

CHAPTER- I

INTRODUCTION

1.1 General Background of the Study

The behavior of stock price and the relationship between risk and return in financial market has been of interest to researchers. Many interesting and exemplary researchers have been carried out this regard in the developed capital market. In recent year finance companies with new financial instruments and innovation are highly needed in the country. This will provide investment opportunities to the small and medium savers. Financial sector is the dynamic part of economy that collects unused funds and mobilizes it in needed areas. It is very important for trade industry and commerce. One of the leading sectors, stock market has become a global phenomenon even in the least develop country like Nepal that plays vital role in the development of national economy. In the capitalistic market, stock market is not only for the justification for encouragement on the ideological background but also required for the natural and/or progress of the development of financial sector of a nation.

The concept of financial institute in Nepal was introducing when the first commercial bank, Nepal Bank Limited was established in 1937. It was established under special banking act 1936 having elementary function of commercial bank. Latter in 1955 the central bank Nepal Rastra bank was established with an objective of supervising, protecting, and directing the function of commercial banking activities. Another commercial bank fully owned by GON, named as Rastriya Banijya bank got established in 1966. The establishment of joint venture bank gave a new horizon to the financial sector of the country. Since 1984 joint venture banks were established under company act and their shares were listed in Nepal stock exchange limited (NEPSE). The focus of the study is that commercial bank whose share listed in NEPSE.

Investment in financial assets including common stock is a new phenomenon for the Nepalese investor that is offering a challenging but potential rewarding opportunity to the individual investors. The dramatic changes in the investment environment (the security, security market and financial intermediaries) and increasing volatility in the stock prices have added more complexities in the track of the investing masses which requires a careful evaluation and informed investment strategy.

In financial market, there is demand of the funds that consists mainly the business firms, industry, multinational and government on one hand and in the other hand there are also suppliers of fund that include among all the households.

Financial markets are segmented into money market and capital markets. Money market instrument includes short term, liquid, low risk debt securities. Money market instruments are sometimes cash equivalent or just cash for short. Capital markets, in contrast, include longer-term and riskier securities. Securities in the capital market are much more diverse than those found within the money market.

Primary and secondary markets are the significant part of capital markets. Primary market deals with the new issue of securities. The securities previously issued in primarily markets are bought and sold in the secondary market that is commonly known as stock market.

The capital market can be further segmented into long-term fixed income markets, equity markets, and the derivative markets for options and futures. This study concerns with common stock only. Common stock holders are ultimately the owners of the company and have full claim on residual profit if any but has a junior claim on assets so is risky too.

Banking sector is the most dynamic part of economy, which collects unused funds and mobilizes it in needed areas. It is the heart trade, commerce industry. In Nepalese context, commercial banks have comparatively good performance among the public limited companies. Because most of the banks are counted with in the top ten positions among the listed companies on the basis of amount traded, number of transactions, market capitalization, etc. most of the banks are established with collaboration of foreign well-known banks. In Nepal altogether there are 25 commercial banks till this date.

In Nepal foreign joint venture banks perform better than Nepalese ones do. Because they have higher management efficiency and they can manage risk properly. Specifically, Nepalese banks have high degree of internal firm specific risk. At the same time they have to bear more social obligation and government intervention than foreign banks. However, Nepalese bank has high potentialities to increase their performance by changing their risk attitude and by improving their internal management.

Risk is related to future and future is uncertain but risk is manageable rather than uncertain. Company specific risk and company's ability to service its debt burden are intimately related to the particular characteristics of the business in which the company operates. Moreover, they are affected by economic condition apart management's ability to generate satisfactory operating performance.

There are different types of securities as treasury bills, long term government bonds, long term corporate bonds, common stocks etc. Among these securities this study concerns with common stocks. "Common stocks represent a commitment on the part of corporation to pay periodically whatever its board of directors deems appropriate as a cash dividend".

Common stock holders of a company are ultimate owners. Collectively they own the company and it is assumed that ultimate risk is associated with ownership. So the common stock is risky security. But what is risk? Risk is like pornography. It is hard to define, but you know it when you see it. Investor invests in common stock for higher return but their expected return may or may not change in realities. This uncertainty is major risk to investors in stock market investment.

The return is income received on an investment, which is expressed as dividend plus any change in market price of share and usually expressed in percent. Both market price of share and dividend are uncertain figures. So, the actual figure of return on investment in common stock may differ substantially from the expected return. The greater variability, the riskier the security is said to be. The market price of share of a company is driven both by fundamental business values and stock market sentiment. For a given business, it is always worth attempting to identify which of those is driving its share price.

A rational risk adverse investor wants to maximize his return at minimum risk. The investment process describes how an investor should go about making decision with regard to what marketable securities to invest in, what extensive the investment should be and when the investment the investment should be made. An investor first set investment policy that determines the investment objective and the amount of his or her investable fund. Investment objective should be stated in terms of both risk and return. Then investors involve in security analysis using both technical analysis and fundamental analysis. To minimize risk at a stated level of returns, an investor then constructs a portfolio. Investment into two or more than two securities is called diversification of fund of portfolio formation. Diversification involves constructing the investor's portfolio in such a manner that risk is minimized, subjects to certain restrictions. The objective of portfolio analysis is to develop a portfolio that has the maximum return at whatever level of risk the investor deems appropriate. Portfolio analysis considers the determination

of future risk and return in holding various blends of individual securities. Portfolio expected return is a weighted average of the expected return of individual securities but portfolio variance in sharp contrast, can be something less than a weighted average of security variance. As a result an investor can sometimes reduce portfolio risk by adding another security with greater individual risk than any other security in the portfolio. The investment process doesn't complete with construction of optimal portfolio rather an investor involves in portfolio revision. Portfolio revision involves the periodic revision of previous three steps. Finally an investor involves determining periodically how the portfolio performed in terms of not only the returned earned but also risk experienced by the investor.

1.2 Statement of the Problem

People assume more risk in stock investment than its real risk. So it is necessary to analyze in the field is must. Unavailability of clear and simple technique to analyze risk associated with return is also constraint.

Theory suggests that the stock price in the market is guided by the intrinsic value which is calculated by and of company's result of financial performance dividend, required rate of return and growth. In an efficient market condition stock price is equal to the intrinsic value since the buyer and seller are fully aware of the facts and figure of the company. Therefore, one can say that market price and financial performance are positively correlated but conditions here are totally different from that. Whatever the theory has depicted is not applicable in our context, where most of the investors do not know to interpret the information and so they can't make a rational decision regarding transactions of the stock.

Therefore, stock prices in Nepal are determined more by other factors, than the financial performance of the concerned company. Therefore, courage is needed

and at the same time faith to invest in common stock because there are several question which may be rising in the mind of the individual investor at the time of the investment. Some of the common questions that frequently occur in investor's mind can be listed as follows:

The criteria for evaluation that are holding will them a favorable return of not what should be the compensation they have to receive for bearing risk.

-) How they know about the magnitude of the risk?
-) How can one make higher return through risk?
-) How can an investor diversify the risk?

So these are some burning issues that have influenced researchers to carry on these studies.

1.3 Objective of the Study

The basic objective of this study is to asses the risk associated with return on the common stock investment on the basis of selective tools.

The other specific objectives of this study are as follows:

-) To study the risk return of the individual bank.
-) To find out the systematic and unsystematic risk of the individual bank.
-) To find out the relationship between earning per share and market price per share of the commercial banks.
-) To analyze the volatility of different stock and other relevant variables

1.4 Focus of the Study

This study will focus on the risk and return analysis along with the analysis of the relationship of MPS with different financial variables. Most of public investors i.e. existing and potential are not well aware about the real financial strengths and

weaknesses of the public companies in which they are investing of going to invest their funds. Further they cannot well analyze and interpret the real financial position of the company on the basis of available data and information to reach the right conclusion. So due to this kind of circumstances, this study may help investors to think about restructuring their investment portfolio. Similarly the potential investors may take better timely investment decision on the findings of the study.

Major focus of the study is as follows:

-) To compare the risk and return on investment of the Commercial Banks.
-) To suggest and recommend some measure on the basis of analyzing data and findings.
-) To evaluate and interpret the financial performance of selected banks in terms of investment strategies.

1.5 Scope of the Study

This study will focus on the risk and return analysis along with the analysis of the relationship of MPS with different financial variables. Hence, the study has to disseminate the findings on the real financial status of the financial institutions to the public investors as well as the policy makers.

1.6 Limitation of the Study

The limitation of the study is as follows:

- Only seven listed commercial banks have taken as sample.
- Primary as well as secondary data has been used for the analysis and interpretation, which would be taken form the SEBON, NRB, NEPSE, Annual reports of the concern banks, different web sites and questionnaire and Interviews from the Investors.

- This study has to complete within the limited time period so it will covers only 7 year's data.
- This study will basically focus on risk and return on common stock of the sampled Banks and analysis of the yearly data.

1.7 Organization of the Study

This study has divided into five chapters, which are as follows:

Chapter I: Introduction

It includes the general introduction, statement of the problem, objectives of the study, importance of the study, limitations of the study and organization of the study.

Chapter II: Review of Literature

This chapter consists of review of books, journals, thesis and other relevant materials.

Chapter III: Research Methodology

It covers on research design, population and sample, source of data, data collection procedure, analytical tools etc.

Chapter IV: Data Presentation and Analysis

This chapter attempt to analyze and evaluate data with the help of analytical tools and interpret the results obtained.

Chapter V: Summary, Conclusion and Recommendations

It will sumps up the results obtained through analysis and recommends some suggestions.

CHAPTER -II

REVIEW OF LITERATURE

This chapter shows the background of the work and review of recent literature. In this regard, basic academic course books specifically related to the topic, some of the major research works major articles published in journal and the related thesis are reviewed. The chapter has been arranged as follows:

2.1 Conceptual Review

2.2 Journals and Articles Review

2.3 Thesis Review

2.4 Websites Review

2.1 Conceptual Review

Central focus of the finance is trade of between risk and return. Here, main focus is it's in publication in the investment of common stock. Verities of books deal with the theoretical aspect of this matter. Here some major well popular and worldwide-accepted books have been reviewed.

2.1.1 Investment

Investment can be define as sacrifice of today's currency (fund) in some sector in which one expects to increase its value with passage of time. When current income exceeds current consumption desires, people tend to save the excess. They can do any of several things with these saving. One possibility is to put the money under a mattress or burry it in the ground (our ancestors used to do) until some future time when consumption desires exceeds current income. When they retrieve their savings from the mattress of ground, they have the same amount they saved because money does not multiply itself. The buried money even fails to preserve its value against the ongoing (prevailing) inflation. Therefore, the saving can be employed in such a way that its value is preserved and some additional income can

be generated at a future date. Thus, investment is the current commitment of the savings that compensates for the time involved, the expected rate of inflation and uncertainty involved. To state in other words, an investment is any vehicle into which funds can be placed with the expectation that they will generate positive return and/or their value will be preserved or increase(*Thapa, Bhattarai and Basnet; 2006 : 1-3*).

“Investment may be defined as the purchase by an individual or institutional investor of a financial or real asset that produces a return proportional to the risk assumed over some future investment Period” (*Amling F; 1985 : 186*).

“Investment, in its broadest sense means the sacrifice of current dollars for future dollars. Two different attributes are generally involved: time and risk. The sacrifice takes place in the present and is certain. The reward comes later, if at all, and the magnitude is generally uncertain” (*Sharpe, Alexander, & Bailey; 1998.*)

There are 3 main attributes linked up with investment.

- i) Anticipation of Return
- ii) Involvement of Risk
- iii) Time dimension

Anticipation of Return: - An investor is ready to sacrifice his present consumption and put to employ the money only in anticipation of future return or reward. An investor expects from his/her investment that its value is preserved (not eroded) and some additional income can be generated in future.

Involvement of Risk: - Both the timing and the magnitude of return from majority of investments cannot be predicted exactly. The investment is made at present and it is obviously certain. However, the return/reward is expected in some

future date so, it is uncertain. The uncertainty brings the risk. Therefore, almost every investment entails some degree of risk. Hence, making investment is a risky endeavor.

Time Dimension: - Another inseparable attribute in connection to investment is the time dimension. There is time lapse between investing the money and expecting/generating the return. The expectation of return also depends on the length of time horizon until the investment is tied up (*Thapa, Bhattarai and Basnet ; 2006 : 1-3*).

2.1.2 Common Stock

“Common stock represents equity, or an ownership position in a corporation. It is a residual claim, in the sense that creditors and preferred stock holders must be paid as scheduled before common stockholders can receive any payment. In bankruptcy, common stockholders are in principle entitled to any value remaining; after all other claimants have been satisfied” (*Sharpe, Alexander and Bailey; 1998:501*).

“Common stockholders of a corporation are its residual owner, their claim to income and assets come after creditors and preferred stock holders return on investment is less certain than return to a lender of preferred stock holder. On the other hand, the share of common stock can be authorized either with or without par value. The par values of stock are merely a stated figure in the corporate charter and are of little economic significance. A company should not issue stock at a price less than par value would be liable to creditor for the difference between the below par price they paid and the par value” (*Van Horne; 1997:60*).

The characteristics of common stock are as follows (*Van Horne ; 1997 : 60*)

Voting Right: - Common stock has voting right that can be to elect corporate directors who, in turn, appoint the corporate officers. Generally, stockholders also have three rights to vote on any issue that will have a material effect on the corporation, any proposal that will change their individual percentage ownership and any significant contract or financial arrangement.

Preemptive Right: - A preemptive right gives existing stockholders the first option to purchase a proportionate interest in a new issue of a corporation's stock. The purpose of this provision is to protect stockholders against a loss of voting control and a dilution in the value of their shares. The preemptive right is usually satisfied by the use of right offering.

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

Right to Income and Distribution of Additional Shares: - Common stockholders have no legal right to receive income distributions from the corporation. As a practical matter, however, the board of directors may declare cash dividends to stockholder, provided the financial resources are available, even for periods when the corporation has experienced a loss.

Par Value: - the face value of the stock, established at the time of stock is initially issued, is the par value. Without a stock split or any other action by the board of directors, the par value of the stock does not change.

Book Value: - Book value per share is calculated by dividing the total common equity on the balance sheet (book) by the number common share outstanding. This figure represents the asset value per share after deducting liabilities and preferred stock. Typically, common stock in a profitable corporation will be valued based on earning power and will sell at prices significantly greater than book value.

Market Value: - Market value in the secondary markets is determined by supply and demand factors and reflects the consensus opinion of investors and traders concerning the “value” of the stock.

2.1.3 Expected Rate of Return on Common Stock

The return on an investment is measured on the total gain or loss experienced on behalf of the owner over given period of time. The cash Payoff to owners of common stocks comes in two forms.

-) Cash Dividend
-) Capital Gain (or Losses)

To make it clearer, example derived from the book (*Brealey and Meyers; 2003:63*) 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 Div_1 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 can be shown in the form of:

$$\text{Expected return (r)} = \frac{P_1 - P_0 + Div_1}{P_0}$$

The return from holding an investment over some period say a year is implied by any payments received due to ownership, plus the change in market price divided by the beginning price. Thus, the return comes from two sources; income and price appreciation.

For common stock we can define one-period return as:

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

Where,

R = actual rate of return period t or expected rate of return

P_t = price (value) of the stock at the time t or ending stock price

P_{t-1} = Cash dividends paid (cash flow) on the stock in the time
Period t-1 or Beginning stock price.

D_t = Dividend amount at the time t.

Above formula can be used to determine both actual one period return (when based on historical figure) as well as expected one period return (when based on future expected dividends and prices). The term in the parenthesis in the numerator of above question represents the capital gain or loss during the period (*Van Horne and Wachowicz; 1997:90*).

Holding period return 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 on 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 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 a probability distribution based on historical data plus the analysis for the outlook for the economy and the outlook for the industry the outlook for the firm in its industry and another factors" (*Van Horne and Walchowicz; 1997:90*).

2.1.4 The risks on Common Stocks

Risk can be defined as the variability of possible returns around the expected return of an investment. For some investment this variability can be quite small. Each investor has his or her own attitude about risk and how much he or she can tolerate. Since investment alternative have different types of risk associated with them. The investor must determine which combination of alternative matches his or her particular risk tolerances (*Loric, Dodd and Kimpton ; 1991: 85 – 88.*)

Most investors know that there is no free lunch, that is, the return you can expect is a function of the risk you take. Those investors who can tolerate higher level of risks should be rewarded with high value of returns. Most empirical studies of historical risk-return relationships support this statement. Intelligent investment involves combining investment alternatives in a portfolio that offers a fair return for the risks you are willing to assume.

Uncertainties and risks are the facts of life for the common stock holder. Different people interpret uncertainties and risks in different ways. For some uncertainties are simply lacks of definite outcome. It is anything that could happen as an unknown event, which maybe favorable or unfavorable. To other it is the risk, many people consider risks as a chance of happening some unfavorable event or

danger of losing some values. The trouble lies in using them interchangeably (*Brigham, Gapewnski and Ehrhardt ; 2001: 188- 90*).

Uncertainty and risk are treated separately in financial analysis. The practice is to translate the uncertainty into a mathematical value, which represents the best estimates of all uncertainties values. In other words uncertainties are taken care of by calculating the expected values of all possible outcomes. But a risk is treated differently. Although, risk arises from uncertainty, its magnitude depends upon the degree of variability in uncertain cash flows; it is measured in terms of standard deviation. In project evaluation risks in fact is an indicator of chance of losing investment values. The words change here refers to the probability of loss in the investment project. In other words the project risk indicates the probability of return being less than the expected values. Higher the probability of such loss and returns higher the projects risk.

Risk is complicated subject and needs to be properly analyzed. The relationship between risks is described by the investor's perception about risk and their demand for compensation. No investor will like to invest in risky assets unless he is assumed of adequate compensation for the assumption of the risk. Therefore, it is the investor required risk premium that establishes a line between risk and return in a market dominated by rational investors, higher risks will command by rational premium and the tradeoff between risk and risk premium(*Weston, Beslley and Brigham ; 1996 : 556 – 558*.)

2.1.5 Sources of Investment Risks

Every investment involves uncertainty that make future investment returns risky. Sources of uncertainty that contribute to investment risk are as follows (*Francis; 1997: 3-8*).

Interest Rate Risk

It is defined as the potential variability of return caused by changes in the market interest rates. If the market interest rate rises (fall), then the present value of investment will fall (rise). Moreover the present value moves inversely with changes in the market rate of interest. This interest rate risk affects the prices of Bonds, real estate, gold and other investments as well.

Purchasing Power Risk

It is the variability of return an investor suffers because of inflation. When inflation takes place, financial assets (such as cash, stocks, bonds) may lose their ability to command the same amount of real power of the financial assets and increase investor's risk. So the real rate of return on financial assets may not adequately compensate the holder of financial assets for inflation.

Bull-Bear Risk

Bull-bear market arises from the variability in market returns, resulting from alternating bull-bear market forces. When a security index rises fairly constantly from low point, called a trough, for a period of time, the upward trend is called bull market. The bull market ends when the market index reaches a peak and starts a downward trend. The period during which the market declines to the next trough is called bear market.

