CHAPTER I

INTRODUCTION

1.1 Background of the study

A nation is a type of group of human in spite of changeable characteristic of its boundaries. A south-Asian landlocked country, Nepal, can't develop beside it has lot of natural resources. Nepal enlisted among least developed country and among the poorest nation of the world is trying to chase the way of economic development by economic growth rate and developing all sectors of economy. It has a lot of problems as well as prospects too. Lacks of industry, Unemployment are seemed to be the major problem of the country. Most of the Nepalese are engaged in traditional type of agriculture. Our economic development process depends upon various factors, however economists are now convinced that capital formation and its proper utilization plays a supreme role for rapid economic development. Hence, investment portfolio is one such tool that helps for proper utilization of resources.

The relationship between Bank and Business activities are inter-dependence. The necessary part of the business activities are banks which are established to safeguard people's money and thereby using the money in making loans and investments. There are several commercial banks operating inside and outside the valley. Every bank invests its money in some profitable financial sector, which may result in profitable business in the long range. An investment is the commitment of money that is expected to generate additional money. Human nature doesn't satisfy for whatever he/she has at present tends to have more than whatever he/she has. So expecting the additional return he/she tends to sacrifice the current resources. Whenever we talk about the return risk too must not be avoided, because in every step and type of return, risk is invoked. So we can say "no" risk can gain "no" return.

The network of a well-organized financial system of the country has great hearing in capital formation. It collects scattered financial resources from the masses and invests them among those engaged in commercial and economic activities of the country. It has been well established that the economic activities of any country can hardly be carried forward without the assistance and support of financial institutions. Financial institutions have catalytic role in the process of economic development. Thus, commercial banks have become the heart of financial system. A key factor in the

development in the country is the mobilization of domestic resources and their investment for productive use to the various sectors. To make it more effective, CBs formulate sound investment policies, which help maximize quality of investment and eventually contribute to the economic growth of a country.

A portfolio is usually defined as a combination of assets. It is a collection of securities. Portfolio provides the highest possible return for any specified degree of risk. Portfolio simply represents the practice among the investors of having their funds in more than one asset. Successful formulation and effective implementation of investment policy is the prime requisite for the successful performance of banks. Good investment policy has a positive impact on economic development of the country and vice-versa. A good investment policy attracts both borrower and lenders, which helps the investment operation of the bank to be efficient and profitable by minimizing the inherent risk. A key factor in the development in the country is the mobilization of domestic resources and their investment for productive use to the various sectors by commercial banks.Investment portfolio is one which the income or profit of the bank depend upon directly to minimize risk, a bank must diversity its investment on different sectors which is known as portfolio investment. Investment portfolio means to reduce risk and divided the investment in different sectors by the means of risk. Portfolio analysis considers the determination of future risk and return in holding various blends of individual securities.

1.1.1 Investment Portfolio on Commercial Banks

A banks is a business organization that receive and holds deposit funds other, makes loans and extend credit and transfers funds by written order deposit. “A Commercial hank refers to such type of bank other than specified banks related to cooperative, agricultural, industrial and other which deals in money exchange, accepting deposits and advancing loans etc.” (Commercial Bank Act; 2031:25). Commercial Banks are those financial institutions deal in accepting deposits to persons and institutions and giving loans against securities. They provide working capital needs of trade industry and even to agricultural sectors. Moreover commercial banks also provide technical and administrative assistance to industries, trade and business enterprises. CB’s poll together the saving of the community and arrange them for the productive use. They

transfer monetary source from saver to users. In addition to above, the main purpose is to uplift the backward sector of economy.

Commercial banks are organization on a joint stock company system, primarily for the purpose of earning profit. They can either of the branches banking type , with a large network of branches , or of the unit banking type as we see in the United States, where a bank's operation is confined to single office or to a few branches within a strictly limited area.

"Commercial bank is a corporation which accepts demand deposits subject to check and makes short term loans to business enterprises, regardless of the scope of its other service." (Ronald; 2000:345-346).

Commercial banks is a heart of financial system they hold the deposits of many person, Government establishment, business unit, they make fund available through their lending and investing activities to borrower, individuals , business firms and service from the producers to customers and the financial activities of the government. They provide a large portion is affected. These fact shows that the commercial banking system of nation is import to the functioning of the economy.

In this way commercial banks are those banks, which are engaged in commercial banking transaction and exclude from description. From the above definition of commercial bank, it can be defined as a bank is a financial institution, which performs widest range of economic and financial functions of any business firm in the economy. The commercial banks are these financial institutions, which collect scattered saving of people and provide loan against proper technical helps and suggestions, administrative suggestion, safe keeping of valuable collectives of bills, cheques, and overdraft facilities and provide modern banking facilities to industries and commerce. CB's collect fund as a saving from public of country and invest in highly return yielding firm. It develops saving habits in people. CB's plays vital role for development of a developing country. Banks provides internal resources for developing country's economy. It collect diversified capital from different part of country through its own branches.

