analyze the diversifiable and undiversifiable risk reflects that all the samples stock except have high systematic risk. And such risk cannot be diversified on minimized. This type of stock is known as aggressive stock. Thus, it is reflected format be above study that has the highest unsystematic risk, which can be minimized or eliminated. Such type or stock can be mentioned as defensive stock.. From the view point of return on portfolio investing in NABIL is beneficial. While considering the risk portfolio consisting NABII has ,lowest risk.

## **5.3 Recommendations**

Recommendations are final output of the whole study. It helps to convey positive information and proper way of improvement to the concerned people and to other invested researcher in the upcoming days. Various analysis have been done till these steps. The following are the recommendation based on the above findings, conclusions and analysis of data.

- J Investors must focus on the risk factors before making an investment if they want to get maximum benefit from the investment. The coefficient of variation is considered the best tool for relative measurement of risk. On the basis of C.V. it is proved that NABIL's is the riskiest one for the investment whereas EBL stock are the lowest risky. Hence it is recommended that the stock of EBL's is the best for investment.
- J Beta coefficient measures the sensitivity of the stock with market. Higher the beta greater the volatility. The beta of market is always equal to 1. Stock having beta coefficient more than 1 is more risky than the market. If an investor is aggressive or risk taker, he/she can invest in the market on that stocks. Stock having beta coefficient less than 1 is less risky than the market. Risk averse investor can invest in that type of common stock. So, it is recommended that the investor should select SCBNL stock whose beta is lowest as compared to other banks. Hence, it is less risky or defensive stock.
- J The stock having more systematic risk has high sensitivity as such type of risk cannot be minimized. So, the investors have to consider the adequate compensation for the acceptance of risk. It is clear from the study that except EBL stock other bank's has high systematic risk. Therefore, it is recommended that the investor had better investment in stock, as it is not highly risky.
- J The investors have to buy those stock during the time of undervaluation and they have to sell the stocks at the time of overvaluation. It is found from the study that all the bank's stock is undervalued as the required rate of return of all banks are lower than the expected rate of return. So it is recommended to the investors to buy all samples stocks.
- J Public awareness of a stock market is must for the rationale investment in stock.
- J It is recommended to investor to invest in Portfolio of EBL. Which can reduce risk?
- J Portfolio consisting of NABIL is highest yielding portfolio. Hence it is recommended.

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## Appendix I

### NABIL

	Closing MPS( Rs.)	Cash	Stock (%)	DPS (Rs.)
2004/05	1505	70	0	70
2005/06	2240	85	0	85
2006/07	5050	100	0	100
2007/08	5275	60	0	60
2008/09	4988	35	0	35

FY	Closing MPS (Rs)	Dividend (D)	$R = \frac{D_1 + (P_1 - P_{t-1})}{P_{t-1}}$	[R-E(r)]	$[R-E(r)]^2$
2003/04	1000	-	-	-	-
2004/05	1505	70	0.575	0.09300	0.00864900
2005/06	2240	85	0.545	0.06300	0.00396900
2006/07	5050	100	1.299	0.81700	0.66748900
2007/08	5275	60	1.056	-0.42600	0.18147600
2008/09	4899	35	-0.065	-0.54700	0.29920900
			2.41000		1.16079
		E (r)	0.48200		0.232158
				( ) =	0.4818277
				(C.V.) =	0.999642

EBL

	Closing MPS(R.S)	Cash	Stock Dividend(%)	DPS(Rs0)
2004/05	870	-	20	275.8
2005/06	1379	25	0	25
2006/07	2430	10	0	10
2007/08	3132	20	0	20
2008/09	2455	30	0	30

FY	Closing Price (P)	Dividend (D)	$R = \frac{D_1 + (P_1 - P_{t-1})}{P_{t-1}}$	[R-E(r)]	$[R-E(r)]^2$
2003/04	680	-	-	-	-
2004/05	870	275.8	0.68500	0.25456	0.06480
2005/06	1379	25	0.61379	0.18335	0.03361
2006/07	2430	10	0.76287	0.33243	0.11050
2007/08	3132	20	0.29712	-0.13332	0.01777
2008/09	2455	30	-0.20657	-0.63701	0.40578
			2.15221		0.63246
		E(r)	0.43044		0.126492
				( ) =	0.35565
				C.V =	0.826247