Default Risk

It is the portion of total of investment that results from changes in the financial integrity of the investment. The variability of returns that investors experiences as a result of changes in the credit worthiness of a firm in which they invested is their default risk. Investors loss from default risk usually results from security prices falling as the financial integrity of a firm weaken, the loss is anticipatory loss.

Liquidity Risk

Liquidity risk is the portion of total variability of return of an asset which results from price discount given or sales commissions paid in order to sell the assets without delay. Perfectly liquid assets are highly marketable - either price discount must be given or sales commissions must be paid. The more liquid an asset is the larger the price discount or commission in which must be given up by the seller in order to affect a quick sale.

Call Ability Risk

Some bonds and preferred stocks are sold with a provision that allows the issuer to call them for re-purchase. Issuers like the provision because it allows them to buy back outstanding preferred stocks or bonds with funds from a new issue if market rate drops below the level being paid on the outstanding securities. Investors should view the call provision as a threat that may deprive them of good investment at a time when their funds can be re-invested at a lower yield. The portion of securities total variability of return that deprives the investor of the possibility may be called call ability risk. The call ability risk commands a risk premium that commands in the form of a slightly higher average rate of return.

Political Risk

Political risk arises from the exploitation of a politically weak group for the benefit of a politically strong group with the effects of various groups to improve their relative positions increasing the variability of returns from the affected assets. Regardless of changes that causes political risk are sought by political or by economic interests. The resulting variability of returns is called

political risk if it is accomplished through legislative, judicial or administrative branches of the government.

2.1.6 Partition (Splitting) of Total Risk

Total risk associated with any securities is measured by standard deviation or variance of returns. This total risk has two components namely

- i) Systematic risk
- ii) Unsystematic risk

Systematic Risk

It is that part of total risk, which is cause due to the external factors and hence, it cannot be diversified away. The effect of such risk is very wide. Therefore, this type of risk is also called “Market specific risk”. The investors demand additional reward to compensate such risk. Therefore, such risk is also appropriately known as “Reward able risk”. The beta coefficient of returns is a tool that measures the systematic risk. Higher the beta coefficient, higher is the systematic risk and vice versa. It stems from factors, which systematically affect all firms, such as war, inflation, recession, high interest rates, depressions and long term changes in consumption in the economy (*Weston and Copeland ; 1992: 75*).

Unsystematic Risk

It is that part of total risk, which is cause due to the internal factors of due to the unique characteristic of a particular firm. Therefore, such risk is also called “firm of company specific” or “unique risk”. Such risk can be diversified away so, it is also known as diversifiable risk. This type of risk differs from one company to another. It is caused by events particulars to the firm. For example, labor strikes, management errors, inventions, advertising campaigns, shifts in consumer taste etc. this type of risk can be eliminated through efficient diversified portfolio (*Francis ; 1986 : 12*).

Beta Coefficient

Beta coefficient is that tool of risk measurement, which measures the systematic risk components. In other words, beta is that coefficient of risk, which tells about the sensitivity (volatility) of a security's return in reference to the return of market as a whole. For this reason, the beta coefficient of market portfolio is considered to be 1. Any security which beta coefficient is more than 1 is termed as "an aggressive" security. On the other hand, if any security has beta coefficient of less than 1 is called "defensive" security. Lastly, a security whose beta coefficient is exactly 1 is called "an average" security (*Sharpe et al ; 2000 : 47*).

2.1.7 Capital Assets Pricing Model (CAPM)

CAPM provides the required rate of returns on any security in terms of risk free rate, expected rate of the market portfolio and the systematic risk coefficient (beta coefficient) of the security. An analysis of CAPM clarifies that; other thing held constant, higher the beta coefficient, higher is the systematic risk and in turn higher will be the required rate of return and vice-versa (*Horne and Wachowitch ; 1996 ; 49*).

Mathematically, it can be shown as;

$$\begin{aligned}\text{Required rate of return of security " i " } E (r_i) &= \text{Risk Free} + \text{Risk Premium} \\ &= R_f + \text{Beta Coefficient} \times \text{Market} \\ &\quad \text{Risk Premium} \\ &= R_f + B_i [E(R_m) - R_f]\end{aligned}$$

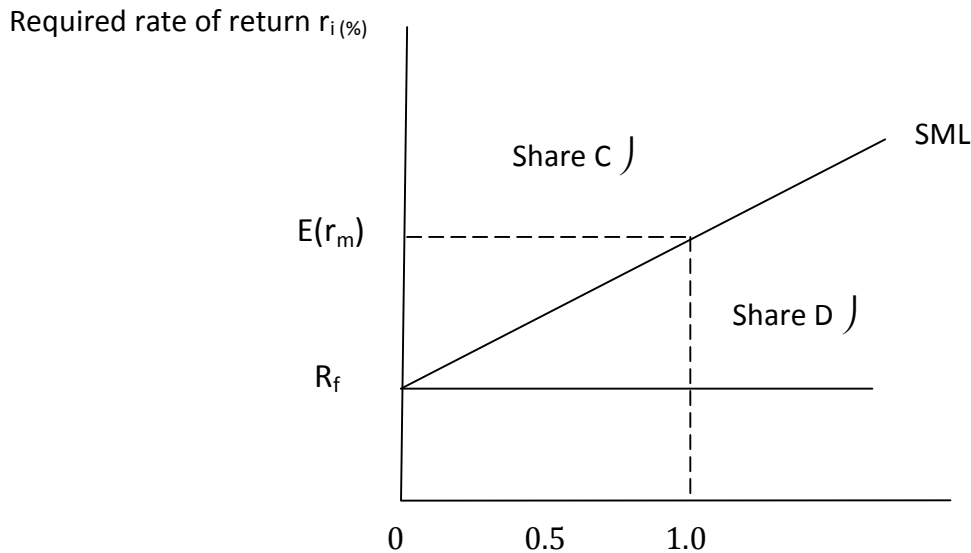
Where,

B_i = Beta coefficient of security " i "

$E (R_m)$ = Expected return of market portfolio.

Further, it can be shown as with the help of security market line graph.

The Security Market Line (SML)



Source; Horne & Wachowitz; 1996:49

In market equilibrium, (when supply and demand and prices remain stable) expected return and required return for the share should be equal and its price would be stable. Equilibrium will generally exist for a given stock because security prices adjust rapidly to new developments. Changes in the equilibrium price can be brought about i) by a change in risk aversion ii) by a change in the risk free rate iii) by a changes in the stock's beta coefficient, or iv) by a change in the stock's expected growth rate.

Share C lies above the SML, it is expected to offer a return greater than that required by the market for that level of risk; its expected return is greater than its required return. Share C is undervalued or underpriced. Alternatively, share D lies below the SML, it is expected to provide a return below that required by the market for that corresponding level of risk. When the expected rate of return is greater than the required rate, investors will try to purchase shares of the stock; this will drive the price upward.

If the expected rate of returns is less than the required rate, investors will desire to sell the stock; there will also be a tendency for the price to decline.

2.1.8 Concept of Portfolio

An investor's objective is to make maximum return from his/her fund at the lowest risk. By investing in a single asset, investor cannot achieve his/her objective. But it is only possible through portfolio. A portfolio is a combination of securities. By the help of portfolio, risk can be diversified. In this context, it can be cleared through a proverb "do not put all the eggs in one basket." It means that one can lose all the eggs if some unlikely event occurs. So, we can say that risk cannot be diversified by investing in a single asset. Obviously, risk can be diversified by forming portfolio. Thus, the objective of the portfolio analysis is to develop a portfolio that has the maximum returns at whatever level of risk the investor deems appropriate. Combination of securities can be made in many ways (*Weston and Copeland; 1992: 366*).

2.1.9 over and Under Pricing of Securities

To know whether a security is over/under/correctly priced, we compute their required rate of returns founded by applying CAPM and compare it with the respective expected rate of returns which is estimated independently.

Then,

- i) If **Required Rate > Expected Rate** then, it is **Overpriced or Overvalued** security so, an investor should sell it or short-sell it.
- ii) If **Required Rate < Expected Rate** then, it is **Underpriced or Undervalued** security so, an investor should buy such security.
- iii) If **Required Rate = Expected Rate** then, it is **Correctly Priced or Fairly Priced** security so, an investor should not trade this security (*Van Horne;*

2000: 71).

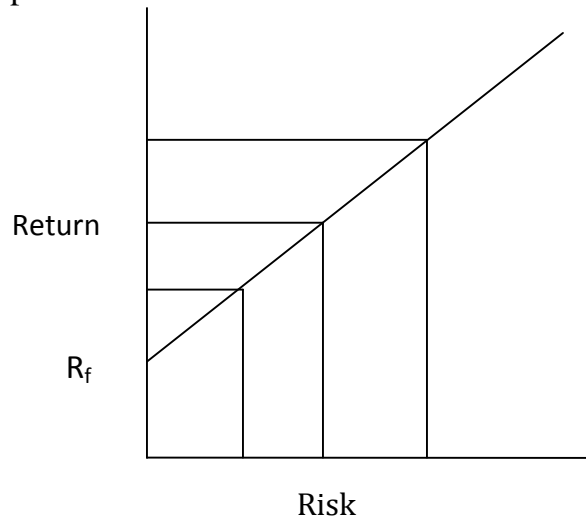
2.1.10 Relationship between Risk and Return

“The expected return from any investment proposal will be linked in a fundamental relationship to the degree of risk in the proposal. In order to be acceptable a higher risk proposal must offer a higher forecast return than lower risk proposal” (*Hampton, 1996:341*).

"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 Kempton; 1995: 1029*).

Generally, there is a positive relationship between rate of return and risk. It means an investor can usually attain more return by selecting dominant assets that involve more risk. While it is not always true that a riskier asset will pay a higher average rate of return, it is usually. The reason is that investors are risk averse. As a result, high-risk assets must offer investors' high returns to induce them to make the riskier investment naturally, investors are likely to prefer more return and less risk. It means investors will not choose an investment that guarantee less return when investments promising higher returns in the same level of risk class are readily available.

The relationship between risk and return is shown in the following figure.



Source: *Van Horne, James; 1998; 245*

2.2 Review of Journals and Articles

Regarding the review of articles and journals of finance and publications, there are hardly any found? So no any articles about the relationships between risk and return of investment has been included. But some related and published journals have been reviewed from website publications and the past studies conducted by other researchers. They are presented below which helps to build the sound conceptual framework on the topic.

Mark Kritzman and Donrich (May/Jun 2002) with the title "*The Miss- Measurement of Risk*" has introduced two new ways of measuring risk, within - horizon probability of loss and continuous value at risk. This is a totally new concept for those investors who measure risk at the end of their investment horizon. Investors typically measure risk as the probability at the end of their investment horizon. This view of risk considers only the result at the end of the investment horizon, whether the horizon lasts for one day, one week, one year or many years. They are affected by exposure to loss throughout the investment period, not just at its conclusion. They introduce two new ways of measuring risk that is, within- horizon probability of loss and continuous value at risk.

They have concluded that, investor's measure risk incorrectly if they focus exclusively on the distribution of out comes at the end of their investment horizons. This approach to risk measurement ignores intolerable losses that might occur throughout an investment period, either as the result of the accumulation of many Small losses or from a significant loss that later recovers. Application of these measures in reasonable scenarios illustrates vividly that investors are exposed to investment period than end-of-horizon risk measure indicate. If investors do not care about within-horizon risk, they should.

At the very least, investors need to be aware of the likelihood that they will be able to sustain their investment strategies. Awareness does not necessarily mean that investors should simply reduce risk, although such a course of action may be warranted. Indeed, if investors are informed of their within-horizon exposures to loss, then if an unpleasant loss occurs, they will not be unduly surprised and will not act to reduce risk out of a misguided perception that the nature of their investment strategy has changed.

Greek Rouwenhorst (1999) published an article "*Local Return Factors and Turnover in Emerging Stock Markets*" where he explained the growing empirical evidence that multiple factors are across-section ally correlated with average returns than large stocks Bang (1981). Fama Frence (1992/1996) and Lakosnishock, Shleifer and Vishny (1994) show that value/stocks with book to market (B/M), earning to price (E/P), and cash flow to price (C/P) outperform growth stocks with low B/M, E/P or C/P.

This paper examines the sources of return variation in emerging stock markets. Compared to the developed market the correlation between most emerging market and stock market has been historically low and until recently many emerging country restricted investment by foreign investor.

He attempts tow set of questions to answer by his solution. The first set of three questions concern the existence of expected return premiums

-) Do the factors that explain expected return differences in developed equity markets also describe the cross section of expected returns of emerging market firms?
-) Are the returns factors in emerging market primarily local or they having global components as well?

-) 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 second set of questions of the paper includes:
 -) Is there a cross sectional relation between liquidity and average returns in emerging markets?
 -) Are the return factors in emerging markets cross section ally correlated with liquidity?

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

Bowman (1988, Feb) “*The Theoretical Relationship between Systematic Risk and Financial Variable*” examined the relationship between risk and financial variables. Syatematic risk of livered firm is equals to the systematic risk of the same firm without leverage. There is no direct relationship between earning variability and market risk. Systematic risk is directly related to the accounting beta. There is no theoretical basis for relationship of dividend payout and beta. There is not only theoretical relationship between dividends and systematic risk but also size and growth of the firm and systematic risk.

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

Pradhan and Balampaki (2004) conducted a study on “*Fundamental of Stocks Return in Nepal*” based on pooled cross sectional data of 40 listed companies in

NEPSE Ltd and traded in the stock market. The study examines if dividend yield, capital gain yield and total yield are related to earning yield, book to market ratio and cash flow yield. Pradhan and Balampaki have summarized the following results.

-) Earnings yield and cash flow yield have significant positive impact on dividend yield, and an insignificant impact on book to market value, whereas, size has negative impact on dividend yield. In the case of earning yield and cash flow yield, cash flow yield has been found to be more informative than earnings yield.
-) Capital gain yield is positive influenced by earnings yield and size, whereas, the same is negatively influenced by book to market value and cash flow yield. Book to market value has been found to be statistically strong in predicting capital gain yield.
-) Similarly, total yield is positively determined by earnings yield and size, whereas the same is negatively determined by book to market value has been found to be more informative than other variables.
-) The positive relationship exists among earnings yield, book to market value and cash flow yield. However, the size is negatively related to these three variables.

Khagendra Prasad Ojha (2000) conducted a study on “*Financial performance and common stock pricing*” concluded that: An investment in common stock of a corporate firm neither ensures annual return nor ensure the return of principle. Therefore, investment in common stock is very sensitive on the ground of the risk. Dividend to common stockholders is paid only of the firm marker on operating profit after tax and performance dividend. The company can return the principal in case of its liquidation only to extent of the residual assets after satisfying to all of its creditors and preferential shareholders. Besides this, investor have to sacrifice

the return on their investment in common stock, which could be earned investing fund elsewhere in the next best opportunity.

The study focused on the financial performance where financial activities involve decision regarding,

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

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

2.3 Review of Thesis

Review of thesis is a section of review of literature where various theses are reviewed which are related its topic and which may be helpful for this study. In this section some thesis are reviewed which have done on risk and return topic and the objective of this section is to know how the relation between risk and return is described and measured by different thesis.

Deepak Adhikari (2002) conducted a study entitled "*Risk and Return on Common Stock Investment*" is based on 8 listed commercial bank covering nine years from fiscal Year 1992/93 to 2000/01 and submitted to FOM, Tribhuvan University. He had tried to assess the risk and return on common stock of listed commercial banks by financial and statistical tools. His main objective of the study is to evaluate common stock of listed commercial banks in terms of risk and return i.e. expected rate of return, standard deviation and determine whether the shares of commercial banks in Nepal are overpriced or under priced by using the CAPM.

In his study, he found the expected rate of return in the common stock of BOKL is maximum and common stock of Himalayan Bank Ltd is minimum. Similarly SCBL has the best common stock for investment because its C.V. is the lowest risk per unit of return. However, HBL has highest risk per unit of return HBL's expected rate of return is lower than market return. According to Beta Coefficient BOKL's common stock is most volatile and SCBL's common stock is least volatile. All banks common stock move positive with market as their betas are positive but SCBL, HBL, SBI & EBL are having defensive and Nabil, NIB, BOK and NBB have aggressive type of Common Stock. Besides that all the analyzed commercial bank's common stocks are under priced, that means their stocks value will be increased in near future. Therefore, investors can purchase the common stock of any Banks.

Sudeep Upadhaya (2002) in his master's thesis, *"Risk and Return on common stock investment of commercial bank in Nepal"* Studies the performance of listed company. In his research paper he applies the five- year data from 1997 to 2002.

He focused on; "In general, most people see stock market investment as a black art that they know little about. Many people have unrealistically optimistic and pessimistic expectations, about stock market investment or perhaps a fear of the unknown. Nepalese stock market is in emerging state. Its development is accelerating since the political change in 1990 in effect of openness and other part is the stock market is influence due to the Maoist problem faced by the country. And investor lacks information and poor knowledge. Nepalese individual investor cannot analyze the securities as well as market properly."

In addition, Updhaya added that: proper analysis of individual security, Industry and overall market is always needed. General knowledge about economic, political

and technological trend will be advantageous. To win the market, shares should be hold when the market is rising and hold safer investment when it is falling.

Tanka Raj Bhatta (2003) in his thesis *"Investment in Shares of Commercial Banks in Nepal"* had tried to assess the risk and return on common stocks investment of eight commercial banks (on the basis of financial and statistical tools). An assessment of Risk and Return Elements using the data over the period of FY 1996/97 to 2000/01 has been made.

The main objective of his study was to examine the movement of market price of shares, to find out the relationship between the return on individual shares and return on market and to determine the shares of commercial banks in Nepal are correctly priced or not. In his thesis, he finds out that risk return characteristics do not seem to be the same for all the shares reviewed and the portion of unsystematic risk is very high with shares having negative beta coefficient.

Similarly he finds out that most of the shares fall under the category of aggressive stock(having beta coefficient more than one) while some under the defensive stock (having beta coefficient 0.99 approximately one) according to the price evaluation, the study shows that all the banks shares are under priced and hence positively correlated with market return.

Durgamani Sharma (2004) conducted a study on *"Portfolio Management of listed Commercial Banks and Insurance Companies in Nepal"* in the year 2004 is also related with the study. The main objective of his study was to analyze the risk and return of the common stock of Commercial Banks and Insurance Companies. He has also analyzed the diversifiable and un-diversifiable risk of common stock as well as portfolio return and risk.

Based on risk and return, he found that the shares of all the Commercial Banks are attractive for investment compared to Insurance Companies. The conflicting political and economic scenario has the adverse impact on economic activities of the companies. Therefore, Insurance Companies are unable to effectively manage its portfolio. The researcher realized that the risk per unit of return of market is very high. So the overall market return can be regarded as attractive with respect to its risk. He also concluded that the unsystematic risk of all the companies was high in comparison to total risk.

Guna Nidhi Gautam (2004) Conducted a study entitled “*Risk and Return Analysis of Common Stock Investment of Finance Companies in Nepal with special Reference to Ten Companies*” and submitted to FOM, Tribhuvan University.

The relevant objectives set by Gautam were “to examine risk and return on common stock of finance companies, to evaluate the stocks of selected companies whether they are overpriced, underpriced or correctly priced.”

His study was based on the common stock data of ten listed finance companies for the period of eight years starting from F/Y 2052/53 to 2059/60.