The word investment sounds very good and attractive that is why every individual in the world is interested in it. In layman's sense, there is always a return if there is

investment. This return may be favorable as well as unfavorable to the investor's stand point. Investment brings forth vision of profit, risk, speculation and wealth. For the uninformed, investing may result in disaster. In general sense, investment means to pay out money to get more. But in the broadest sense, investment means the sacrifice of current money for future money.

A portfolio is collection of investment securities. Portfolio theory deals with the selection of optimal portfolio; that is, portfolio that provides the highest possible return for any specified degree of risk or the lowest possible risk for any specified rate of return. A portfolio is usually defined as a combination of asset.

"A portfolio simply represents the practice among the investor of having their funds in more than one asset. The combination of investment assets is called a portfolio" (Weston and Brigham; 1992:245).

Investment portfolio refers to an investment that combines several assets. It is a collection of securities. "Portfolio means the lists of holdings in securities owned by an investor or institution." (Oxford Dictionary; 1997:173) Portfolio is a collection of investment securities for example, if you owned some of Nabil Bank stock, some Alliance Insurance co. ltd. stock, some Soaltee Hotel ltd. stock, some United finance ltd. stock, some Salt trading ltd. stock, some Nepal liver ltd. stock, some Bottlers Nepal ltd. stock you would be holding seven stock portfolios. 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 the individual securities. Investment portfolio is one which the income or profit of the banks depend upon directly. Hence, the banks should never invest its fund in those securities; difference may cause a great loss. It must not invest its funds into speculative businessman who may be bankrupt at once and who may earn millions in a minute. The bank should accept that type of securities which are commercial, durable, marketable stable, transferable and high market prices. A commercial bank can maximize its volume of wealth through maximization of return on their investments and lending. So they must invest their funds where they gain maximum profit. The profit of CB's mainly depends on the interest rate, volume, tenure of loan and nature of investment in different securities.While investing excess funds in different securities or at the lending period, the banks should keep in mind that the people

deposit money at the bank in different account with confidence that the bank will repay their money on demand. Similarly a bank should not lay all its eggs on the same basket i.e. to minimize risk; a bank must diversify its investment on different sectors. Diversification of loan or investment helps to sustain loss according to the law of average because if securities of a company deprived, there may be appreciation in the securities of other companies.

1.1.2 Investment Pattern of Nepalese Commercial Banks

After the announcement of liberal and free market economic based policy, Nepalese banks and financial sectors are having greater network and access to national and international markets. They have to go with their portfolio management very seriously and superiority. Most of other commercial banks are providing new schemes like Insurance to depositor, which is an extra bonus to encourage them to deposit their surplus in such banks. Credit card system is other attractive feature of commercial banks i.e. NABIL credit card, visa of NGB, credit card of HBL has launched in market for their clients. EBL introduced cumulative deposit scheme (CDS) and facilities for Nepalese living in gulf countries for transfer of their savings to their home in Nepal by entering into drawing arrangements with exchange houses in UAE, Bahrain and Kuwait. And provided housing, vehicle and education loan to people, that means invest in other areas. These days due to keen competition in the market the Banks are launching innovative and dynamic products to the customers. The concept of Universal Banking is also started by many of the existing and newly open Banks in the country.

No doubt, if commercial banks and financial institutions has to gain prosperity without delay, they should immediately start to improve customer service quality and flexibility at high standards to reflect tremendous opportunities in the markets for their customers benefits like managing their risk, giving them the advantage of global strength, insights and philosophy because this can make the customer take full confidence to expands their transaction further more with best approach and feel secured for each investment made to earn superior returns over time. Therefore commercial banks should be aware and at every moment while providing service to their customers and should have better judgment on the quality of service whether they could satisfy their customers up to their expectation and have been able to attract

others as many to meet the objectives or not as a result of the quality in service delivered, Actually for commercial banks the customers act as the soul which helps in correcting the problems of service providers with which the providers can identify the defects of the gaps to minimize them in time through strong and intensive analysis of their service market research team.

Nepal being listed among least developed countries, the commercial banks has played a catalytic role in the economic growth. Its investments range from small scale cottage industries to all types of social and commercial loans and large industries. Generally the investment of the commercial banks include the investment on Government securities, like treasury bills, development bonds, national saving bonds, foreign government securities, shares on government owned companies and non-government companies and investment on debentures and investment on other investments, similarly the commercial banks used their funds as loan and advances. The guidelines given by NRB play a significant role in the composition of bank portfolio. Since the constraints framework provided by the central bank is for economic enhancement, it can be hypothesized that the composition of bank portfolio has a considerable impact on national economy. Portfolio management activities of Nepalese banks are in developing stage, however, on the other hand most of the joint venture banks are not doing such activities so far.