NBB

FY	Closing Price (P)	Cash Dividend (Rs)	Stock Dividend(%)	DPS(Rs)
2004/05	265	0	0	0
2005/06	199	0	0	0
2006/07	550	0	0	0

2007/08	1001	0	0	0
2008/09	280	0	0	0

FY	Closing Price (P)	Dividend (D)	$R = \frac{D_1 + (P_1 - P_{t-1})}{P_{t-1}}$	[R-E(r)]	[R-E(r)] <sup>2</sup>
2003/04	354	-	-	-	-
2004/05	265	0	-0.25797	-0.52918	0.28003
2005/06	199	0	-0.24905	-0.52026	0.27067
2006/07	550	0	1.76381	1.49260	2.22785
2007/08	1001	0	0.82000	0.54879	0.30117
2008/09	280	0	-0.72027	-0.99148	0.98303
			1.35606		4.06275
		E(r)	0.27121		0.81255
				( )	0.90141
				C.V =	0.30087

### NEPSE

FY	NI	$R = \frac{D_1 + (P_1 - P_{t-1})}{P_{t-1}}$	[R-E(r)]	[R-E(r)] <sup>2</sup>
2003/04	222.04	-	-	-
2004/05	286.67	0.29107	-0.02786	0.0007762
2005/06	386.83	0.34939	0.03046	0.000928
2006/07	683.95	0.76808	0.44915	0.20173
2007/08	963.36	0.40852	0.08959	0.00802
2008/09	749.10	-0.22240	-0.54133	0.29303
		1.59466		0.50449
	E(r)	0.31893		0.100898
			=	0.3176444
			C.V =	2.22706

## Appendix II

NABIL(A)		EBL(B)		NBB(C)	
RA	E(RA)	RB	E(RB)	RC	E(RC)
0.575	0.48200	0.68500	0.43044	-0.25797	0.27121
0.545	0.48200	0.61379	0.43044	-0.24905	0.27121
1.299	0.48200	0.76287	0.43044	1.76381	0.27121
1.056	0.48200	0.29712	0.43044	0.82000	0.27121
-0.065	0.48200	-0.20657	0.43044	-0.72027	0.27121

RA- E(RA)	RB-E(RB)	[RA- E(RA)][RB- E(RB)]	RA- E(RA)	RC-E(RC)	[RA- E(RA)][RC- E(RC)]
0.09300	0.25456	0.023674	0.09300	-0.52918	-0.049213
0.06300	0.18335	0.011551	0.06300	-0.52026	-0.032776
0.81700	0.33243	0.271595	0.81700	1.49260	1.219454
-0.42600	-0.13332	0.05679	-0.42600	0.54879	-0.233784
-0.54700	-0.63701	0.348444	-0.54700	-0.99148	0.542339
=		0.712027	=		1.446020
COV <sub>AB</sub> = /5=		0.1424054	COV <sub>AC</sub> = /5=		0.289204
A=		0.4818277	A=		0.4818277
B=		0.35565	C =		0.90141
r <sub>AB</sub> =COV <sub>AB</sub> / A . B=		0.831020777	r <sub>AC</sub> =Cov <sub>AC</sub> / A. C=		0.66587109

$R_B - E(R_B)$	$R_C - E(R_C)$	$[R_B - E(R_B)][R_C - E(R_C)]$
0.25456	-0.52918	-0.134708
0.18335	-0.52026	-0.095389
0.33243	1.49260	0.496185
-0.13332	0.54879	-0.073164
-0.63701	-0.99148	0.631582
=		0.824506
$COV_{BC} = \sum / 5 =$		0.16490
$B =$		0.35565
$C =$		0.90141
$r_{BC} = COV_{BC} / B C =$		0.514369811