After analyzing the available data and information using various financial and statistical tools, Mr. Gautam summarized his findings as: “The expected rate of return of the common stock of Narayani Finance Ltd. is highest among the selected finance companies. Similarly, expected rate of return is found lowest on common stock of Peoples Finance Company Ltd. Total risk measured by standard deviation is observed maximum in common stock of Narayani Finance Company Ltd. and minimum in common stock of National Company Ltd. Common stock of citizen investment Trust has highest excess return to Beta.”

Furthermore, Gautam concluded that stocks of all selected finance companies are underpriced indicating attractive for purchase.

2.4 Websites Review

For the purpose of clearly understand the risk return pattern of the common stock we need to review the related websites. It helps to learn further more information to the particular investor and potential investors as well. Here we have been reviewed some websites related to the topic.

2.4.1 Introduction to Common Stock

Stock represents a piece of ownership of a particular company. When you purchase a stock of a company you immediately become one of its owners. As a result you have right over the profits the company makes and some voting rights depending on the type of the stock. So, if you consider the stock profitable and beneficial you should strive to purchase as much shares of it as possible.

The price of the stock is set following certain rules. Generally, stocks are traded on the stock market, which tends to determine the value of the company on daily basis.

The major factor that determines the value of a stock is its earnings. They are mostly in the focus of attention. Every company makes a report of the profits it has made every quarter. These numbers are of great interest to most investors, since they tend to base their investment decisions on them. Investors use earnings per share as an indicator of the current state of the company and its future position.

A positive attitude is awarded to companies that report quick growth in their earnings as well as earnings growth that is stable. Many investors target companies that don't experience positive earnings, but are predicted to shift their losing position into a winning one in the near future. What is not looked at with a

good eye is if the company sustains losses for which no good reasons are provided. Additionally, the market will not accept companies that have a declining earnings trade.

Stocks are generally characterized as experiencing an upward trend over the long term. However, this is not guaranteed in whatsoever way especially when we consider individual stocks. You will enjoy profits from stocks only if their price increases.

You should keep in mind that no company is insured against going bankrupt. If the company of which you own shares does go bankrupt you will lose your investment. Fortunately, this doesn't happen every day. The company may experience short term problems, but if its management is effective enough it will manage to overcome them and put its price back to balance.

As you can see, stock investing carries a certain degree of risk. However, there are ways in which you can control the level of risk to which you are exposed. The key is in diversification. This means that you should strive to include in your portfolio different types of stocks. If a fall of one stock is experienced it will be compensated by an increase in another. Additionally, you should try to get the best out of compounding.

When you purchase a stock of a company, you are assigned the right to vote on different issues concerning the company. A Board of Directors is elected, which tends to supervise the management of the business. The major goal of the company's management is to increase the value of the equity the company possesses. If the management fails to accomplish this goal, the shareholders are in their right to remove it.

Being an individual investor you should not think that you will be able to accumulate enough stock to govern the company. Instead the major influence is in the hands of institutional shareholders or a group of company's insiders. So, when you select companies you should include management examination as part of your analysis.

To be a successful investor you need two main things - the knowledge and the right trading platform (*Source:-www.Stock-Market-Investors.com*).

2.4.2 Types of Common Stocks

A. Blue Chips - Blue chips refers to the stock offerings of the country's largest and most prestigious companies. Due to their already large size and market share, these companies sometimes don't have the potential for further substantial internal growth. On the other hand, they won't be going out of business anytime soon. They are considered to be relatively low-risk, low-reward investments. They rarely have to raise additional capital, and they usually generate excess cash. As a result, blue chip companies generally pay dividends to their shareholders.

B. Utilities - These are the stocks issued by power and water companies. They usually have limited competition, and as such, enjoy somewhat monopolistic conditions. For example, most homeowners have only one choice from which to purchase their power services. Because of these prevailing conditions, utilities are considered low-risk investments. They're also closely regulated with regard to the prices that they are allowed to charge for their services and the return which they are allowed to earn. Thus, they also offer a fairly low reward. But like blue chip companies, they are generally considered to be very stable and safe investments. Most utilities distribute a relatively high percentage of their earnings in the form of dividends.

C. Established Growth - These companies are large enough to be well-established and even well-known, but are small enough to still have the possibility of substantial future growth. They're usually currently profitable, but may need to raise additional capital to sustain their growth. The earnings that these companies generate are usually reinvested for further expansion and, as a result, they don't usually pay dividends to their shareholders. However, the shareholders do often reap benefits in the form of capital gains.

D. Emerging Growth - Emerging growth companies are relatively small and have the potential for substantial future growth. These companies will generally need to raise additional capital to support their growth and expansion. They, therefore, will not pay dividends. Many times they can offer very attractive returns but they also have additional risk. This can often be attributed to the fact that successful management of rapid corporate growth and its inherent risks can be very challenging and complicated, and many management teams may not quite be suited for the task.

E. Penny Stocks - These are by far the most speculative. They generally trade for less than \$5 per share. These stocks represent ownership in companies which may still be in the research and development stage of their first product. They may also be offerings of companies that have suffered severe financial setbacks and are barely surviving. While almost always losing money, they carry a great deal of risk, and they tend to be very illiquid. There is generally a high failure rate among these companies (*Source: FinWeb.com*).

2.4.3 Time, Risk and Investment Goals

When you begin stock investing you should clearly determine your goal for doing so. The goal you will identify for yourself will not be the same as the one another investor has set. Additionally, you should expect that your financial goals and the

risk you are willing to take change over time because your way of life changes as well.

However, you should be clear that the goal that you establish today represents the goal at this point of your life. It will be the driving force of the investments you will execute in the near future.

If you are a young investor, you are more likely to take higher risk. Moreover, most young investors tend to focus on investments that provide growth.

However, as you near middle age, your investment style starts to change since your needs change. You will most probably be less willing to face higher levels of risk and start to bet on stocks with more predictable growth.

When you near your retirement years, you become even more conservative. At this point of your life you will be more concerned with capital preservation and you will pay less attention to growth. As a result, most investors tend to concentrate on bonds and fixed income investments, overlooking stocks which carry higher levels of risk.

The latter (stocks, bonds and cash) should be presented in a certain proportion in your investment portfolio. Many investors find it difficult to determine these percentages.

Since the proportion depends on the individual conditions of every investor it is difficult to give a certain working for all proportion.

However, a useful rule of thumb is that the percentage of bonds or fixed income investments in your portfolio should be equal to your age. For example, if you are

39 years old, 39% of your portfolio should constitute of bonds and fixed income investments, whereas the remaining 61% should be in stocks.

However, you should not consider this as a straight formula you should follow. There are other factors that should guide your decision, such as your risk tolerance.

You should keep in mind that the higher number of stocks in your portfolio leads to a more aggressive investment style. On the other hand, the less the number of stocks the more conservative your portfolio is.

It is up to you to decide on the investment style you will follow. After setting your mind on this you will be able to determine the mix of stocks, bonds and cash that is most suitable for your investment goals.

If you are still in your early ages a conservative way of investing may hamper the quick reach of your investment goals. However, one can never be sure, and this may be exactly the investment style for you.

On the other hand, if you are nearing retirement and you still invest aggressively, a turn in the market may lead to the loss of the money you have accumulated for retirement.

Finally, it is up to you to decide on the investment approach you will follow but have in mind that the style you choose will govern you investment decisions, which in turn can have a deep impact on your goal achievement.

To be a successful investor you need two main things - the knowledge and the right trading platform (*Source: www.Stock-Market-Investors.com*).

2.4.4 Common Stock Investing Strategies

Investing Strategy 1 - Buy and Hold

If you choose this investing strategy you will have to purchase a stock and be ready to hold it over a long period of time, since buy and hold strategy is based on the assumption that the price of the stock will rise with time. However, due to the dynamics of the market you can never be sure that this will happen. This investing strategy elaborates on the idea that the market will continue to expand due to its capitalist nature. As a result it assumes that the stock prices will continue to rise and shareholders will enjoy higher dividends.

The market fluctuations and inflation levels are smoothed over the long-term. The advantage of this investing strategy is that you pay less commission fees and taxes since you trade less. You hold the stocks for a long time and don't trade on frequent basis.

Investing Strategy 2 - Growth Investing Strategy

This strategy aims to identify the growth potential of a company. Companies with high earnings growth are very attractive to investors who believe that such companies will experience continuing rise in their stock price since more and more investors will want to take advantage of the regular and large dividend paying.

One of the most important factors for consideration in growth investing is the earnings per share of the company. Investors observe the changes in the earnings per share over the years not neglecting the revenue growth as well.

What is more, in order to get a clear view on the willingness of the market to pay for a given earnings growth, investors examine the relationship between the price/earnings ratio and the annual earnings growth.

Keep in mind that this strategy carries a certain degree of risk, since the target companies are usually young. However, as you know risk and reward go hand in hand, meaning the higher the risk the higher the potential reward from the investment.

Investing Strategy 3 - Value Investing Strategy

Value investors are often referred to as bargain seekers. This means that they search for stocks that are sold at a price that is below the real value of the company.

No matter what the current price of the stock is, be it \$20 or \$100, it should be below the real value of the company. Value stocks are those that have been overlooked by the market and as a result their price is lower. The latter may be caused by the chasing of the market after stocks that are currently considered to be more attractive.

Generally, growth and value investing are considered to be positioned in opposite sides of the investment spectrum.

Investing Strategy 4 - Timing the Market

The major idea behind market timing is the buying low and selling high. Market timers believe that they can successfully predict the behavior of the market regarding the price movement of stocks. This makes timing the market the opposite of the buy and hold strategy.

If you are to time the market, you should familiarize yourself with such tools as technical and fundamental analysis as well as even intuition.

Most financial experts are against timing the market because it is difficult to identify whether a particular stock price has reached its peak or bottom. It may eventually go even higher or lower.

Additionally, with the often trades that are executed under this strategy commission fees will greatly reduce your profits especially if you make frequent trades of small amounts.

Another disadvantage of timing the market is that in theory over the long-term the market goes up. Therefore, it is better to stay fully invested during the time in order not to miss the long-term stock rewards.

Investing Strategy 5 - GARP Investing Strategy

Growth at Reasonable Price (GARP) represents a combination between the value and growth investing strategies. Therefore, applying this strategy will involve the search of a stock that is both undervalued and has a potential for future growth. You may find it difficult to find such a stock due to the opposing characteristics of growth and value investing. However, it is not unattainable. Investors applying this strategy use the PEG (price-to-earnings-growth) ratio as an indicator for a stock that possesses a growth potential at a price that is below the real value of the company (*Source: www.Stock-Market-Investors.com*).

2.4.5 Advantages and Disadvantages of Common Stocks

Every share of common stock represents a proportional ownership, or equity, in a company. If a company has only one share of common stock and an investor owns it, the investor owns the entire company and is entitled to one hundred percent of the company's profits. If a company has 100,000 shares of common stock and an investor owns one of them, then the investor owns 1/100,000th of the company, and as such, has an interest in 1/100,000th of the company's profits.

Common stock has a number of advantages which make it a desirable investment vehicle, some of which are listed below:

- Common stock has the potential for delivering very large gains, unlike bonds, Certificates of Deposit, or some other alternatives. Annual returns-on-investment (ROIs) of over 100% have occurred on a somewhat regular basis.
- The potential loss from stock purchased with cash is limited to the total amount of the initial investment. This is considerably better than that of some leveraged transactions, where the maximum loss can well exceed the total of the funds invested.
- Stocks offer limited legal liability. Passive stockholders (those who take no active part in the running of the company) are protected against any liability stemming from the company's actions beyond their financial investment in the company.
- Most stocks are very liquid; in other words, they can be bought and sold quickly at a fair price.
- Although past performance is not a guarantee of future performance, stocks have historically offered very high returns in relation to other investments.
- Stocks offer two ways for their owners to benefit, by capital gains and with dividends. As previously stated, each share of stock represents partial ownership in a company. If the company becomes more valuable, so will the ownership interest represented by each share of stock. This appreciation of the stock's value is known as a capital gain. In addition, if the company earns more profits than it needs to support its maintenance and growth, it may elect to distribute the excess to its owners, the shareholders. The periodic distributions of profits are called dividend payments.

While there are numerous advantages, common stocks, like all investments, have some distinct disadvantages which investors must remain aware of:

- Since common stock represents ownership of a business, stockholders are the last to get paid, like all other owners. A company must first pay its employees, suppliers, creditors, maintain its facilities and pay its taxes. Any money left can then be distributed among its owners.
- While shareholders are company owners, they do not enjoy all of the rights and privileges that the owners of privately held companies do. For example, they cannot normally walk in and demand to review in detail the company's books.
- Investors in a company may not know all that there is to know about the company. This limited information can sometimes cause investment decision-making to be difficult.
- Stock prices tend to be volatile. Prices can be erratic, rising and declining quickly. Such declines often cause investors to panic and sell, which actually only serves to lock in their losses.
- Stock values can sometimes change for no apparent reason, which can be quite frustrating for the investor who is trying to anticipate the stock's behavior based on the actual performance of the company.

2.4.6 Return on Common Stocks

Return on Equity (ROE) is one measure of how efficiently a company uses its assets to produce earnings. You calculate ROE by dividing Net Income by Book Value. A healthy company may produce an ROE in the 13% to 15% range. Like all metrics, compare companies in the same industry to get a better picture.

While ROE is a useful measure, it does have some flaws that can give you a false picture, so never rely on it alone. For example, if a company carries a large debt

and raises funds through borrowing rather than issuing stock it will reduce its book value. A lower book value means you're dividing by a smaller number so the ROE is artificially higher. There are other situations such as taking write-downs, stock buy backs, or any other accounting slight of hand that reduces book value, which will produce a higher ROE without improving profits.

It may also be more meaningful to look at the ROE over a period of the past five years, rather than one year to average out any abnormal numbers.

Given that you must look at the total picture, ROE is a useful tool in identifying companies with a competitive advantage. All other things roughly equal, the company that can consistently squeeze out more profits with their assets, will be a better investment in the long run (*Source: FinWeb.com*).

2.4.7 Investment Opportunities in Times of Financial Crisis

It looks like the stock market is not the favorite place for anyone these days. Every day brings another disturbing news or commentary. Another stock tanked. Another bank failed. And so on.

The financial marketplace is now marked with extreme volatility and investments resemble quite a lot lottery tickets - unpredictable and surprising rallies in the value of stocks and bonds are followed by sudden significant drops. No wonder that so many investors sell up and run away from the stock market, which only worsens the situation and further pushes the stock market down.

So why should you be the one to go against the current? Is it wise to invest in stocks right now?

Actually, it is. Now that everyone else is selling it is one of the best times to invest in stocks.

Right now fear has seized the stock market and to many investors it seems like it is the end of the world now. However, it is not. The economy and the market will recover even if it takes longer than expected. Thus, what you can do in times of crisis like the current one is take advantage of the attractive prices and fearful environment.

Of course, this does not mean that you should invest in companies with bad outlook. Before you make a major, long-term investment, do your homework and find companies with strong and experienced management teams, good track records of profitability and growth, and innovative R&D.

You may not find extraordinary bargains but there are certainly some nice bargains for patient investors committed to gains over the long term. There are many companies that the general market has dragged down to very low prices despite their great product lines.

Invest Based on Your Objectives and Age. Do not forget that both your age and objectives should play role when you are choosing your investments.

If you are young, far from your retirement years, you can afford a little bit bigger risk. Surely, it is painful to watch your investments drop significantly. And it is very easy to give in to the fear when a stock in your portfolio drops 50%. But fear is not a good guide to decision making. While sudden financial losses may be indeed indicators that even worse drops in value lie ahead, they can just as easily be followed by an upswing.

Selling now and moving to safer investments (such as US treasuries) that will provide only 2 or 3% rate of return will not get you to your goals and will

certainly take you too much time to even get back to where you were before the market went down.

On the other hand, if you are near your retirement you should choose more stable and safer investments. First, you might never be able to recover from a significant drop since you have much shorter timeframe to work with. Second, since you are going to need your money sooner, you may be forced to sell your assets at their lows (Source: www.Stock-Market-Investors.com).

2.4.8 Investment Portfolio Management and Portfolio Theory

Portfolio theory is an investment approach developed by University of Chicago economist Harry M. Markowitz (1927 -), who won a Nobel Prize in economics in 1990.

Portfolio theory allows investors to estimate both the expected risks and returns, as measured statistically, for their investment portfolios.

Markowitz described how to combine assets into efficiently diversified portfolios. It was his position that a portfolio's risk could be reduced and the expected rate of return could be improved if investments having dissimilar price movements were combined.

In other words, Markowitz explained how to best assemble a diversified portfolio and proved that such a portfolio would likely do well.

There are two types of Portfolio Strategies:

A. Passive Portfolio Strategy

A strategy that involves minimal expectational input, and instead relies on diversification to match the performance of some market index. A passive strategy assumes that the marketplace will reflect all available information in the price paid for securities.

B. Active Portfolio Strategy

A strategy that uses available information and forecasting techniques to seek a better performance than a portfolio that is simply diversified broadly.

Moreover, there are three more types of Portfolios:

1. The Patient Portfolio

This type invests in well-known stocks. Most pay dividends and are candidates to buy and hold for long periods ... Perhaps forever!

The vast majority of the stocks in this portfolio represent classic growth companies, those that can be expected to deliver higher earnings on a regular basis regardless of economic conditions.

2. The Aggressive Portfolio

This portfolio invests in "expensive stocks" (in terms of such measurements as price-earnings ratios) that offer big rewards but also carry big risks.

This portfolio "collects" stocks of rapidly growing companies of all sizes, that over the next few years are expected to deliver rapid annual earnings growth.

Because many of these stocks are on the less-established side, this portfolio is the likeliest to experience big turnovers over time, as winners and losers become apparent.

3. The Conservative Portfolio

They choose stocks with an eye on yield, as well as earnings growth and a steady dividend history (*Source: Greekshares.com*).

2.4.9 Earning per Share

One of the challenges of evaluating stocks is establishing an “apples to apples” comparison. What it means by this is setting up a comparison that is meaningful so that the results help you make an investment decision.

Comparing the earnings of one company to another really doesn’t make any sense, if you think about it. Using the raw numbers ignores the fact that the two companies undoubtedly have a different number of outstanding shares.

For example, companies A and B both earn \$100, but company A has 10 shares outstanding, while company B has 50 shares outstanding. Which company’s stock do you want to own?

It makes more sense to look at earnings per share (EPS) for use as a comparison tool. You calculate earnings per share by taking the net earnings and divide by the outstanding shares.

$$\text{EPS} = \frac{\text{Net Earnings}}{\text{Outstanding Shares}}$$

Using our example above, Company A had earnings of \$100 and 10 shares outstanding, which equals an EPS of 10 (\$100 / 10 = 10). Company B had earnings of \$100 and 50 shares outstanding, which equals an EPS of 2 (\$100 / 50 = 2).

So, you should go buy Company A with an EPS of 10, right? Maybe, but not just on the basis of its EPS. The EPS is helpful in comparing one company to another, assuming they are in the same industry, but it doesn’t tell you whether it’s a good

stock to buy or what the market thinks of it. For that information, we need to look at some ratios (*Source:About.com*).