Portfolio Analysis

A portfolio is a combination of investment assets. The portfolio is the holding of securities and investment in financial assets i.e. bond, stock portfolio management is related to the efficient portfolio investment in financial assets. The portfolio analysis is performed to develop a portfolio that has the maximum return at whatever level of risk and an investor thinks appropriate.

“A portfolio simply represents the practice among the investors of having their funds in more than one asset. The combination of investment asset is called a portfolio” (*Weston and Brigham, 1982:245*).

Portfolio management can be also be define as aggregation and management of an diverse portfolio of supply resources which will act as a hedge against various risk that may effect specific resource. Under more market driven power sector with a

power pool or pool Co wholesale market structure, a portfolio manager would aggregate and manage a divers and other market heading type contract and mechanism (www.fiscalagent.com/newsletter/gloss/glossary/p.shtm).

Portfolio management is the process of selecting a bundle of securities that provides the investing organization a maximum yield for a given level of risk. Portfolio management can be also taken as risk and return management. It aims to determine an appropriate asset mix, which attain optimal level of risk and return. Portfolio, technically known as efficient portfolio, is a superior portfolio. The efficient portfolio is a function of not only risk and return of individual asset included, but also the effect of relationship among the asset on the sum total of portfolio risk and return.

Portfolio investment refers to an investment that combines several securities. It is the collection of security. Nobody is ready to bear risk without any return but to have return, one must ready to face some risk, To minimize the risk at given rate of return, the concept of portfolio diversification is necessary. It is one such tool that helps for proper utilization of resources. Investor always tries to achieve their investment goal. To fulfill the goal they gathered different security. These securities diversify the risk. Most investors hope that if they have several securities then even one goes bad, the others will provide protection from loss.

In finance a portfolio is a collection of investment held by an institution or a private individual. In building up an investment portfolio a financial institution will conduct its own investment analysis whilst a private individual may make use of the service of a merchant hank, which offers portfolio management. Holding a portfolio is a part of all investment and risk limiting strategy called diversification (www.google.com/search).

The investment decision is one of the major functions of financial management. The increasing number of bank and finance institution has created a competitive environment in financial sector. The investment opportunity of trade industry, agriculture and other sector have not comparatively been extended, So, commercial bank have to face so many difficulties to mobilized their fund on profitability sector. The risk is involved in every steps of the return, every investor wants a maximum returns from a minimum level of the risk, so to minimization of risk investor should diversify its investment by the means of portfolio.

Profiles of the Banks under Study

Himalayan Bank Limited was incorporated in 1992 by a few distinguished business personalities of Nepal in partnership with Employees Provident Fund and Nabil Bank Limited, one of the largest commercial bank of Pakistan. Banking operation commenced from January 1993. It is the first commercial bank of Nepal whose maximum shares are held by the Nepalese private sector. Besides commercial banking services, the Bank also offers industrial and merchant banking services.

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

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

Nabil Bank Limited commenced its operation on 12 July 1984 as the first Joint Venture Bank in Nepal. Dubai Bank Limited, Dubai, which was later, acquired by Emirates Bank International Limited. Dubai was the first Joint Venture Partner of Nahil Bank. Currently, NB (International) Limited, Ireland is the foreign partner of Nabil Bank. Nabil Bank Limited had the official name Nepal Arab Bank Limited till 31 December 2001. Nabil is the pioneer in introducing many innovative products and marketing concept in banking sector of Nepal with 15 branches and two counters in

all major cities. It is the only bank having its presence at Tribhuvan International Airport, the only international airport of the country. Also, the number of outlets, iii country is the highest Nabil is a milestone in the banking history of Nepal as it paved the way for the establishment of many commercial banks and financial institutions.

In this study the trends of investment process of commercial bank in various sectors by the means of portfolio will he analysis, the existing investment situation and its investment strategy in future will be analyzed. Our main focuses of the study are measurement of financial performance of simple bank, their risk and return, trend and portfolio pattern etc.

1.2 Statement of the Problems

With the arrival of liberalization policy by the Government, the banking sector has been growing dramatically and operating with unhealthy competition. However, due to political instability, government couldn't be able to pay sufficient attention in this sector. Regulation, supervision, and monitoring by government have been weakened in banking sector as like other sectors. Commercial Banks in Nepal have been facing various challenges and problems especially in lending and portfolio management.