Before we move on, you should note that there are three types of EPS numbers:

Trailing EPS – last year’s numbers and the only actual EPS

Current EPS – this year’s numbers, which are still projections

Forward EPS – future numbers, which are obviously projections

2.4.10 Book Value per Share

There are several ways to define a company’s worth or value. One of the ways you define value is market cap or how much money would you need to buy every single share of stock at the current price.

Another way to determine a company’s value is to go to the balance statement and look at the Book Value. The Book Value is simply the company’s assets minus its liabilities.

Book Value = Assets - Liabilities

In other words, if you wanted to close the doors, how much would be left after you settled all the outstanding obligations and sold off all the assets.

A company that is a viable growing business will always be worth more than its book value for its ability to generate earnings and growth.

Book value appeals more to value investors who look at the relationship to the stock's price by using the Price to Book ratio.

To compare companies, you should convert to book value per share, which is simply the book value divided by outstanding shares (*Source: About.com*).

2.4.11 Price Earning Ratio (P/E Ratio)

If there is one number that people look at than more any other it is the Price to Earnings Ratio (P/E). The P/E is one of those numbers that investors throw around with great authority as if it told the whole story. Of course, it doesn't tell the whole story (if it did, we wouldn't need all the other numbers.)

The P/E looks at the relationship between the stock price and the company's earnings. The P/E is the most popular metric of stock analysis, although it is far from the only one you should consider.

You calculate the P/E by taking the share price and dividing it by the company's EPS.

$$P/E = \frac{\text{Stock Price}}{\text{EPS}}$$

For example, a company with a share price of \$40 and an EPS of 8 would have a P/E of 5 ($\$40 / 8 = 5$).

What does P/E tell you? The P/E gives you an idea of what the market is willing to pay for the company's earnings. The higher the P/E the more the market is willing to pay for the company's earnings. Some investors read a high P/E as an overpriced stock and that may be the case, however it can also indicate the market has high hopes for this stock's future and has bid up the price.

Conversely, a low P/E may indicate a "vote of no confidence" by the market or it could mean this is a sleeper that the market has overlooked. Known as value stocks, many investors made their fortunes spotting these "diamonds in the rough" before the rest of the market discovered their true worth.

What is the “right” P/E? There is no correct answer to this question, because part of the answer depends on your willingness to pay for earnings. The more you are willing to pay, which means you believe the company has good long term prospects over and above its current position, the higher the “right” P/E is for that particular stock in your decision-making process. Another investor may not see the same value and think your “right” P/E is all wrong (*Source: About.com*).

2.4.12 Dividend Yield

Not all of the tools of fundamental analysis work for every investor on every stock. If you are looking for high growth technology stocks, they are unlikely to turn up in any stock screens you run looking for dividend paying characteristics.

However, if you are a value investor or looking for dividend income then there are a couple of measurements that are specific to you. For dividend investors, one of the telling metrics is Dividend Yield.

This measurement tells you what percentage return a company pays out to shareholders in the form of dividends. Older, well-established companies tend to payout a higher percentage than do younger companies and their dividend history can be more consistent.

You calculate the Dividend Yield by taking the annual dividend per share and divide by the stock’s price.

$$\text{Dividend Yield} = \frac{\text{Annual Dividend per Share}}{\text{Stock's Price per Share}}$$

For example, if a company's annual dividend is \$1.50 and the stock trades at \$25, the Dividend Yield is 6%. ($\$1.50 / \$25 = 0.06$) (*Source:About.com*).

2.4.13 Dividend Payout Ratio

The Dividend Payout Ratio (DPR) is one of those numbers. It almost seems like a measurement invented because it looked like it was important, but nobody can really agree on why.

The DPR (it usually doesn't even warrant a capitalized abbreviation) measures what a company's pays out to investors in the form of dividends.

You calculate the DPR by dividing the annual dividends per share by the Earnings Per Share.

$$\text{DPR} = \frac{\text{Dividends per Share}}{\text{EPS}}$$

For example, if a company paid out \$1 per share in annual dividends and had \$3 in EPS, the DPR would be 33%. ($\$1 / \$3 = 33\%$)

The real question is whether 33% is good or bad and that is subject to interpretation. Growing companies will typically retain more profits to fund growth and pay lower or no dividends.

Companies that pay higher dividends may be in mature industries where there is little room for growth and paying higher dividends is the best use of profits (utilities used to fall into this group, although in recent years many of them have been diversifying).

Either way, you must view the whole DPR issue in the context of the company and its industry. By itself, it tells you very little (*Source:About.com*).

2.5 Research Gap

Risk and return is a broad topic in finance and investment. It is a continuous process of analyzing and interpreting the results that are obtained from the research. Investment is a dynamic process and investors required various information regarding the stock market and individual company as soon as possible.

Theses which are reviewed in this chapter also based on risk return analysis of commercial banks are providing relevant information to shareholders and investors and the fact to carry out this thesis is to provide investors real, accurate and updated information as soon as possible.

CHAPTER-III

RESEARCH METHODOLOGY

Introduction

Research Methodology may be defined as “a systematic process that is adapted by the researcher in studying problem with certain objective in view”. In other words research methodology describes the methods and process applied in the entire aspect of the study focus of data, data gathering instrument, procedure data tabulating, Processing and method of analysis. On the basis of collecting these data's and information's using both financial and statistical tools perform detail analysis of different variables. Results are presented in simple way.

In this chapter, efforts have been made to present and explain the specific research design for the sake of attaining the research objectives. It includes research design, nature and source of data, population and sample, and Methods of analysis.

3.1 Research Design

Research design is necessary to fulfill the objectives of well-set research. Research design may be defined as framework, plan and structure for collecting, analyzing and evaluating data. It is a procedure and techniques, which provide ways for research viability. This research is belongs to risk and return analysis so that this research is based on recent historical data, which covers the eight years period data from the FY 2001/02 to FY 2007/2008. It deals with the common stocks of commercial banks on the basis of available information. As the title of the study suggests, it is more analytical and empirical but less descriptive.

3.2 Nature and Sources of Data

The data required for the research is collected from the secondary data sources. Data related to the market prices of stocks, market capitalization, movement of NEPSE index etc. is taken from the trading report published by NEPSE and the website of Nepal Stock Exchange (i.e. www.nepalstock.com). Annual report of commercial banks and their financial statement are also collected from the respective sample banks. Security board of Nepal (SEBON), NRB, NEPSE, Annual reports of the concern banks and different websites are the main sources of the data.

3.3 Population and Samples

The population of the study is all the listed commercial banks in NEPSE index. This study is concentrated in listed commercial banks only. Total listed commercial banks are 25. For this study, 7 commercial banks are taken as sample which represents the 28% sample from its total population. The banks which I have chosen as samples are based on random sample which would be able to meet the yearly data from fiscal year 2001/02 to 2007/08. The respective banks are as follows:

- i) NABIL Bank Ltd. (NABIL)
- ii) Nepal Investment Bank Ltd. (NIBL)
- iii) Standard Chartered Bank Ltd. (SCBL)
- iv) Himalayan Bank Ltd. (HBL)
- v) Everest Bank Ltd. (EBL)
- vi) Bank of Kathmandu Ltd. (BOK)
- vii) Nepal Industrial and Commercial Bank Limited (NIC)

3.4 Methods of Analysis

The collected data are analyzed by using various financial tools, as well as statistical tools, which are given and defined below.

Statistical Tools

Statistical tools help to measure the relationship between the variables. Mainly, expected return (Mean value), Standard deviation (Risk) and coefficient of variation (CV) is calculated for examining the relationship between the variables.

Graph

Graph help to show the general trend of the ratios in respect to time period of the analysis year. Every common way of presenting data for two variables, which have a relationship, as in figure or chart or graph is presented.

3.4.1 Market Price of Stock (MPS)

There are three price records available. High, low and closing price. So two approaches either average price (of high and low) or closing price can be used. Closing price is used as market price of stock, which has a specific time span of one year and the study has focused in annual basis while average price represents the price of whole year. Hence, it is very difficult to get reliable and representative information.

3.4.2 Earnings per Share (EPS)

Earning refers to the net income after tax of the company. Earnings per share (EPS) is the results of net income after tax dividend by the outstanding number of common shares. It can be expressed as:

$$\text{Earnings per Share (EPS)} = \frac{\text{Net Profit After Tax}}{\text{No. of Equity outstanding}}$$

3.4.3 Dividend

Dividend is reward to the shareholders for their investment. It can be given in the form of cash or shares. If a company declares only the cash dividend, there is no

problem to take dividend amount. But if company declare stock dividend (bonus share), it is difficult to obtain the amount that really shareholders has gained. In case of stock dividend the formula for total dividend amount is considered as follows:

$$\text{Total Dividend} = \text{Cash Dividend} + \text{Stock Dividend} \% \times \text{Next year's MPS}$$

Where,

MPS = Market Price per Share

3.4.4 Return on Common Stock Investment (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 then dividing by market price of previous year.

Mathematically,

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

Where,

D_t = Cash dividend received at time t.

P_t = Price of a stock at time t.

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

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

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

Symbolically,

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

Where,

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

R_j = Return on stock j

n = Number of years that the return is taken

\sum = Sign of summation

3.4.6 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.

3.4.7 Standard Deviation (S.D.)

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

If data given as time series

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

If data is probability distribution

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

Where,

σ_j = Standard Deviation of return on 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.

3.4.8 Coefficient of Variation (C.V.)

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

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

Where,

C.V. = Coefficient of variation of stock.

σ_j = Standard deviation of return on stock j.

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

3.4.9 Beta Coefficient ()

Beta coefficient shows the market sensitivity of stock. Higher the beta, greater is 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.

Mathematically,

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

Where,

β_j = Beta coefficient of stock j

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

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

σ_m^2 = Variance of market return.

3.4.10 Correlation Coefficient (P_{ij})

Two variables are correlated when they are related that the change in the value of one variable is accompanied by change in the value of other. Correlation may be positive or negative. If returns 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;

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

Where,

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

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

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

3.4.11 Partitioning of Total Risk

$$\text{Systematic risk proportion } (\rho^2) \times \frac{\sigma_j^2 \sigma_m^2}{\sigma_j^2}$$

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

Where,

σ_j^2 = Variance of stock j.

β_j^2 = Square beta of stock j.

σ_m^2 = variance of market return.

Var (e) = Residual variance.

3.5 Presentation Method

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 -V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Common stock is a source of capital 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 sticks holders are only paid if the firm makes profit after tax and preference share dividend. The company can return the principal in case of its liquidation only to the extent 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 of 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 and 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 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 coast 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 25 commercial banks are operation in Nepal. Among the listed commercial banks, only 7 banks NABIL, NIBL, SCBL, HBL, EBL, BOK and NIC bank are taken as reference to analyze the risk and return. While analyzing the risk and return, research variables and tools namely expected 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 and return analysis of common stocks of listed commercial banks is based on primary as well as secondary data from fiscal year 2001/02 to 2007/08. In this study, expected rate of return of NABIL bank's stock is highest i.e. 67.92%. Like wise in terms of standard deviation of BOK has the highest risk i.e. 51.51%. 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 coefficient of variation, NIC bank's stock seems to be the most risky with 0.4852. On the other hand, it is found that the required rates of return of all the sampled banks have lower than its expected rate of return. It means that all the sample institutions' stocks are underpriced. Similarly, the study made to analyze the diversifiable and undiversifiable risk reflects that all the samples stock have less systematic risk and such risk cannot be diversified or minimized. More specifically, the investors demand additional reward to compensate such risk. The systematic risk is less than one in all sampled banks so we can say that these stocks are defensive stocks. The relation between EPS and MPS of all the sampled institutions goes positively. Theory suggests that when EPS increases, then MPS should also increases. NABIL, NIBL, SCBL, and NIC banks are able to follow this theory in practically because EPS and MPS of these banks both are increasing

in every fiscal year. HBL, EBL and BOK's relation between EPS and MPS also have positive relation but in some fiscal years, they are not able to adopt this theory.

5.3 Recommendations

Recommendations are the 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 analyses have been done till these steps.

The following are the recommendations based on the above findings, conclusions and analysis of data.

- J Investors must focus on the risk factors before making and 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., NIC bank's stock is the riskiest one for the investment because its CV is 0.4852. Whereas the SCBL has lowest CV i.e.0.1553 so, its stock has low risk. Hence, it is recommended that the stock of SCBL 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 of risk taker, he/she can invest having beta of more than 1. Stock having beta coefficient less than 1 is less risky than the market. Risk averter investor can invest in that type of common stock. But all the sampled banks have beta coefficient of less than 1 so, it is recommended that the investor could select any of the bank's stock according to their investment desire.

-) The stocks having more systematic risk have 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's stock other bank's stock has high systematic risk. Therefore, it is recommended that the investor had better investment in stock, as it is not highly risky.
-) The investors have to buy those stocks during the time of under valuation and they have to sell the stocks at the time of overvaluation. It is found from the study that all the banks' 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 sample banks' stocks.
-) The positive relation between EPS and MPS shows the better performance of the company. So, on the basis of the relation between EPS and MPS, it is recommended that the stock of NABIL, NIBL, SCBL and NIC bank is better for investment.

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 Limited (Erstwhile Nepal Arab Bank Ltd.)

Nabil bank is the first joint venture bank established in partnership with Dubai bank Ltd. of Dubai. It was established on 12th July 1984. The bank had initiated its business with authorized capital of Rs. 60 million and paid up capital of mere Rs. 30 million. NB International (foreign partner) holds 50% of the share capital of the bank, NIDC holds 10%, NEPSE holds 0.33%, Rastriya Beema Sansthan holds 9.67% and the general public holds 30%. Following table 4.1 represents the market price and dividend per share of Nabil bank for the purpose of risk and return analysis.

Table 4.1

Market Price per Share and Dividend per Share Data of NABIL

Fiscal Year	Closing MPS (Rs.)	Cash Dividend Per Share (Rs.)	Stock Dividend (%)	Total Dividend Per Share (Rs.)
2001/02	315	20	0	20
2002/03	735	30	0	30
2003/04	1000	50	0	50
2004/05	1505	65	0	65
2005/06	2240	70	0	70
2006/07	5050	85	0	85
2007/08	5275	100	40	2210

Data source: Annual Reports of SEBON

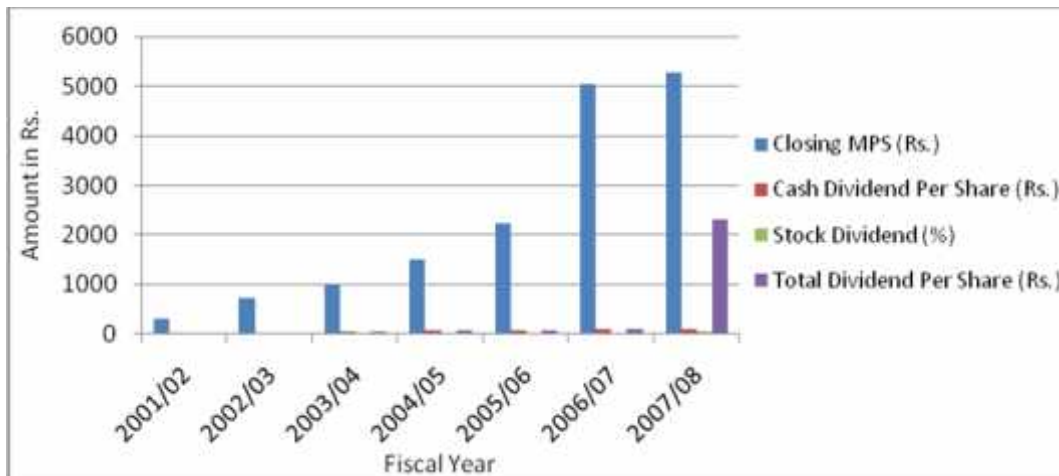
Value of Stock Dividend = Dividend % × Next year's Closing MPS

Total Dividend = Cash Dividend per Share + Stock Dividend per share.

Value of Stock Dividend for the year 2007/08 = Dividend% × same year's MPS

Figure 4.1

Market Price per Share and Dividend per Share of NABIL



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

Rate of returns for each year are calculated on the basis of closing price of common stock and dividend amounts of respective year. Table 4.2 shows the calculation of year wise rate of return, expected rate of return, standard deviation and coefficient of variation of return.

Table 4.2
Rate of Return, Expected Rate of Return, S.D., C.V. of the
Common Stock of NABIL Bank

Fiscal Year	Return
2001/02	-
2002/03	1.4285
2003/04	0.4285
2004/05	0.57
2005/06	0.5348
2006/07	1.2924
2007/08	0.5
E(R) =	0.6792
=	0.4213
C.V. =	0.2614

Source: Appendix 1

2. Nepal Investment Bank Limited (NIBL)

Nepal Investment Bank was established on 27th February 1986, with the joint venture of Indosueze Bank of France. The shareholding pattern of the bank has changed and is as follows: Rastriya Bajijya Bank 15%, Rastriya Beema Sansthan 15%, General public 20% and the Nepalese promoters holding 50%. Following table 4.3 represents the market price and dividend per share of Nepal Investment bank for the purpose of risk and return analysis.

Table 4.3

Market Price per Share and Dividend per Share Data of NIBL

Fiscal Year	Closing MPS (Rs.)	Cash Dividend Per Share (Rs.)	Stock Dividend (%)	Total Dividend Per Share (Rs.)
2001/02	760	0	0	0
2002/03	795	0	30	282
2003/04	940	20	0	20
2004/05	800	15	0	15
2005/06	1260	12.58	0	12.58
2006/07	1729	20	35.46	888.77
2007/08	2450	5	25	617.5

Data source: Annual Reports of SEBON

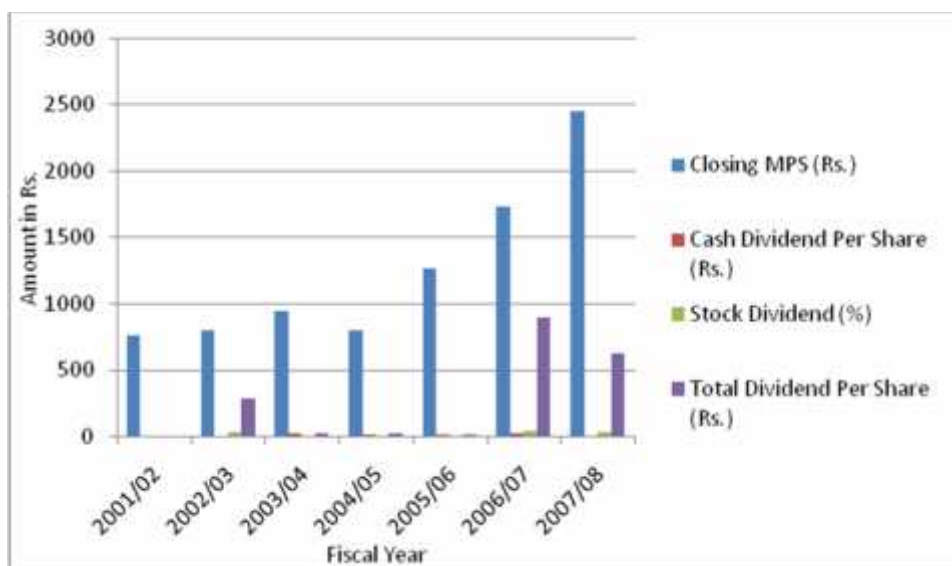
Value of Stock Dividend = Dividend % × Next year's Closing MPS

Total Dividend = Cash Dividend per share + Stock Dividend per Share.