These banks have been contributed in line with the trust of economic liberalization and financial sector reform, i.e. making the financial system more competitive, efficient and profitable. Nepalese commercial banks cannot escape from such condition. Because of liberal economic policy, many new banks are coming in existence day by day which creates threatens for existing bank to be competitive. Declinations of price and cost leadership are best way to complete in the industry.

Banks has to invest its source in different productive sector of the investment alternatives to earn profit. But there is uncertainly of profit, which creates risk to the organization. So, every commercial bank has to diversify their investment to minimize risk. Without diversify its investment policy is impossible. So, this study mainly concerns with the portfolio investment practices by Nepalese commercial banks.

This study seeks to find out to the following question:

- Is the portfolio investment management efficient on Nepalese commercial bank?
- What is the existing situation of financial position of Nepal commercial banks?
- Which banks have the largest degree of financial risk measured in terms of portfolio risk?
- Which portfolio has highest return?

1.3 Objective of the Study

The main objective of this study is to find out the condition of portfolio management, and to estimate an optimal portfolio among the common stock investment of two selected commercial Banks. The specific objectives of the study are as follows:

- To evaluate the common stocks of selected commercial Banks in terms of risk and return.
- To examine systematic an unsystematic risk associated with stock.
- To determine whether the share of listed commercial banks in Nepal are over-priced, under priced or correctly priced.

1.4 Significance of the Study

This study mainly fills a research gap on the study of Investment Policy and portfolio of Nepalese commercial banks. Definitely, the study will provide a useful feedback to the policy makers of the bank and also becomes a useful reference for other Commercial Banks of Nepal and the Central Bank (NRB) for the formulation of appropriate strategies. This study evaluates the Investment Policy of selected commercial banks and finds its loopholes and significantly contributes to rank the policy sound.

On the other hand, portfolio of a bank is the result of investment policy. In this thesis, portfolio behavior of the bank has been analyzed and its portfolio performance has been evaluated. This will be beneficial to all the bankers and policy makers to evaluate their own portfolio.

1.5 Limitation of the study

This research study has been conducted for the fulfillment of partial recruitment of Master Degree in Business Studies (M.B.S.). Due to the constraints, financial constraints and other, the study is bound for limited area. It has certain limitations:

- This study has employed secondary data published by and collected from selected banks.
- Among various commercial banks in Nepal the study is only concern on two commercial banks which are Himalayan Bank and NABIL Bank.
- The truth of research result is based upon secondary data.
- Among the various commercial banks, only two commercial banks are taken under study. The study covers a period of five fiscal years, which wil1 be tabulated and processed for thawing conclusion.
- The accuracy of the research work will be dependent on data provided by concerned bank differential coverage of data limits the study.

1.6 Organization of the study

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

Chapter 1: Introduction: The contents of each chapter of this study are briefly mentioned below .The first chapter is introduction. This chapter deals with the introduction that includes backgrounds, meaning, focus of study, statement of problems, objective of the study, significance of study, limitation of study and organization of their study.

Chapter 2: Review of Literature: The second chapter deals on descriptive conceptual framework of portfolio management. It consider to the review of major related literature about the portfolio management and related studies.

Chapter 3 Research Methodology: The third chapter explains the research methodology used in the study, which includes research design, populating and sample source of data, data collection techniques, data analysis tools.

Chapter 4 Presentation and Analysis: The fourth chapter is the major parts of the whole study in which all collected relevant data are analyzed and interpreted by the help of different financial and statistical tools. In this chapter we explain the major findings of the study.

Chapter 5: Summary, Conclusion and Recommendation: The fifth chapter is suggestive to all concern in accordance of analysis and interpretation of data. It gives a summary of study, recommendations are made for concerns authorities and institutions as well as conclusion of the study are also carried out.

Finally bibliography and appendices have been given.

CHAPTER II

REVIEW OF LITERATURE

Review of literature is the study of past research studies and relevant materials. It is an advancement of existing knowledge and in-depth study of subject matter. During this research, in depth study and theoretical investigation regarding portfolios aspects and their present application and potentialities made. A portfolio simply represents the having their funds in more than one assets. The combination of investment assets is portfolio. Hence, in this chapter, the focus has been made on the review of literature relevant to the investment portfolio analysis of commercial banks in Nepal. For this study, different Journals, Article, Books, Annual reports and some research paper related with this topic has been reviewed. Therefore, this chapters arranged into the following other;

2.1 Concept of Portfolio:

“Don’t put all your eggs in one basket” us a bit of time tested folk. Modern portfolio theory reconfirms it. Spreading the fund across a number of assets will eliminate some but not all, of the risk. This is known as principle of diversification too. Portfolio means the collection of securities of investment vehicles.

“Portfolio doesn’t include only the securities but also other investment like gold, land etc. study of an individual asset is enough to decide whether to include of delete it from a portfolio. An investor should evaluate the effect on expected risk and return of the portfolio by the inclusion or exclusion of an individual asset in the portfolio “(Dahal, 2003:23).

2.1.1 Modern Portfolio Theory

Financial pioneer Harry M. Markowitz originally proposed portfolio theory in 1952. He won the 1990 Nobel Prize in economics ‘for having development the theory of portfolio selection.’

"A portfolio is collection of investment securities. Portfolio theory deals with the selection of optimal portfolio; that is portfolio that provides the highest possible return or the lowest possible risk for any specified rate of return" (Western & Copeland. 1992:302)

"The portfolio of investment can be formed with just single assets or several assets and the risk and return of individual assets or assets included in the portfolio determine the risk and return of the portfolio. While the return on a portfolio is measure as the weighted average of return on the assets included, the portfolio risk depends on several factors such as returns on individual assets, their weights in the portfolio and the correlation among the securities included in the portfolio.

The portfolio theory explains the relationship between assets, risk and return. The theory is founded on the measurement of risk and return of portfolio. It was Harry Markowitz, a practitioner, who first developed the model that deals with the portfolio risk and return. The model emphasizes risk (measured in terms of variance of the portfolio returns) and return (measured in terms of mean return of portfolio) as the only two major reflectors of portfolio performance. He used these two parameters in developing modem portfolio theory" (Pradhan, 2000:267).

2.1.2 Basis Element of Portfolio Theory

"The discussion of portfolio theory leads to define the feasible set of portfolios, efficient frontier, capital market line, etc which are very important to analyze and understand. The feasible set of portfolios indicates what available portfolio in the market for investment is. The efficient frontier shows the all possible superior portfolios which dominate all other portfolios in terms of risk and return. The portfolios, which do not lie on the efficient frontier, that is those, which are inside the feasible set, are relatively inferior portfolio. The discussion of the modern portfolio theory will be incomplete without understanding some fundamental elements on which the theory of the portfolio is based on. Several questions arise with respect to the choice of among feasible portfolios, efficient portfolios and market average portfolios. They are (Pradhan, 2000:272).

- What is the feasible set of portfolios?
- What are the superior or efficient portfolios among all feasible ones?
- How is the efficient frontier defined and where are they positioned in the portfolio graphs?
- Is the market average portfolio efficient one?
- How do we find out the portfolio with the lowest level of risk (which is called minimum variance portfolio), and where is it located in the graphs?
- What happens to the portfolio curve if we mix risks -free assets with risky assets in the portfolio, and how the efficient frontier changes when both risk free and risky assets are included in the portfolio?
- What does capital market line indicate?
- Which the basic assumption of capital market line?
- How does an individual investor choose the best portfolio for him?

2.1.3 Introduction to Portfolio Management

Portfolio management is concerned with efficient management of portfolio investment in financial assets, including shares and debentures of companies. The management may be by professionals, by others, or by individuals themselves. A portfolio of an individual or a corporate unit is the holding of securities and investment in financial assets. These holding of securities are the result of individual preference mid decisions regarding risk and return. The process of portfolio management is closely and directly linked with process of decision making the correctness of which cannot be ensured in all cases.

“portfolio Management is the art of handling a pool of funds so that it not only preserves its original worth but also over time appreciates in value and yields an adequate return consistent with the level of risk assumed”(Cohen, Zinbarg & Zeinkal,n.p: 591).

Portfolio management is the process of selecting a bundle of securities that provides the investing organization a maximum yield for given level of risk for alternatively ensuring minimum risk for a given level of return. Portfolio management can also be taken as risk and return management. It aims to determine an appropriate assets mix, which attains optimum level of risk and return.

Objective of Portfolio Management

"The portfolio manager's task is to select the investment weights that will result in dominant investment. Hereafter, dominant assets will be called 'efficient portfolios' whether they contain one or many assets. An efficient portfolio, then, is any assets or combination of assets that has

- The maximum expected return in its class, or conversely
- The minimum risk at its level of expected return.

The objective of portfolio management is to analyze different individual assets and delineate efficient set of portfolios. The efficient set of portfolios comprises the 'efficient frontier'. "The efficient frontier is the locus of point in risk-return space having the maximum return at each risk class. The efficient frontier dominates all other investment" (Clark, Gordon, Shapre & Bailey)

The objectives of the portfolio management are as follows

- Capital
- Safety or security of an investment
- Income by way of individual and interests
- Liquidity
- Marketability
- Tax planning- capital gain tax, income tax and wealth tax
- Risk avoiding or minimization of risk

2.1.4 Portfolio Selection

“In practice choosing a discount rate is seldom so easy. For example, you must learn how to adjust for the extra risk caused by company borrowing and how to estimate the discount rate for projects that do have the same risk as the company’s existing business. There are also tax issues. But these refinements can wait until later.