Value of Stock Dividend for the year 2007/08 = Dividend% × same year's MPS

Figure 4.2

Market Price per Share and Dividend per Share of NIBL



Rate of Return, Expected Return, Standard Deviation and Coefficient of Variation of NIBL

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

Table 4.4
Rate of Return, Expected Rate of Return, S.D., C.V. of the
Common Stock of NIBL

Fiscal Year	Return
2001/02	-
2002/03	0.4171
2003/04	0.2075
2004/05	-0.13297
2005/06	0.59072
2006/07	1.0775
2007/08	0.7741
E(R) =	0.4192
=	0.3955
C.V. =	0.3732

Source: Appendix 1

3. Standard Chartered Bank Nepal (SCBL)

Standard Chartered Bank Nepal Limited has been in operation in Nepal since 30th January 1987 when it was initially registered as a joint-venture operation. Today the Bank is an integral part of Standard Chartered Group who has 75% ownership in the company with 25% shares owned by the Nepalese public. The Bank enjoys the status of the largest international bank currently operating in Nepal. Following table 4.5 represents the market price and dividend per share of Standard Chartered bank for the purpose of risk and return analysis.

Table 4.5

Market Price per Share and Dividend per Share Data of SCBL

Fiscal Year	Closing MPS (Rs.)	Cash Dividend Per Share (Rs.)	Stock Dividend (%)	Total Dividend Per Share Rs.)
2001/02	1550	100	0	100
2002/03	1640	100	0	100
2003/04	1745	110	10	344.5
2004/05	2345	110	0	110
2005/06	3775	120	0	120
2006/07	5900	130	10	813
2007/08	6830	80	50	3495

Source: Annual Reports of SEBON

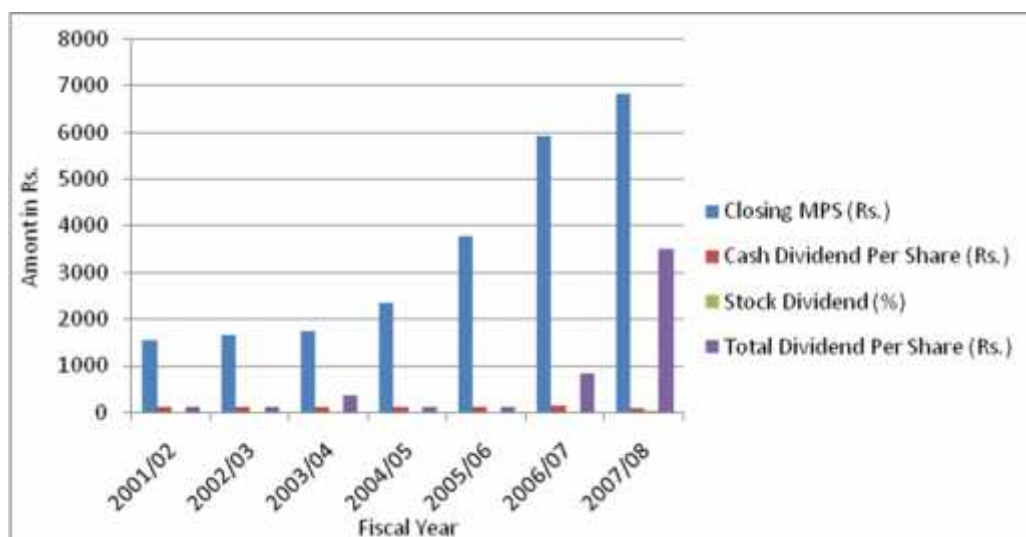
Value of stock dividend = Dividend % × Next year's Closing MPS

Total Dividend = Cash dividend per share + Stock dividend per share.

Value of Stock Dividend for the year 2007/08 = Dividend% × same year's MPS

Figure 4.3

Market Price per Share and Dividend per Share Data of SCBL



Rate of Return, Expected Return, Standard Deviation and Coefficient of Variation of SCBL

Rate of returns for each year are calculated on the basis of closing price of common stock and dividend amounts of respective year. Table 4.6 shows the calculation of year wise rate of return, expected rate of return, standard deviation and coefficient of variation of return.

Table 4.6
Rate of return, Expected rate of Return, S.D., C.V. of the Common Stock of SCBL

Fiscal Year	Return
2001/02	-
2002/03	0.1226
2003/04	0.2741
2004/05	0.4069
2005/06	0.6609
2006/07	0.7783
2007/08	0.75
E(R) =	0.4275
=	0.2577
C.V. =	0.1553

Source: Appendix 1

4. Himalayan Bank Limited (HBL)

Himalayan Bank was established on 18th January 1993 on joint venture agreement with Habib Bank of Pakistan. Nepalese Promoters holding 80% share and remaining 20% holding Habib Bank of Pakistan. Despite the cut-throat competition in the Nepalese banking sector, Himalayan bank has been able to maintain a lead in the primary banking activities – Loans and Deposits. Following table 4.7 represents the market price and dividend per share of Nepal Investment bank for the purpose of risk and return analysis.

Table 4.7

Market Price per Share and Dividend per Share Data of HBL

Fiscal Year	Closing MPS (Rs.)	Cash Dividend Per Share (Rs.)	Stock Dividend (%)	Total Dividend Per Share (Rs.)
2001/02	1000	7.50	30	258.30
2002/03	836	25	10	109
2003/04	840	1.32	25	231
2004/05	920	0	20	220
2005/06	1100	11.5	20	363.50
2006/07	1760	30	5	129
2007/08	1980	15	15	312

Source: Annual Reports of SEBON

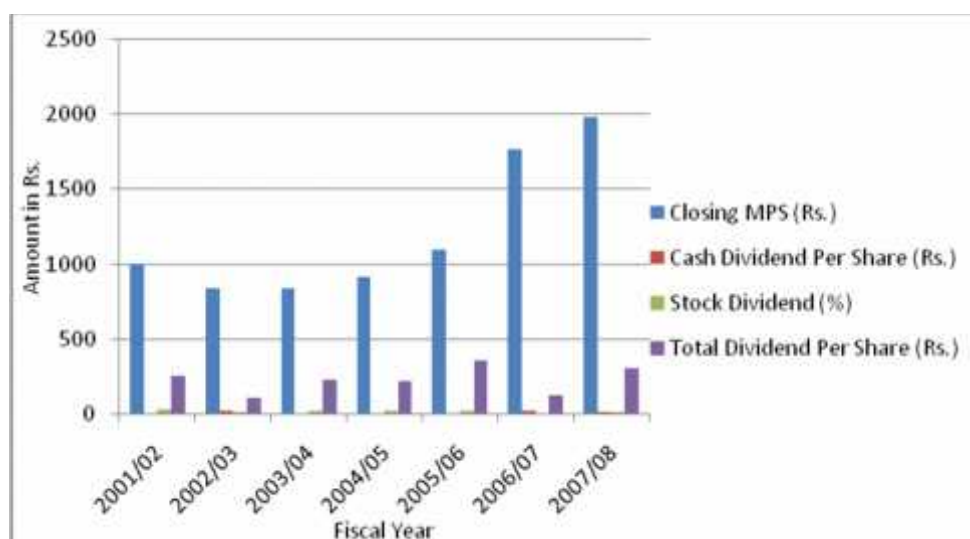
Value of Stock Dividend = Dividend % × Next year's Closing MPS

Total Dividend = Cash Dividend per share + Stock Dividend per share.

Value of Stock Dividend for the year 2007/08 = Dividend% × same year's MPS

Figure 4.4

Market Price per Share and Dividend per Share Data of HBL



Rate of Return, Expected Return, Standard Deviation and Coefficient of Variation of HBL

Rate of returns for each year are calculated on the basis of closing price of common stock and dividend amounts of respective year. Table 4.8 shows the calculation of year wise rate of return, expected rate of return, standard deviation and coefficient of variation of return.

Table 4.8
Rate of Return, Expected rate of Return, S.D., C.V. of the
Common Stock of HBL

Fiscal Year	Return
2001/02	-
2002/03	-0.055
2003/04	0.2811
2004/05	0.3571
2005/06	0.5908
2006/07	0.7173
2007/08	0.3023
E(R) =	0.3134
=	0.2513
C.V. =	0.2015

Source: Appendix 1

5. Everest Bank Limited (EBL)

Everest bank limited was established on 18th October 1994. 50% of its total share holds by Panjab National Bank, 30% by Local Promoters and remaining 20% by General Public. Following table 4.9 represents the market price and dividend per share of Nepal Investment bank for the purpose of risk and return analysis.

Table 4.9

Market Price per Share and Dividend per Share Data of EBL

Fiscal Year	Closing MPS (Rs.)	Cash Dividend Per Share (Rs.)	Stock Dividend (%)	Total Dividend Per Share (Rs.)
2001/02	430	0	20	89
2002/03	445	0	20	136
2003/04	680	20	0	20
2004/05	870	20	0	20
2005/06	1379	0	20	486
2006/07	2430	25	0	25
2007/08	3132	10	30	949.6

Source: Annual Reports of SEBON

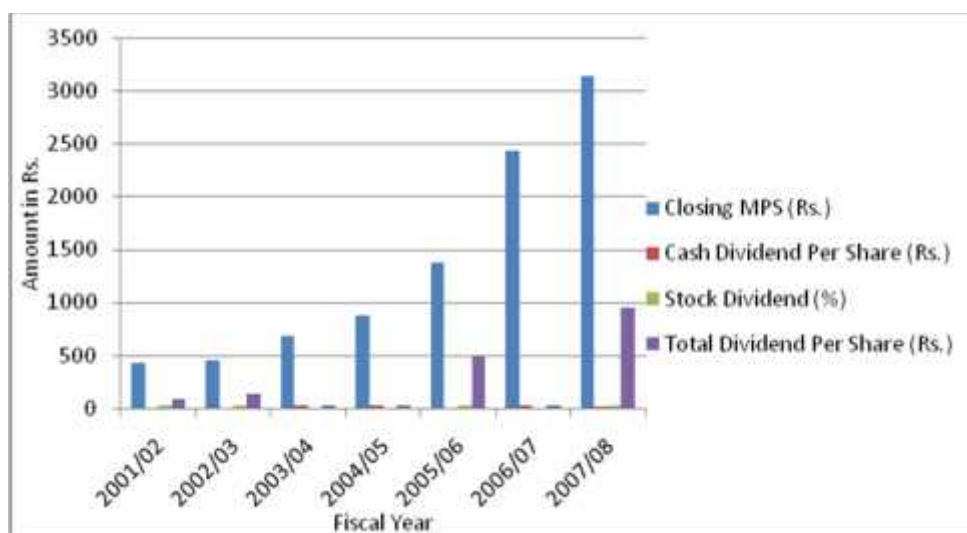
Value of Stock Dividend = Dividend % × Next year's Closing MPS

Total Dividend = Cash Dividend per share + Stock Dividend per share.

Value of Stock Dividend for the year 2007/08 = Dividend% × same year's MPS

Figure 4.5

Market Price per Share and Dividend per Share Data of EBL



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

Rate of returns for each year are calculated on the basis of closing price of common stock and dividend amounts of respective year. Table 4.10 shows the calculation of year wise rate of return, expected rate of return, standard deviation and coefficient of variation of return.

Table 4.10
Rate of Return, Expected Rate of Return, S.D., C.V. of the
Common Stock of EBL

Fiscal Year	Return
2001/02	-
2002/03	0.3512
2003/04	0.5730
2004/05	0.3088
2005/06	1.1437
2006/07	0.7803
2007/08	0.6769
E(R) =	0.5477
=	0.295
C.V. =	0.1589

Source: Appendix 1

6. Bank of Kathmandu Limited (BOK)

With the share capital of 45% of the local promoters, 30% of Siam commercial Bank of Thailand and 25% of the General Public, BOK was established on 12th March 1995. The share pattern has already changed and the Nepalese Promoters and general public hold 97.70% and financial institutions hold 2.07% and some companies are holding 0.23%. Following table 4.11 represents the market price and dividend per share of Nepal Investment bank for the purpose of risk and return analysis.

Table 4.11
Market Price per Share and Dividend per Share Data of Bok

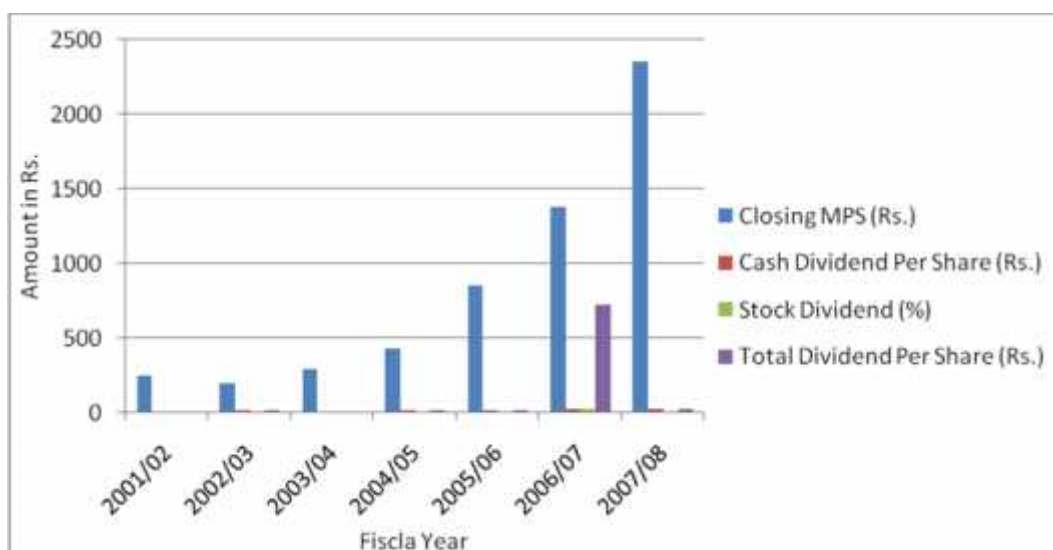
Fiscal Year	Closing MPS (Rs.)	Cash Dividend Per Share (Rs.)	Stock Dividend (%)	Total Dividend Per Share (Rs.)
2001/02	254	0	0	0
2002/03	198	10	0	10
2003/04	295	5	0	5
2004/05	430	10	0	10
2005/06	850	15	0	15
2006/07	1375	18	30	723
2007/08	2350	20	0	20

Source: Annual Reports of SEBON

Value of Stock Dividend = Dividend % × Next year's Closing MPS

Total Dividend = Cash Dividend per share + Stock Dividend per share.

Figure 4.6
Rate of Return, Expected Rate of Return, S.D., C.V. of the
Common Stock of EBL



Rate of Return, Expected Return, Standard Deviation and Coefficient of Variation of BOK

Rate of returns for each year are calculated on the basis of closing price of common stock and dividend amounts of respective year. Table 4.12 shows the calculation of year wise rate of return, expected rate of return, standard deviation and coefficient of variation of return.

Table 4.12
Rate of Return, Expected Rate of Return, S.D., C.V. of the
Common Stock of Bok

Fiscal Year	Return
2001/02	-
2002/03	-0.1811
2003/04	0.5151
2004/05	0.4915
2005/06	1.0116
2006/07	1.4682
2007/08	0.7236
E(R) =	0.5756
=	0.5151
C.V. =	0.4610

Source: Appendix 1

7. Nepal Industrial and Commercial Bank Limited (NIC)

Nepal Industrial and Commercial Bank was established on 21th July 1998. The general public holds 30% of its share, Rastriya Banijya Bank holds 5% and the Nepalese promoters' holds 65% share. Following table 4.13 represents the market price and dividend per share of Nepal Investment bank for the purpose of risk and return analysis.

Table 4.13

Market Price per Share and Dividend per Share Data of NIC Bank

Fiscal Year	Closing MPS (Rs.)	Cash Dividend Per Share (Rs.)	Stock Dividend (%)	Total Dividend Per Share (Rs.)
2001/02	250	10	0	10
2002/03	180	0	0	0
2003/04	218	0	0	0
2004/05	366	0	0	0
2005/06	496	10	20	200
2006/07	950	0	10	128.4
2007/08	1284	1.05	20	257.85

Source: Annual Reports of SEBON

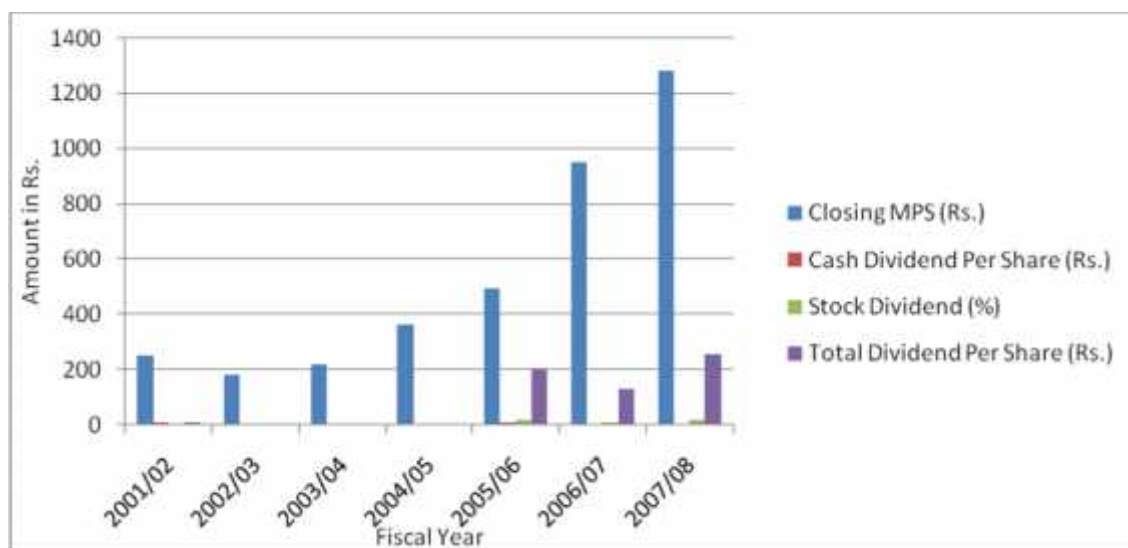
Value of Stock Dividend = Dividend % × Next year's Closing MPS

Total Dividend = Cash Dividend per share + Stock Dividend per share.

Value of Stock Dividend for the year 2007/08 = Dividend% × same year's MPS

Figure 4.7

Market Price per Share and Dividend per Share Data of NIC Bank



Rate of Return, Expected Return, Standard Deviation and Coefficient of Variation of NIC Bank

Rate of returns for each year are calculated on the basis of closing price of common stock and dividend amounts of respective year. Table 4.14 shows the calculation of year wise rate of return, expected rate of return, standard deviation and coefficient of variation of return.

Table 4.14
Rate of Return, Expected Rate of Return, S.D., C.V. of the
Common Stock of NIC Bank

Fiscal Year	Return
2001/02	-
2002/03	-0.28
2003/04	0.2111
2004/05	0.6789
2005/06	0.9016
2006/07	1.1742
2007/08	0.623
E(R) =	0.4727
=	0.4789
C.V. =	0.4852

Source: Appendix 1

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, Standard Deviation and Coefficient of Variation, Only Commercial Banking's index has taken from www.nepalstock.com. Table 4.15 shows the following information regarding NEPSE.

Table 4.15
Rate of Return, Expected Rate of Return, S.D., C.V. of the
Market i.e. NEPSE

Fiscal Year	Return
2001/02	-
2002/03	-0.0997
2003/04	0.1323
2004/05	0.3133
2005/06	0.0679
2006/07	1.4257
2007/08	-0.4257
E(R) =	0.1636
=	0.6365
C.V. =	2.4753

Source: Appendix 1

4.3 Comparison of Sample Banks with Market

4.3.1 NABIL Bank Limited

Table 4.16
Summary of Risk Return Pattern of NABIL Bank with Market

Financial Tools	NABIL	NEPSE
Expected Return E(r)	0.6792	0.1636
Variance(σ^2)	0.1775	0.1641
Standard Deviation (σ)	0.4213	0.6365
Coefficient of Variation (C.V.)	0.2614	2.4753
Systematic Risk (σ_m^2)	0.0371	-
Unsystematic Risk (e^2)	1.0282	-
Beta (β)	0.3027	1
Correlation with Market (P_{im})	0.4571	-
Proportion of Systematic Risk (P^2)	0.2089	-
Proportion of Unsystematic Risk ($1-p^2$)	0.791	-

Source: - Appendix I and II

The above table explains Expected Return of NABIL bank is higher than the market return (i.e. $0.6792 > 0.1636$). Standard deviation of NABIL bank is lower than the market. Standard deviation which means total risk on returns of NABIL bank is 0.6619 times (i.e. $0.4213/0.6365$) low riskier than the market return of 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 (i.e. $0.2614 < 2.4753$). This means NABIL bank has low risk per unit return than the market return.

Beta of NABIL bank is 0.3027, based on the yearly returns during FY 2001/02 to 2007/08. A beta of 0.3027 means that return of NABIL bank is less volatile than the market return. Hence, the stock of NABIL bank has less undiversifiable risk. The correlation with market is 0.4571. The positive correlation indicates that if the market returns goes up, return of NABIL bank also goes up and vice-versa.

The coefficient of determination or proportion of systematic risk is 0.2089. It indicates that the percentage of the standard deviation of NABIL's return explained by the change in the market returns. Thus the market explains 20.89% of the total risk of NABIL bank is systematic risk and it cannot be diversified. On the other hand the remaining 79.11% of the total risk is unsystematic risk or firm specific risk and it is diversifiable.

4.3.2. Nepal Investment Bank Limited (NIBL)

Table 4.17

Summary of Risk Return Pattern of NIBL with Market

Financial Tools	NIBL	NEPSE
Expected Return E(r)	0.4192	0.1636
Variance(σ^2)	0.1564	0.1641
Standard Deviation (σ)	0.3955	0.6365
Coefficient of Variation (C.V.)	0.3732	2.4753
Systematic Risk (σ^2_m)	0.0129	-
Unsystematic Risk (e^2)	0.9255	-
Beta (β)	0.1788	1
Correlation with Market (P_{im})	0.2877	-
Proportion of Systematic Risk (P^2)	0.0828	-
Proportion of Unsystematic Risk ($1-p^2$)	0.9172	-

Source: - Appendix I and II

The above table explains Expected Return of NIBL is higher than the market return (i.e. $0.4192 > 0.1636$). Standard deviation of NIBL bank is lower than the market. Standard deviation which means total risk on returns of NIBL is 0.6214 times (i.e. $0.3955/0.6365$) low riskier than the market return of common stock.

Coefficient of variation is better measure of risk because it measures per unit risk. C.V. of NIBL bank is lower than market (i.e. $0.3732 < 2.4753$). This means NIBL has low risk per unit return than the market return.

Beta of NIBL is 0.1788, based on the yearly returns during FY 2001/02 to 2007/08. A beta of 0.1788 means that return of NIBL is less volatile than the market return. Hence, the stock of NIBL has less undiversifiable risk. The correlation with market is 0.2877. The positive correlation indicates that if the market returns goes up, return of NIBL also goes up and vice-versa.

The coefficient of determination or proportion of systematic risk is 0.0828. It indicates that the percentage of the standard deviation of NIBL's return explained by the change in the market returns. Thus the market explains 8.28% of the total risk of NIBL is systematic risk and it cannot be diversified. On the other hand the remaining 91.72% of the total risk is unsystematic risk or firm specific risk and it is diversifiable.

4.3.3. Standard Chartered Bank Limited (SCBL)

Table 4.18

Summary of Risk Return Pattern of SCBL with Market

Financial Tools	SCBL	NEPSE
Expected Return E(r)	0.4275	0.1636
Variance(σ^2)	0.0664	0.1641
Standard Deviation (σ)	0.2577	0.6365
Coefficient of Variation (C.V.)	0.1553	2.4753
Systematic Risk (σ_m^2)	0.0035	-
Unsystematic Risk (e^2)	0.3950	-
Beta (β)	0.0929	1
Correlation with Market (P_{im})	0.2294	-
Proportion of Systematic Risk (P^2)	0.0526	-
Proportion of Unsystematic Risk ($1-p^2$)	0.9474	-

Source: - Appendix I and II

The above table explains Expected Return of SCBL is higher than the market return (i.e. $0.4275 > 0.1636$). Standard deviation of SCBL is lower than the market. Standard deviation which means total risk on returns of SCBL is 0.4049 times (i.e. $0.2577/0.6365$) low riskier than the market return of common stock.

Coefficient of variation is better measure of risk because it measures per unit risk. C.V. of SCBL is lower than market (i.e. $0.1553 < 2.4753$). This means SCBL has low risk per unit return than the market return.

Beta of SCBL is 0.0929, based on the yearly returns during FY 2001/02 to 2007/08. A beta of 0.0929 means that return of SCBL is less volatile than the market return. Hence, the stock of SCBL has less undiversifiable risk. The correlation with market is 0.2294. The positive correlation indicates that if the market returns goes up, return of SCBL also goes up and vice-versa.

The coefficient of determination or proportion of systematic risk is 0.0526. It indicates that the percentage of the standard deviation of SCBL's return explained by the change in the market returns. Thus the market explains 5.26% of the total risk of SCBL is systematic risk and it cannot be diversified. On the other hand the remaining 94.74% of the total risk is unsystematic risk or firm specific risk and it is diversifiable.

4.3.4. Himalayan Bank Limited (HBL)

Table 4.19

Summary of Risk Return Pattern of HBL with Market

Financial Tools	HBL	NEPSE
Expected Return E(r)	0.3134	0.1636
Variance(σ^2)	0.0631	0.1641
Standard Deviation (σ)	0.2513	0.6365
Coefficient of Variation (C.V.)	0.2015	2.4753
Systematic Risk (σ_m^2)	0.0324	-
Unsystematic Risk (e^2)	0.3464	-
Beta (β)	0.2656	1
Correlation with Market (P_{im})	0.7168	-
Proportion of Systematic Risk (P^2)	0.5138	-
Proportion of Unsystematic Risk ($1-p^2$)	0.4862	-

Source: - Appendix I and II

The above table explains Expected Return of HBL is higher than the market return (i.e. $0.4275 > 0.1636$). Standard deviation of HBL is lower than the market. Standard deviation which means total risk on returns of HBL is 0.3948 times (i.e. $0.2513/0.6365$) low riskier than the market return of common stock.

Coefficient of variation is better measure of risk because it measures per unit risk. C.V. of HBL is lower than market (i.e. $0.2015 < 2.4753$). This means HBL has low risk per unit return than the market return.

Beta of HBL is 0.2656, based on the yearly returns during FY 2001/02 to 2007/08. A beta of 0.2656 means that return of HBL is less volatile than the market return. Hence, the stock of HBL has less undiversifiable risk. The correlation with market is 0.7168. The positive correlation indicates that if the market returns goes up, return of HBL also goes up and vice-versa.

The coefficient of determination or proportion of systematic risk is 0.5138. It indicates that the percentage of the standard deviation of HBL's return explained by the change in the market returns. Thus the market explains 51.38% of the total risk of HBL is systematic risk and it cannot be diversified. On the other hand the remaining 48.62% of the total risk is unsystematic risk or firm specific risk and it is diversifiable.

4.3.5. Everest Bank Limited (EBL)

Table 4.20

Summary of Risk Return Pattern of EBL with Market

Financial Tools	EBL	NEPSE
Expected Return $E(r)$	0.5477	0.1636
Variance(σ^2)	0.0871	0.1641
Standard Deviation (σ)	0.295	0.6365
Coefficient of Variation (C.V.)	0.1589	2.4753
Systematic Risk (σ^2_{m})	0.0021	-
Unsystematic Risk (e^2)	0.5202	-
Beta (β)	0.0698	1
Correlation with Market (P_{im})	0.1549	-
Proportion of Systematic Risk (P^2)	0.0240	-
Proportion of Unsystematic Risk ($1-p^2$)	0.9760	-

Source: - Appendix I and II

The above table explains Expected Return of EBL is higher than the market return (i.e. $0.5477 > 0.1636$). Standard deviation of EBL is lower than the market. Standard deviation which means total risk on returns of EBL is 0.4635 times (i.e. $0.295/0.6365$) low riskier than the market return of common stock.

Coefficient of variation is better measure of risk because it measures per unit risk. C.V. of EBL is lower than market (i.e. $0.1589 < 2.4753$). This means EBL has low risk per unit return than the market return.

Beta of EBL is 0.0698, based on the yearly returns during FY 2001/02 to 2007/08. A beta of 0.0698 means that return of EBL is less volatile than the market return. Hence, the stock of EBL has less undiversifiable risk. The correlation with market is 0.1549. The positive correlation indicates that if the market returns goes up, return of EBL also goes up and vice-versa.

The coefficient of determination or proportion of systematic risk is 0.0240. It indicates that the percentage of the standard deviation of EBL's return explained by the change in the market returns. Thus the market explains 2.40% of the total risk of EBL is systematic risk and it cannot be diversified. On the other hand the remaining 97.60% of the total risk is unsystematic risk or firm specific risk and it is diversifiable.

4.3.6. Bank of Kathmandu Limited (BOK)

Table 4.21

Summary of Risk Return Pattern of BOK with Market

Financial Tools	Bok	NEPSE
Expected Return E(r)	0.5756	0.1636
Variance(σ^2)	0.2653	0.1641
Standard Deviation (σ)	0.5151	0.6365
Coefficient of Variation (C.V.)	0.4610	2.4753
Systematic Risk (σ_m^2)	0.1448	-
Unsystematic Risk (e^2)	1.4473	-
Beta (β)	0.5054	1
Correlation with Market (P_{im})	0.7387	-
Proportion of Systematic Risk (P^2)	0.5456	-
Proportion of Unsystematic Risk ($1-p^2$)	0.4544	-

Source: - Appendix I and II

The above table explains Expected Return of BOK is higher than the market return (i.e. $0.5756 > 0.1636$). Standard deviation of BOK is lower than the market. Standard deviation which means total risk on returns of BOK is 0.8093 times (i.e. $0.5151/0.6365$) low riskier than the market return of common stock.

Coefficient of variation is better measure of risk because it measures per unit risk. C.V. of BOK is lower than market (i.e. $0.4610 < 2.4753$). This means BOK has low risk per unit return than the market return.

Beta of BOK is 0.5054, based on the yearly returns during FY 2001/02 to 2007/08. A beta of 0.5054 means that return of BOK is less volatile than the market return. Hence, the stock of BOK has less undiversifiable risk. The correlation with market is 0.7387. The positive correlation indicates that if the market returns goes up, return of BOK also goes up and vice-versa.

The coefficient of determination or proportion of systematic risk is 0.5456. It indicates that the percentage of the standard deviation of BOK's return explained by the change in the market returns. Thus the market explains 54.56% of the total risk of EBL is systematic risk and it cannot be diversified. On the other hand the remaining 45.44% of the total risk is unsystematic risk or firm specific risk and it is diversifiable.

4.3.7. Nepal Industrial and Commercial Bank Limited (NIC)

Table 4.22

Summary of Risk Return Pattern of NIC Bank with Market

Financial Tools	NIC Bank	NEPSE
Expected Return E(r)	0.4727	0.1636
Variance(σ^2)	0.2294	0.1641
Standard Deviation (σ)	0.4789	0.6365
Coefficient of Variation (C.V.)	0.4852	2.4753
Systematic Risk (σ_m^2)	0.1133	-
Unsystematic Risk (e^2)	1.2628	-
Beta (β)	0.4477	1
Correlation with Market (P_{im})	0.7030	-
Proportion of Systematic Risk (P^2)	0.4942	-
Proportion of Unsystematic Risk ($1-p^2$)	0.5058	-

Source: - Appendix I and II

The above table explains Expected Return of NIC Bank is higher than the market return (i.e. $0.4727 > 0.1636$). Standard deviation of NIC Bank is lower than the market. Standard deviation which means total risk on returns of NIC Bank is 0.7524 times (i.e. $0.4789/0.6365$) low riskier than the market return of common stock.

Coefficient of variation is better measure of risk because it measures per unit risk. C.V. of NIC Bank is lower than market (i.e. $0.4852 < 2.4753$). This means NIC Bank has low risk per unit return than the market return.

Beta of NIC Bank is 0.4477, based on the yearly returns during FY 2001/02 to 2007/08. A beta of 0.4477 means that return of NIC Bank is less volatile than the market return. Hence, the stock of NIC Bank has less undiversifiable risk. The correlation with market is 0.7030. The positive correlation indicates that if the market returns goes up, return of NIC Bank also goes up and vice-versa.

The coefficient of determination or proportion of systematic risk is 0.4942. It indicates that the percentage of the standard deviation of NIC Bank's return explained by the change in the market returns. Thus the market explains 49.42% of the total risk of NIC Bank is systematic risk and it cannot be diversified. On the other hand the remaining 50.58% of the total risk is unsystematic risk or firm specific risk and it is diversifiable.

4.4 Calculation of Earning Per Share (EPS) of the Respective Banks

4.4.1 NABIL Bank Limited

Table 4.23

Calculation of EPS of NABIL Bank

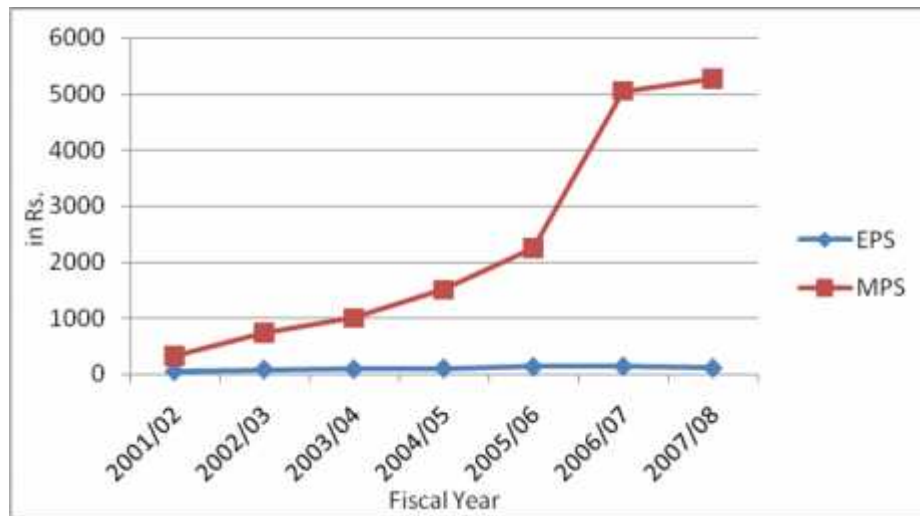
Fiscal Year	NPAT	No. of Equity Outstanding	EPS	MPS
2001/02	271640000	4909950	55.3243923	315
2002/03	416240000	4909950	84.774794	735
2003/04	455320000	4909950	92.7341419	1000
2004/05	508640000	4909950	103.593723	1505
2005/06	635260000	4909950	129.382173	2240
2006/07	674000000	4909950	137.272274	5050
2007/08	746500000	6873930	108.59872	5275

Source: - Annual Report NEPSE

Where, $EPS = \frac{\text{Net Profit After Tax}}{\text{No. of Equity Outstanding}}$

Figure 4.8

Trend Analysis of EPS and MPS of NABIL Bank



The above table and graph clearly shows that the MPS of Nabil bank is increasing every year. EPS of this bank is also increasing trend but in fiscal year 2007/08, it is less than previous fiscal year due to the cause of more outstanding shares. We can say that this bank is being able to increase its EPS and MPS every year.

4.4.2 Nepal Investment Bank Limited (NIBL)

Table 4.24

Calculation of EPS of NIBL

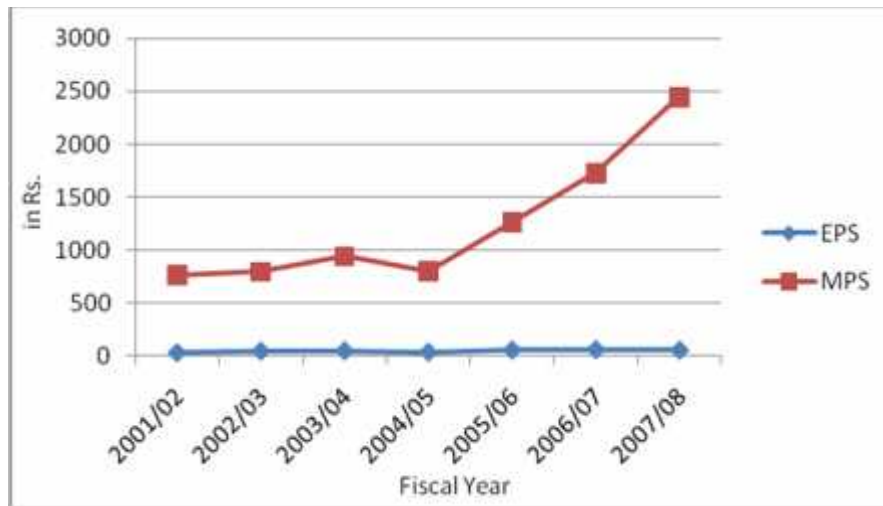
Fiscal Year	NPAT	No. of Equity outstanding	EPS	MPS
2001/02	57110000	1691820	33.7565462	760
2002/03	116820000	2366451	49.3650619	795
2003/04	152670000	2952930	51.7011917	940
2004/05	232150000	5877385	39.4988588	800
2005/06	350540000	5905860	59.3546071	1260
2006/07	501400000	8013526	62.5692111	1729
2007/08	696731516	12039154	57.8721325	2450

Source: - Annual Report NEPSE

Where, $EPS = \frac{\text{Net Profit After Tax}}{\text{No. of Equity Outstanding}}$

Figure 4.9

Trend Analysis of EPS and MPS of NIBL



MPS of this bank is increasing except the fiscal year 2004/05. EPS is also increasing trend. This bank is being able to increase its profit every year so that its EPS is also increasing but in fiscal year 2004/05 and 2007/08, it has less EPS than Previous fiscal years due to the cause of high volume of outstanding shares.