Let’s review four basic principle of portfolio selection:

- Investors like high return and low standard deviation. Common stock portfolios that offer the highest expected return for a given standard deviation are known as efficient portfolios.
- If you want to know the marginal impact of a stock on the risk of portfolio, you must look not at the risk of that stock in isolation, but as its contribution to the portfolio risk. That contribution depends on the stock’s sensitivity to changes in value of the portfolio.
- As stock’s sensitivity to changes in the value of the market portfolio is known as beta. Beta, therefore, measures the marginal contribution of stock to the risk of the market portfolio.
- If investors can borrow and lend at the risk free rate of interest, then they should always hold a mixture of risk free investment and one particular common stock portfolio. The composition of this stock portfolio depends only on investor’s assessment of the prospects for each stock and not on their attitude to risk. If they have no superior information, investors should hold the market portfolio.

Risk premium always reflect the contribution to portfolio risk. If the portfolio you have chosen is efficient, each of your investment must he working equally hard for you. So if one stock has a greater marginal effect on portfolio risk than another stock, it must also have proportionately greater expected return" (Brealey & Myers, 1997: 181- 182).

2.1.5 Common Stock

"Common stock is an ownership share in a corporation. Therefore the common stock holders are true owners of a corporation. Each share of common stock represents fractional ownership interest in the firm. For example, one share of common stock in a corporation that has 100 shares outstanding would represent 1/10,000 ownership interest. The return on common investment comes from either of two sources the periodic receipt of dividend and capital gains. Common stock holders enjoy a No. of tights such as is dividend right. Assets right, preemptive right voting right etc. Common stock is the recipient of the residual income of the corporation. Common stock holders are an uncertain position about dividend. Capital gain and residual claim. Therefore, Common stock holder musts bear greatest risk. Common stock is suitable for the investor who wants to take highly risk and return for a long period too. Common stocks are traded in stock exchanges and over the counter market (OTC)." (Thapa, Bhattarai and Basnet, 2006:9).

Common stocks are easier to descriptive than fixed income securities such as bonds hut they are harder to analyze. Fix income almost always has a limited life and an upper dollar limit on cash payments to investors. Common stocks have neither. Although the basic principles of valuation apply to both, the role of uncertainty is larger for common stocks. So much so that often dominated all other elements in their valuation, Common stock represents equity, or an ownership position in a corporation. It is a residual claim, in the sense that creditors and preferred stockholders must he paid as scheduled before common stockholders can receive any payments. In bankruptcy, common stockholders are in principle entitled to any value remaining after all of the claimants have been satisfied from organizations The Limits liability of its owners, Common stocks are generally "Fully paid and no assessable", meaning that common stockholders may lose their initial investment but no more. That is, if the corporation fails to meet its obligations, the stockholders cannot he forced to give the

corporation the funds that are needed to pay off the obligations. However, as a result of such as a failure, it is possible that the value of a corporation's shares will be negligible. This outcome will result in the stockholders having lost and amount equal to the price to buy the shares' (Sharpe, Alexander and Bailey; 2003: 457).

"Common stock represents ownership of a firm. Owners of the common stock of a firm share in the company prospers, the investor receives high rates of return and can become wealthy. In contrast, the4 investor can lose money if the firm does not do well or even goes bankrupt, as the once for mid able K-Kart, Enron. W.T. Grant and Interstate Department Stores all did. In these instances, the firm is forced to liquidate its assets and pay off all its creditors. Notably, the films preferred stockholders and common stocks all the advantages and disadvantages of ownership and is a relatively risky investment compare with fixed-income securities' (Reilly and Brow; 2004:83).

"Common stock holders of corporation are its residual owners, their claim to income and assets comes after creditors and preferred stock holders have been paid in fill, As a result, a stockholders return on investors is less certain than the return to lenders or to a prefer Ted stock holder, On the other hand, the shares of a common stock can be authorized either with or without par value, The par value of a stock is merely a stated figure in the corporate charter and is of little economic significance. A company shouldn't issue stock at priceless than par value because stock holders who bought stocks for less than par value would be liable to creditors for the difference between the 4 below par price they paid and the par value" (Thapa and Koirala, 2064).

2.1.6 The Expected Rate of Return Common Stock

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

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

Expected value, E (r) = $\Sigma_{t=1}^{n}\ r_j p_j = r_1p_1 + r_2p_2 + \ldots\ldots + r_np_n$

Where,

r_j = rate of return on j outcome or event

p_j = Probability of occurrence of j outcome or event

When historical returns are used, the following formula is used to

Calculate and average return:

$$\text{Expected value, } E(r) = \frac{\Sigma_{t=1}^{n} rt}{n}$$

Where E (e) is the average or mean return and n the number of observed returns' (Thapa, Bhattarai and Basnet; 2006:118)

"Investors main objective to maximize concept of value by investing money in product and project". A company creates value of it the expected return exceeds the return required by the financial market for the risks involve, If someone buy a bond, he expects to revive interest on the bond and those interest payments provides him with the rate of return on his investment. If we multiply each possible outcome and then sum these products, we have weight average of outcomes. The weights are the probability and the weighted average is the expected rate of return. (Sharma; 2058 B.S: 70)

"The expected rate of return is the increase in the expected after tax value of the initial investment over the holding period. The cash payoff to owners of common stock can be descriptive as two types i.e.

- Cash dividend (dividend component)
- Capital gain (loss) [capital appreciation]

Capital appreciation is the difference between ending and beginning value of investment. Returns are defined as the dividend yields plus capital gain\loss. Thus return comes from two sources, income and price appreciation. Return is the main attraction for investors to invest. In a risky security as stock (equity share) accepting a varying degree of risk tolerance.

‘The return from holding an investment over some period, say a year is simply any cash payment received due to ownership plus the change in market price, derived by beginning price. From common stock we can define single period return as:

$$\text{Single period return}(r) = \frac{\text{Ending price - Beginning price + Dividend}}{\text{Beginning price}}$$

This 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 expected dividend and prices). Also note that the term is parenthesis in the number of above equation represents the capital gain or loss during the year (Van Home, Wachowicz and John, 1995: 90).

“Annualized rate of return over several periods can be calculated in two ways. The first one is simply to take the arithmetic average of the annual holding period return (HPR) over a gain period and the second one, which also takes in t account the compounding effects of cash receipts over different time intervals, in the geometric mean rate of return.

$$\text{Simple Arithmetic Mean} = \Sigma_{t=1}^{n} \frac{r_1}{n} = \frac{r_1 + r_2 + r_3 + ...r_n}{n}$$

Where,

r_t = single period return at time t

n = number of observations or return

The geometric mean

$$Gm = \left[\prod_{t=1}^{n}(1+r_t)\right]^{1/n} - 1 = [1+r_1)(1+r_2)(1+r_3)....(1+r_n)]^{1/n} - 1$$

Where,

G_m= geometric mean return

r_t = single period return at time t

n = number of observation

(Cheney, Moses; 1992:85)

2.1.7 The risk on Common Stock

"Risk is defined as the variability of the returns of a period. The one-period rate of return is the basic random variable used in measuring an investment's risk. The greater the variability of the returns, the riskier the project." (Thapa, Bhattarai and Basnet; 2006:119)

"Risk defined as the variability of the returns of a period. The basic random variable that measures an investments risk is one period rate of return. The greater variable of the returns, the riskier the project and vice versa, "risk may he defined as the likelihood that the actual return from an investment will he less that the expected return. It referees to the chances that some unfavorable events will occur. Risk exists because of the inability of the decision maker to make perfect forecast. Risk arises on investment evaluation because we can't anticipate the occurrence of the possible future events with certainly and consequently cannot make any correct predictions about the cash flow sequences" (Basu; 2058 B.S: 70).

"Risk is defined in Webster's Dictionary as 'a hazard: a peril: exposure to loss or injury': thus, for most, risk refers to the chance that some unfavorable event will occur. If you invest in speculative stokes (or. really, any stock), you are taking a risk in the hope of making inapplicable return' (Weston, Basely and Brigham; 2003: 182).

It is said that risk refers to the chance that some unfavorable event will occur. If someone invest in speculative stock (really, any stock) he\she is taking a risk in the hope of making an applicable return. So, if one is going to invest in common stock for future return. High return on common stock involves high risk and vice versa.

"Risk defined more generally, is probability the occurrence of unfavorable outcomes. But risk has different meaning in different contexts. In out context two measures developed from risk. They are the mean and standard deviation of probability distribution." (Weston and Brigham; 2000:183)

2.1.8 The Range

"The range (Maximum return minimum return) is known as one of the traditional way of measuring risk. It simply shows the difference between the best possible return and

the worst possible return hut does not provide information about the distribution of the rates of return between the extremes. (Cheney and Moses; 1992:41)

"The range is one of the traditional methods of measuring risk, which simply communicates the difference between the best possible returns and the worst possible return; it does not provide information about distribution of the rates of return between the extremes.

The range = Best possible rates of return-worst possible rate of return.