4.4.3 Standard Chartered Bank Limited (SCBL)

Table 4.25

Calculation of EPS of SCBL

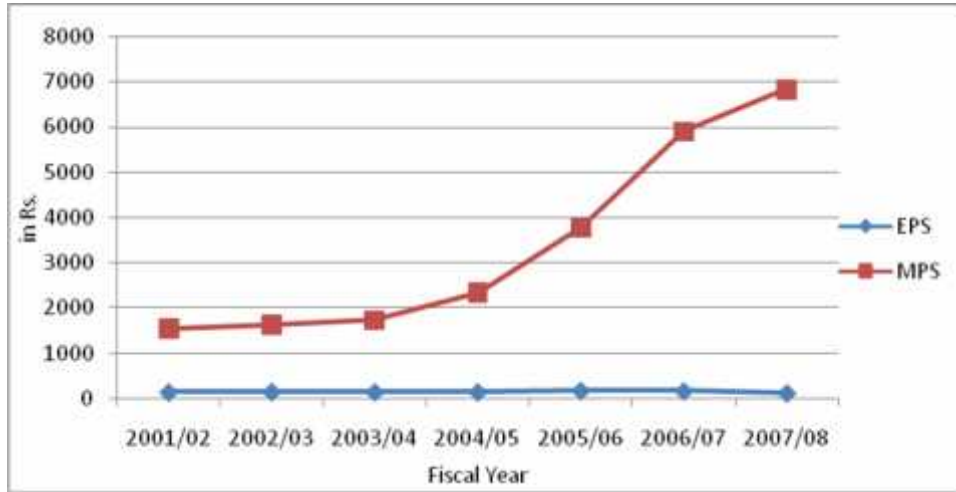
Fiscal Year	NPAT	No. of Equity Outstanding	EPS	MPS
2001/02	479210000	3395488	141.131407	1550
2002/03	506930000	3395488	149.295182	1640
2003/04	537800000	3746404	143.550989	1745
2004/05	539200000	3746404	143.924681	2345
2005/06	658750000	3746404	175.835281	3775
2006/07	691700000	4132548	167.378576	5900
2007/08	818921000	6807840	120.290871	6830

Source: - Annual Report NEPSE

Where, $EPS = \frac{\text{Net Profit After Tax}}{\text{No. of Equity Outstanding}}$

Figure 4.10

Trend Analysis of EPS and MPS of SCBL



Every fiscal year, this bank is being able to increase its MPS continuously on a large amount. EPS of this bank is also increasing trend except the fiscal year 2007/08 due to the cause of large volume of equity outstanding. High volume of increasing NPAT in every fiscal year clearly shows that this bank is performing better.

4.4.4 Himalayan Bank Limited (HBL)

Table 4.26

Calculation of EPS of HBL

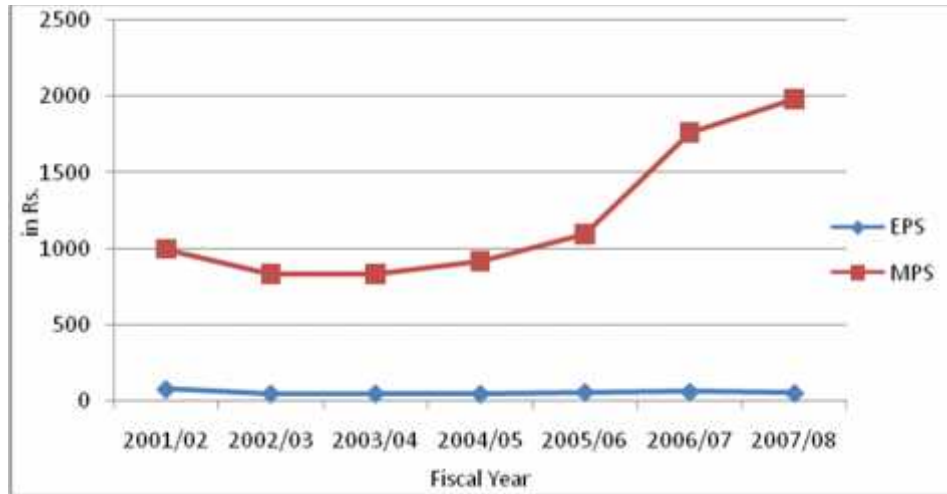
Fiscal Year	NPAT	No. of Equity Outstanding	EPS	MPS
2001/02	235020000	3000000	78.34	1000
2002/03	212130000	4290000	49.4475524	836
2003/04	263050000	5362500	49.0536131	840
2004/05	308280000	6435000	47.9067599	920
2005/06	457460000	7722000	59.2411292	1100
2006/07	491800000	8108100	60.655394	1760
2007/08	635869000	12162150	52.2826145	1980

Source: - Annual Report NEPSE

Where, $EPS = \frac{\text{Net Profit After Tax}}{\text{No. of Equity Outstanding}}$

Figure 4.11

Trend Analysis of EPS and MPS of HBL



EPS of this bank is being fluctuation over the fiscal yerars because in every fiscal yerar, it has a increasing no of outstanding shares however, MPS of this bank is increasing ternd. We can say that this bank is also being able to increase its Market price per share in every fiscal year.

4.4.5 Everest Bank Limited (EBL)

Table 4.27

Calculation of EPS of EBL

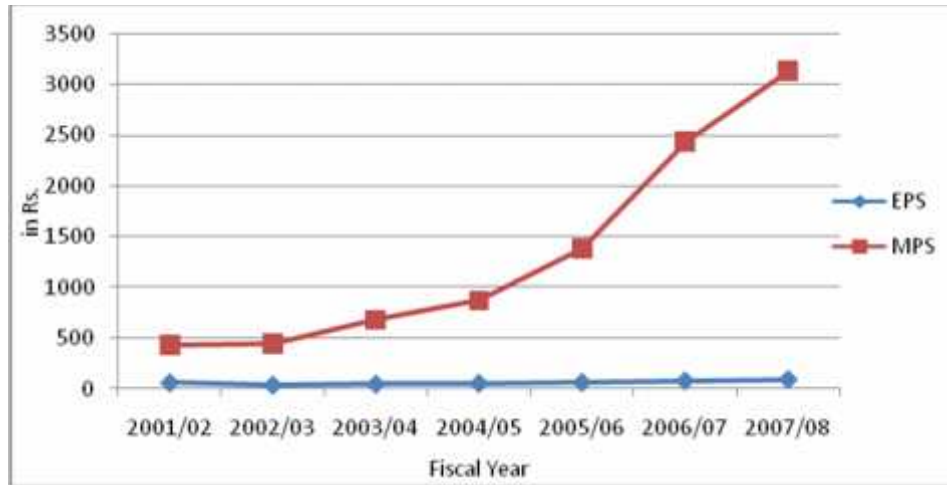
Fiscal Year	NPAT	No. of Equity Outstanding	EPS	MPS
2001/02	85350000	1440000	59.2708333	430
2002/03	94180000	2632110	35.7811794	445
2003/04	143570000	3150000	45.5777778	680
2004/05	170810000	3150000	54.2253968	870
2005/06	237290000	3780000	62.7751323	1379
2006/07	296400000	3780000	78.4126984	2430
2007/08	451200000	4914000	91.8192918	3132

Source: - Annual Report NEPSE

Where, $EPS = \frac{\text{Net Profit After Tax}}{\text{No. of Equity Outstanding}}$

Figure 4.12

Trend Analysis of EPS and MPS of EBL



The above table and graph shows that this bank is being able to increase its MPS in every fiscal year. EPS of this bank is also increasing but in fiscal year 2002/03, it has a less EPS than previous fiscal year due to the cause of more no of outstanding shares than previous. We can say that this bank is also performing better on the basis of EPS and MPS.

4.4.6 Bank of Kathmandu Limited (BOK)

Table 4.28

Calculation of EPS of Bok

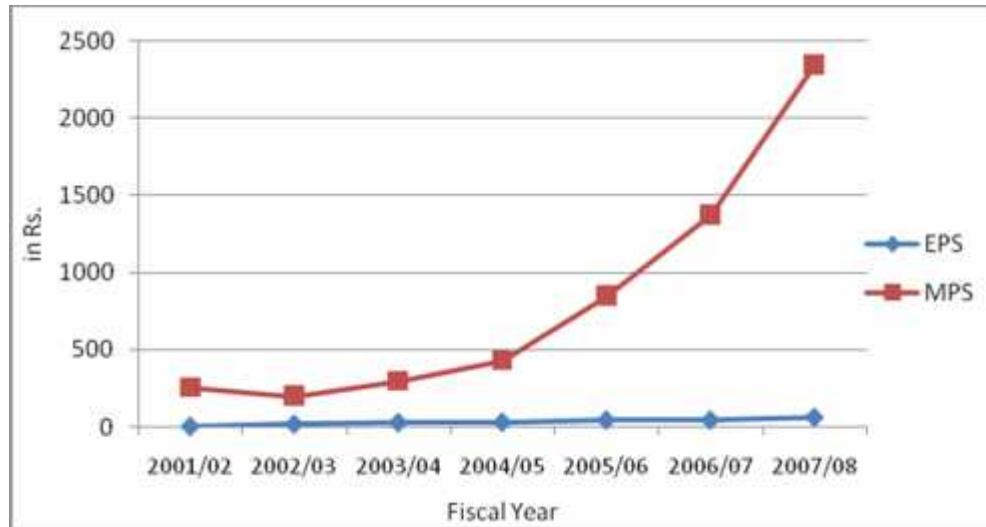
Fiscal Year	NPAT	No. of Equity Outstanding	EPS	MPS
2001/02	9270000	2340000	3.96153846	254
2002/03	82130000	4635809	17.7164331	198
2003/04	127000000	4635809	27.3954341	295
2004/05	139530000	4635809	30.0983065	430
2005/06	202440000	4635809	43.6687534	850
2006/07	262400000	6031413	43.50556	1375
2007/08	361496879	6031413	59.9356865	2350

Source: - Annual Report NEPSE

Where, $EPSX = \frac{\text{Net Profit After Tax}}{\text{No. of Equity Outstanding}}$

Figure 4.13

Trend Analysis of EPS and MPS of BOK



The above table and graph shows that EPS of this bank is very low in fiscal year 2001/02 but it is increasing after then except fiscal year 2006/07 due to the cause of more outstanding no. of shares. MPS is determined by the market and this bank is able to increase its MPS every year except the fiscal year 2002/03.

4.4.7 Nepal Industrial and Commercial Bank Limited (NIC)

Table 4.29

Calculation of EPS of NIC Bank

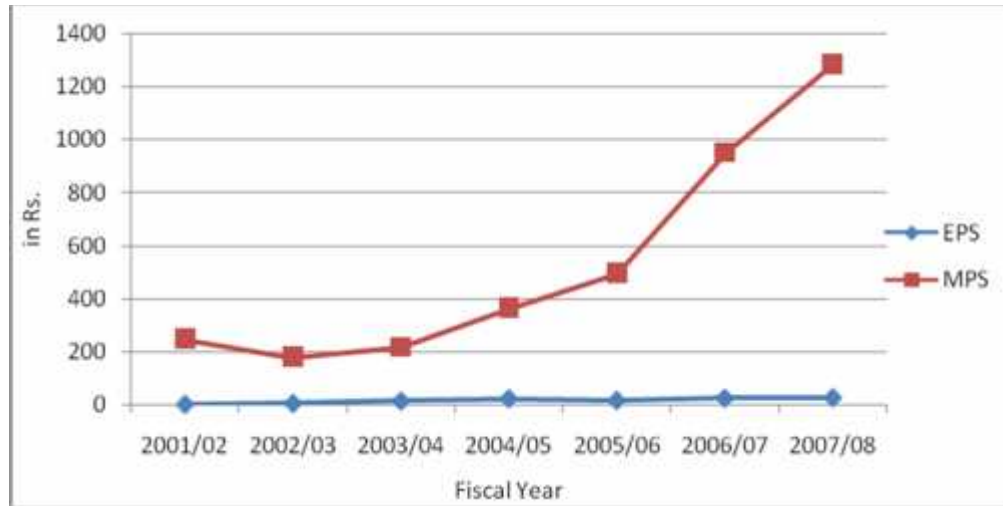
Fiscal Year	NPAT	No. of Equity outstanding	EPS	MPS
2001/02	6820000	5000000	1.364	250
2002/03	25940000	5000000	5.188	180
2003/04	68260000	5000000	13.652	218
2004/05	113760000	5000000	22.752	366
2005/06	96600000	6000000	16.1	496
2006/07	158500000	6600000	24.0151515	950
2007/08	243058000	9438773	25.7510166	1284

Source: - Annual Report NEPSE

Where, $EPS = \frac{\text{Net Profit After Tax}}{\text{No. of Equity Outstanding}}$

Figure 4.14

Trend Analysis of EPS and MPS of NIC Bank



The above table and graph shows that EPS of this bank is very low in fiscal year 2001/02 but it is being able to increase its EPS till fiscal year 2004/05 since, it has a same no. of outstanding shares till that date. In 2006/07, it has less EPS than previous year due to the cause of large volume of outstanding shares. MPS of this bank is also increasing trend except the fiscal year 2002/03.

Theory says that when EPS of the stock increases, then MPS of the stock should also increases and vice-versa. But in practice, it is clear from the above table and graph that NABIL, NIBL, SCBL and NIC banks are able to maintain the relation between EPS and MPS positively.

4.5 Calculation of Required Rate of Return on Common stocks and Price Evaluation

Table 4.30
Calculation of Required Rate of Return on
Common stocks and Price Evaluation

Banks	Risk Free Rate R_f %	Expected Return on Market $E(R_m)$ %	Beta (β_i)	Required Rate of Returns $E(R_i)$ %	Expected Returns $E(r)$ %	Price Situation
NABIL	6.89	16.36	0.3027	9.756569	67.92	Underpriced
NIBL	6.89	16.36	0.1788	8.583236	41.92	Underpriced
SCBL	6.89	16.36	0.0929	7.769763	42.75	Underpriced
HBL	6.89	16.36	0.2656	9.405232	31.34	Underpriced
EBL	6.89	16.36	0.0698	7.551006	54.77	Underpriced
BOK	6.89	16.36	0.5054	11.676138	57.56	Underpriced
NIC	6.89	16.36	0.4477	11.129719	47.27	Underpriced

Source: Risk Free Rate is 364 Day's Treasury bill Rate which is Published by Nepal Rastra Bank

Where,

$$\text{Required Rate of Returns } E(R_i) = R_f + \beta_i [E(R_m) - R_f]$$

From the above table it is concluded that all the sample banks have lower required rate of return than its expected return. Hence it is the case of underpriced price evaluation. Theory says that, from the point of view of investor, these stocks are recommended to purchase. On the other hand, who are holding these shares; they should not sell these stocks.

4.6 Primary Data Analysis

Another measure applied to collect the 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 and multiple choice questions. Questions were given to investors on common stock of sampled banks to find out the various aspects on their investment. Eighty percent of the questionnaires were collected during study period. The questionnaire for trading shares through secondary market. Their responses have been analyzed as follows.

1. Causes of Holding the Equity Shares

Investors were asked for their interest on investment motives if they were interested with dividend, for social status, marketability and all above, 60% said they were attached for dividend, 10% interested with marketability, 20% were interested with social status and remaining 10% wanted to have all of the above. The following table 4.31 shows the purpose of owning the shares of company.

Table 4.31
Causes of Holding the Shares of a Company

S.N.	Research Variables	No. of Investors	% of Investors
1	For Dividend	12	60%
2	For Social Status	4	20%
3	For Marketability	2	10%
4	All of the Above	2	10%
	Total	20	100%

Source: - Field Survey

2. Decision Making Analysis

Regarding the investment decision making procedures 46.67% of the investors replied that they made decision on the basis of market price, 26.67% made the decision on the basis of company's profit, 13.33% made the decision on the basis of market index, 10% made the decision on the basis of advice from friends and relatives and remaining 3.33% replied that they made the decision on the basis of other things. The following table 4.32 shows this fact clearly.

Table 4.32

Basis of Decision Making for Investment in Shares

S.N.	Research Variables	No. of Investors	% of Investors
1	Market Index	4	13.33%
2	Company's Profit	8	26.67%
3	Market Price	14	46.67%
4	Advice from Friends	3	10%
5	Other	1	3.33%
	Total	30	100%

Source: - Field Survey

3. Price Fluctuation Factors Analysis

Regarding the influencing factors for price fluctuation of share in capital market different investors gave different views on their own ideas. 25% of them gave their views as dividend as the influencing factor, 20% said company's profit, 30% said rumors, 20% said company's performance and remaining 5% said other factors that influence the stock market price. The table 4.33 gives the detailed picture on this subject as follows.

Table 4.33

Factors that Influence the Stock Market Price

S.N.	Research Variables	No. of Investors	% of Investors
1	Dividend	10	25.00%
2	Company's Profit	8	20.00%
3	Rumors	12	30.00%
4	Company's Performance	8	20%
5	Others	2	5.00%
	Total	40	100%

Source: - Field Survey

4.7 Major Findings of the Study

The major findings 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 31.34% to 67.92 %. The highest expected return is from NABIL bank whereas the lowest is from HBL. The average expected return on commercial banks is 49.08%. This can be considered as better return.
- All the commercial banks have certain value of risk (Standard Deviation) which ranges from 25.13% to 51.51%. The highest risk is from BOK whereas the lowest is from HBL. The average risk for the commercial banks is 37.35%
- All the banks have positive C.V. ranges from 0.1553 to 0.4852. The highest C.V. is from NIC bank whereas the lowest is from SCBL. The average C.V. of the commercial Banks is 0.2995.
- The highest value beta for commercial banks is 0.5054 for BOK and lowest is 0.0698 for EBL. The average value of beta for selected commercial banks is 0.2661. All banks have beta less than 1. It shows their stock volatility is less than market volatility and these stocks are defensive stock.
- Systematic risk proportion in returns of selected commercial banks ranges from 2.40% to 54.56% for EBL and BOK respectively. The average systematic risk of selected commercial banks is 27.46%.
- Unsystematic risk proportions in returns of selected commercial banks are varied from 45.44% to 97.60% for BOK and EBL respectively. The average unsystematic risk is 72.54%.
- The relation between EPS and MPS is positive in NABIL, NIBL, SCBL and NIC bank.
- The stock of these sampled banks is underpriced.

- It was found that the investors' 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 is Rumors.
- Most of the investor considers market price as an important factor to invest in common stock.

CHAPTER -V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Common stock is a source of capital 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 sticks holders are only paid if the firm makes profit after tax and preference share dividend. The company can return the principal in case of its liquidation only to the extent 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 of 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 and 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 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 coast 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 25 commercial banks are operation in Nepal. Among the listed commercial banks, only 7 banks NABIL, NIBL, SCBL, HBL, EBL, BOK and NIC bank are taken as reference to analyze the risk and return. While analyzing the risk and return, research variables and tools namely expected 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 and return analysis of common stocks of listed commercial banks is based on primary as well as secondary data from fiscal year 2001/02 to 2007/08. In this study, expected rate of return of NABIL bank's stock is highest i.e. 67.92%. Like wise in terms of standard deviation of BOK has the highest risk i.e. 51.51%. 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 coefficient of variation, NIC bank's stock seems to be the most risky with 0.4852. On the other hand, it is found that the required rates of return of all the sampled banks have lower than its expected rate of return. It means that all the sample institutions' stocks are underpriced. Similarly, the study made to analyze the diversifiable and undiversifiable risk reflects that all the samples stock have less systematic risk and such risk cannot be diversified or minimized. More specifically, the investors demand additional reward to compensate such risk. The systematic risk is less than one in all sampled banks so we can say that these stocks are defensive stocks. The relation between EPS and MPS of all the sampled institutions goes positively. Theory suggests that when EPS increases, then MPS should also increases. NABIL, NIBL, SCBL, and NIC banks are able to follow this theory in practically because EPS and MPS of these banks both are increasing

in every fiscal year. HBL, EBL and BOK's relation between EPS and MPS also have positive relation but in some fiscal years, they are not able to adopt this theory.

5.3 Recommendations

Recommendations are the 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 analyses have been done till these steps.

The following are the recommendations based on the above findings, conclusions and analysis of data.

- J Investors must focus on the risk factors before making and 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., NIC bank's stock is the riskiest one for the investment because its CV is 0.4852. Whereas the SCBL has lowest CV i.e.0.1553 so, its stock has low risk. Hence, it is recommended that the stock of SCBL 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 of risk taker, he/she can invest having beta of more than 1. Stock having beta coefficient less than 1 is less risky than the market. Risk averter investor can invest in that type of common stock. But all the sampled banks have beta coefficient of less than 1 so, it is recommended that the investor could select any of the bank's stock according to their investment desire.

-) The stocks having more systematic risk have 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's stock other bank's stock has high systematic risk. Therefore, it is recommended that the investor had better investment in stock, as it is not highly risky.
-) The investors have to buy those stocks during the time of under valuation and they have to sell the stocks at the time of overvaluation. It is found from the study that all the banks' 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 sample banks' stocks.
-) The positive relation between EPS and MPS shows the better performance of the company. So, on the basis of the relation between EPS and MPS, it is recommended that the stock of NABIL, NIBL, SCBL and NIC bank is better for investment.

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Appendix - 1

NABIL Bank Limited

Fiscal Year	Closing Price(Rs.)	Dividend (D)	$R \times \frac{(P_t - Z_{P_{t-1}}) \Gamma D_t}{P_{t-1}}$	$[R - E(r)]$	$[R - E(r)]^2$
2001/02	315	20			
2002/03	735	30	1.42857143	0.7493661	0.561549553
2003/04	1000	50	0.42857143	-0.250634	0.062817351
2004/05	1505	65	0.57	-0.109205	0.011925804
2005/06	2240	70	0.53488372	-0.144322	0.020828726
2006/07	5050	85	1.29241071	0.6132054	0.376020846
2007/08	5275	2300	0.5	-0.179205	0.032114549
		Total	4.75443729	Total	1.06525683
		$E(r) = \sum R / n$	0.67920533	$\sigma =$	0.4213
				C.V. =	0.620283709

Nepal Investment Bank Limited

Fiscal Year	Closing Price(Rs.)	Dividend (D)	$R \times \frac{(P_t - Z_{P_{t-1}}) \Gamma D_t}{P_{t-1}}$	$[R - E(r)]$	$[R - E(r)]^2$
2001/02	760	0			
2002/03	795	282	0.41710526	-0.002058	0.000004234
2003/04	940	20	0.20754717	-0.211616	0.044781251
2004/05	800	15	-0.1329787	-0.552142	0.30486046
2005/06	1260	12.58	0.590725	0.171562	0.029433527
2006/07	1729	888.77	1.07759524	0.6584323	0.43353304
2007/08	2450	617.5	0.77414691	0.3549839	0.126013588
		Total	2.93414085	Total	0.938626099
		$E(r) = \sum R / n$	0.41916298	$\sigma =$	0.3955
				C.V. =	0.943547068

Standard Chartered Bank Limited

Fiscal Year	Closing Price(Rs.)	Dividend (D)	$R X \frac{(P_t Z_{P_{t-1}}) \Gamma D_t}{P_{t-1}}$	[R – E(r)]	[R – E(r)]²
2001/02	1550	100			
2002/03	1640	100	0.12258065	-0.304962	0.093002104
2003/04	1745	344.5	0.27408537	-0.153458	0.023549279
2004/05	2345	110	0.40687679	-0.020666	0.000427097
2005/06	3775	120	0.66098081	0.2334377	0.054493161
2006/07	5900	813	0.77827815	0.350735	0.123015066
2007/08	6830	3495	0.75	0.3224569	0.103978447
		Total	2.99280176	Total	0.398465154
		E(r) = $\sum R / n$	0.42754311	$\sigma =$	0.2577
				C.V. =	0.602746238

Himalayan Bank Limited

Fiscal Year	Closing Price(Rs.)	Dividend (D)	$R X \frac{(P_t Z_{P_{t-1}}) \Gamma D_t}{P_{t-1}}$	[R – E(r)]	[R – E(r)]²
2001/02	1000	258.3			
2002/03	836	109	-0.055	-0.368364	0.135692211
2003/04	840	231	0.28110048	-0.032264	0.00104095
2004/05	920	220	0.35714286	0.0437786	0.001916568
2005/06	1100	363.5	0.59076087	0.2773966	0.076948892
2006/07	1760	129	0.71727273	0.4039085	0.163142068
2007/08	1980	312	0.30227273	-0.011092	0.000123022
		Total	2.19354966	Total	0.378863711
		E(r) = $\sum R / n$	0.31336424	$\sigma =$	0.2513
				C.V. =	0.801942182

Everest Bank Limited

Fiscal Year	Closing Price(Rs.)	Dividend (D)	$R X \frac{(P_t Z_{P_{t-1}}) \Gamma D_t}{P_{t-1}}$	[R – E(r)]	[R – E(r)]²
2001/02	430	89			
2002/03	445	136	0.35116279	-0.196541	0.038628474
2003/04	680	20	0.57303371	0.0253296	0.000641591
2004/05	870	20	0.30882353	-0.238881	0.057063912
2005/06	1379	486	1.14367816	0.5959741	0.355185118
2006/07	2430	25	0.78027556	0.2325715	0.054089499
2007/08	3132	943	0.67695473	0.1292507	0.016705734
		Total	3.83392848	Total	0.522314328
		E(r) = $\sum R / n$	0.54770407	$\sigma =$	0.295
				C.V. =	0.538612029

Bank of Kathmandu Limited

Fiscal Year	Closing Price(Rs.)	Dividend (D)	$R X \frac{(P_t Z_{P_{t-1}}) \Gamma D_t}{P_{t-1}}$	[R – E(r)]	[R – E(r)]²
2001/02	254	0			
2002/03	198	10	-0.1811024	-0.756684	0.572571255
2003/04	295	5	0.51515152	-0.060431	0.003651846
2004/05	430	10	0.49152542	-0.084057	0.007065511
2005/06	850	15	1.01162791	0.4360459	0.190136015
2006/07	1375	723	1.46823529	0.8926533	0.796829867
2007/08	2350	20	0.72363636	0.1480543	0.021920089
		Total	4.02907414	Total	1.592174583
		E(r) = $\sum R / n$	0.57558202	$\sigma =$	0.5151
				C.V. =	0.894920241

Nepal Industrial and Commercial Bank Limited

Fiscal Year	Closing Price(Rs.)	Dividend (D)	$R X \frac{(P_t Z_{P_{t-1}}) \Gamma D_t}{P_{t-1}}$	[R – E(r)]	[R – E(r)]²
2001/02	250	10			
2002/03	180	0	-0.28	-0.752692	0.566545050
2003/04	218	0	0.211111111	-0.261581	0.068424493
2004/05	366	0	0.67889908	0.2062072	0.042521415
2005/06	496	200	0.90163934	0.4289475	0.183995936
2006/07	950	128.4	1.17419355	0.7015017	0.492104606
2007/08	1284	257.85	0.623	0.1503081	0.022592534
		Total	3.30884309	Total	1.376184034
		E(r) = $\sum R / n$	0.47269187	$\sigma =$	0.4789
				C.V. =	1.013133567

Nepal Stock Exchange (NEPSE)

Fiscal Year	NEPSE Index	$R X \frac{(P_t Z_{P_{t-1}}) \Gamma D_t}{P_{t-1}}$	[R – E(r)]	[R – E(r)]²
2001/02	227.54			
2002/03	204.86	-0.0996748	-0.2633218	0.0693384
2003/04	231.97	0.13233428	-0.0313127	0.0009805
2004/05	304.64	0.31327327	0.14962628	0.022388
2005/06	325.35	0.06798188	-0.0956651	0.0091518
2006/07	789.21	1.42572614	1.26207915	1.5928438
2007/08	241.41	-0.6941118	-0.8577588	0.7357502
	Total	1.14552895	Total	2.4304527
	E(r) = $\sum R / n$	0.16364699	$\sigma =$	0.6365
			C.V. =	3.8894696

Appendix II

NABIL with Market

Fiscal Year	R(i)	R(m)	Ri-E(Ri)	Rm-E(Rm)	[Ri-E(Ri)] ²	[Rm-E(Rm)] ²	[Ri-E(Ri)] [Rm-E(Rm)]
2001/02							
2002/03	1.4286	-0.0997	0.74937	-0.2633	0.561555397	0.06932689	-0.197309121
2003/04	0.4286	0.1323	-0.25063	-0.0313	0.062815397	0.00097969	0.007844719
2004/05	0.57	0.3133	-0.10921	0.1496	0.011926824	0.02238016	-0.016337816
2005/06	0.5349	0.0679	-0.14432	-0.0957	0.020828262	0.00915849	0.013811424
2006/07	1.2924	0.4257	0.61321	1.2621	0.376026504	1.59289641	0.773932341
2007/08	0.5	-0.4257	-0.17921	-0.8578	0.032116224	0.73582084	0.153726338
				Total	1.065268609	2.43056248	0.735667885
				oi =	0.421360615	COVim	0.122611314
				om =	0.636469753	$\sigma_m^2 = \text{VAR}(R_m)$	0.405093747
		Systematic Risk Proportion (P ²)			0.209024733	$\beta_i =$	0.302673925
		Unsystematic Risk Proportion (1-P ²)			0.790975267	Systematic Risk	0.037111248
						Unsystematic Risk var(e)	1.028157361
		Variance of NABIL (σ_i^2)		0.177544768		Correlation with Market(Pim)	0.457192227

NIBL with Market

Fiscal Year	R(i)	R(m)	Ri-E(Ri)	Rm-E(Rm)	[Ri-E(Ri)] ²	[Rm-E(Rm)] ²	[Ri-E(Ri)] [Rm-E(Rm)]
2001/02							
2002/03	0.4171	-0.0997	-0.0021	-0.2633	4.41E-06	0.06932689	0.00055293
2003/04	0.2075	0.1323	-0.2117	-0.0313	0.04481689	0.00097969	0.00662621
2004/05	-0.13297	0.3133	-0.55217	0.1496	0.304891709	0.02238016	-0.082604632
2005/06	0.5907	0.0679	0.1715	-0.0957	0.02941225	0.00915849	-0.01641255
2006/07	1.0775	0.4257	0.6583	1.2621	0.43335889	1.59289641	0.83084043
2007/08	0.7741	-0.4257	0.3549	-0.8578	0.12595401	0.73582084	-0.30443322
				Total	0.938438159	2.43056248	0.434569168
				oi =	0.395482439	COVim	0.072428195
				om =	0.636469753	$\sigma_m^2 = \text{VAR}(R_m)$	0.405093747
		Systematic Risk Proportion (P ²)			0.082795241	$\beta_i =$	0.178793663
		Unsystematic Risk Proportion (1-P ²)			0.917204759	Systematic Risk	0.012949702
						Unsystematic Risk var(e)	0.925488457
		Variance of NIBL (σ_i^2)		0.15640636		Correlation with Market(Pim)	0.287741621

SCBL with Market

Fiscal Year	R(i)	R(m)	Ri-E(Ri)	Rm-E(Rm)	[Ri-E(Ri)] ²	[Rm-E(Rm)] ²	[Ri-E(Ri)] [Rm-E(Rm)]
2001/02							
2002/03	0.1226	-0.0997	-0.3049	-0.2633	0.09296401	0.06932689	0.08028017
2003/04	0.2741	0.1323	-0.1534	-0.0313	0.02353156	0.00097969	0.00480142
2004/05	0.4069	0.3133	-0.0206	0.1496	0.00042436	0.02238016	-0.00308176
2005/06	0.6609	0.0679	0.2334	-0.0957	0.05447556	0.00915849	-0.02233638
2006/07	0.7783	0.4257	0.3508	1.2621	0.12306064	1.59289641	0.44274468
2007/08	0.75	-0.4257	0.3225	-0.8578	0.10400625	0.73582084	-0.2766405
				Total	0.39846238	2.43056248	0.22576763
				$\sigma_i =$	0.257702147	COVim	0.037627938
				$\sigma_m =$	0.636469753	$\sigma_m^2 = \text{VAR}(R_m)$	0.405093747
		Systematic Risk Proportion (P^2)			0.052629499	$\beta_i =$	0.092886989
		Unsystematic Risk Proportion ($1-P^2$)			0.947370501	Systematic Risk	0.003495146
						Unsystematic Risk var(e)	0.394967234
		Variance of SCBL (σ_i^2)		0.066410397		Correlation with Market(Pim)	0.2294112

HBL with Market

Fiscal Year	R(i)	R(m)	Ri-E(Ri)	Rm-E(Rm)	[Ri-E(Ri)] ²	[Rm-E(Rm)] ²	[Ri-E(Ri)] [Rm-E(Rm)]
2001/02							
2002/03	-0.055	-0.0997	-0.3684	-0.6317	0.13571856	0.39904489	0.23271828
2003/04	0.2811	0.1323	-0.0323	-0.0313	0.00104329	0.00097969	0.00101099
2004/05	0.3571	0.3133	0.0437	0.1496	0.00190969	0.02238016	0.00653752
2005/06	0.5908	0.0679	0.2774	-0.0957	0.07695076	0.00915849	-0.02654718
2006/07	0.7173	0.4257	0.4039	1.2621	0.16313521	1.59289641	0.50976219
2007/08	0.3023	-0.4257	-0.0111	-0.8578	0.00012321	0.73582084	0.00952158
				Total	0.37888072	2.76028048	0.73300338
				$\sigma_i =$	0.251290244	COVim	0.12216723
				$\sigma_m =$	0.67826746	$\sigma_m^2 = \text{VAR}(R_m)$	0.460046747
		Systematic Risk Proportion (P^2)			0.513755204	$\beta_i =$	0.265553948
		Unsystematic Risk Proportion ($1-P^2$)			0.486244796	Systematic Risk	0.03244199
						Unsystematic Risk var(e)	0.34643873
		Variance of HBL (σ_i^2)		0.063146787		Correlation with Market(Pim)	0.71676719

EBL with Market

Fiscal Year	R(i)	R(m)	Ri-E(Ri)	Rm-E(Rm)	[Ri-E(Ri)] ²	[Rm-E(Rm)] ²	[Ri-E(Ri)] [Rm-E(Rm)]
2001/02							
2002/03	0.3512	-0.0997	-0.1965	-0.4598	0.03861225	0.21141604	0.0903507
2003/04	0.573	0.1323	0.0253	-0.0313	0.00064009	0.00097969	-0.00079189
2004/05	0.3088	0.3133	-0.2389	0.1496	0.05707321	0.02238016	-0.03573944
2005/06	1.1437	0.0679	0.596	-0.0957	0.355216	0.00915849	-0.0570372
2006/07	0.7803	0.4257	0.2326	1.2621	0.05410276	1.59289641	0.29356446
2007/08	0.6769	-0.4257	0.1292	-0.8578	0.01669264	0.73582084	-0.11082776
				Total	0.52233695	2.57265163	0.17951887
				$\sigma_i =$	0.295052806	COVim	0.029919812
				$\sigma_m =$	0.65480934	$\sigma_m^2 = \text{VAR}(R_m)$	0.428775272
		Systematic Risk Proportion (P^2)			0.02398217	$\beta_i =$	0.069779704
		Unsystematic Risk Proportion ($1-P^2$)			0.97601783	Systematic Risk	0.002087796
						Unsystematic Risk var(e)	0.520249154
		Variance of EBL (σ_i^2)		0.087056158		Correlation with Market(Pim)	0.154861778

BOK with Market

Fiscal Year	R(i)	R(m)	Ri-E(Ri)	Rm-E(Rm)	[Ri-E(Ri)] ²	[Rm-E(Rm)] ²	[Ri-E(Ri)] [Rm-E(Rm)]
2001/02							
2002/03	-0.1811	-0.0997	-0.7567	-1.02	0.57259489	1.0404	0.771834
2003/04	0.5151	0.1323	-0.0605	-0.0313	0.00366025	0.00097969	0.00189365
2004/05	0.4915	0.3133	-0.0841	0.1496	0.00707281	0.02238016	-0.01258136
2005/06	1.0116	0.0679	0.436	-0.0957	0.190096	0.00915849	-0.0417252
2006/07	1.4682	0.4257	0.8926	1.2621	0.79673476	1.59289641	1.12655046
2007/08	0.7236	-0.4257	0.148	-0.8578	0.021904	0.73582084	-0.1269544
				Total	1.59206271	3.40163559	1.71901715
				$\sigma_i =$	0.515115312	COVim	0.286502858
				$\sigma_m =$	0.752953694	$\sigma_m^2 = \text{VAR}(R_m)$	0.566939265
		Systematic Risk Proportion (P^2)			0.545647867	$\beta_i =$	0.505350178
		Unsystematic Risk Proportion ($1-P^2$)			0.454352133	Systematic Risk	0.14478427
						Unsystematic Risk var(e)	1.44727844
		Variance of BOK (σ_i^2)		0.265343785		Correlation with Market(Pim)	0.738679814

NIC with Market

Fiscal Year	R(i)	R(m)	Ri-E(Ri)	Rm-E(Rm)	[Ri-E(Ri)] ²	[Rm-E(Rm)] ²	[Ri-E(Ri)] [Rm-E(Rm)]
2001/02							
2002/03	-0.28	-0.0997	-0.7527	-1.016	0.56655729	1.032256	0.7647432
2003/04	0.2111	0.1323	-0.2616	-0.0313	0.06843456	0.00097969	0.00818808
2004/05	0.6789	0.3133	0.2062	0.1496	0.04251844	0.02238016	0.03084752
2005/06	0.9016	0.0679	0.4289	-0.0957	0.18395521	0.00915849	-0.04104573
2006/07	1.1742	0.4257	0.7015	1.2621	0.49210225	1.59289641	0.88536315
2007/08	0.623	-0.4257	0.1503	-0.8578	0.02259009	0.73582084	-0.12892734
				Total	1.37615784	3.39349159	1.51916888
				σ _i =	0.478915066	COV _{im}	0.253194813
				σ _m =	0.752051814	σ _m ² = VAR(Rm)	0.565581932
				Systematic Risk Proportion (P ²)	0.494193564	β _i =	0.447671326
				Unsystematic Risk Proportion (1-P ²)	0.505806436	Systematic Risk	0.113348058
						Unsystematic Risk var(e)	1.262809782
				Variance of NIC (σ _i ²)	0.22935964	Correlation with Market(P _{im})	0.702989021