The degree of risk of an under lying security is reflected in the magnitude of the difference. The smaller the difference the lower will be degree of risk." (Pokhrel; 2004:1,1).

"Another measure risk is the range of retransmit is assumed that a larger range of expected returns, from the lowest to the highest return, means greater uncertainty and risk regarding future expected returns" (Really and Brown; 2004:211)

2.1.9 Standard Deviation

"Standard deviation is a statistical of the variability of a set of observations. It is the measure of total risk. The smaller the variance, the lower the riskiness of the stock and vice versa. The risk or standard deviation is denoted by the symbol sigma. The square root of the variance of the rate of return is called the standard deviation of the rate of return. (Thapa, Bhattarai and Basnet; 2006:121)

"The measure we probability use most often is the standard deviation. The simple for which is sigma. To calculate the standard deviation, we proceed as shown in table, taking the following steps:

We calculate the expected rate of return: Where

$\Sigma_{t=1}^{n}\ p_1k_2 = p_1k_1 + p_2k_2 + \ldots\ldots\ldots + p_nk_n$

Pr = Probability

k = Expected rate of return

First, we subtract the expected rate of return [E (k)] from each possible (k) to obtain a set of deviations from (k):

Deviation i = k-E (k)

Where,

E(k) = expected rate of return

Next, we square each deviation, multiply the result by the probability of occurrence for its related outcome and then sum these products to obtain the variance of the probability distribution.

$$\pm^2 = \Sigma_{t=1}^{n}[k_1 - E(K)]^2 \, \mathrm{Pr}_1$$

Where,

E (k) = expected rate of return

P (r) = probability

Finally, we take the square root of the variance to obtain the standard deviation.

$$\pm = \sqrt{\pm^2} = \sqrt{\Sigma_{t=1}^{n}[k_1 - E(K)]^2 \, \mathrm{Pr}_1}$$

Where

E (k) = expected rate of return

P (r) = probability

$\pm$ = standard deviation

Thus, the standard deviation is a weighted average deviation from the expected value, and it gives an idea of how far above or below expected value and the actual value is likely to be. (Weston and Brigham; 2003:182).

2.1.9 Systematic Risk and Unsystematic Risk

"Systematic risk is market related risk. It is also called market, risk or indivertible risk. For example, inflation, interest rates war etc., Unsystematic risk is non market related risk. 1t is also called non market risk or company unique risk or company specific risk or diversifiable risk, For example, winning a new contract, an industrial

dispute, and the discovery of a new technology, labor strikes etc. The systematic risk is rewarded in the form of risk premium. The unsystematic risk is not rewarded because it can be reduced t zero" (Thapa, Bhattarai and Basnet; 2006:183).

"Systematic risk has its source factors that affect all the marketable asses and thus can't be diversified away. The sources of systematic risk are market-pervasive. The measure if systematic risk permits an investor to evaluate an asset required rate of return relative to systematic risk of the stock. Unsystematic (company specific/unique) risk can e reduce through diversification. The relationship among total risk, systematic risk and unsystematic risk are shown below:

Total risk= Systematic Risk + Unsystematic Risk

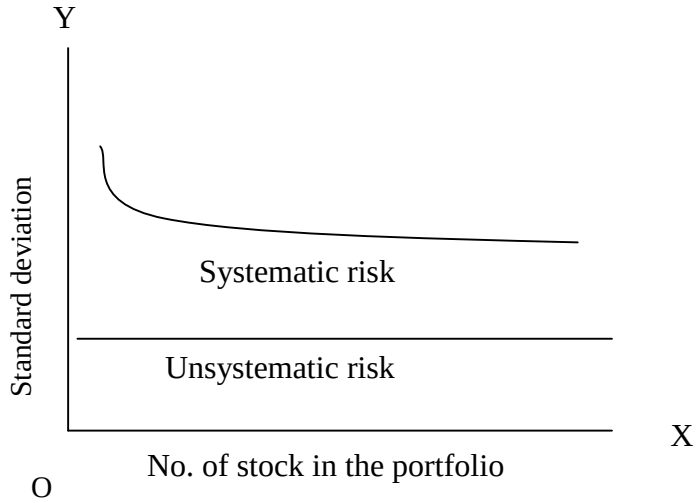
While Systematic Risk= ($\pm$ j) (p_{jm}) and unsystematic Risk= ($\pm$ $_j$) (1- p_{jm})

In this equation P_{jm} is the correlation between the return of given stock (i) and the return on market portfolio" (Upadhyaya; 2001: It).

The relationship between systematic risk In this equation Pjrn is the correlation between the return of given stock (i) and the return and unsystematic risk are shown in given figure

Diagram 2.1

Relation between SI) of portfolio and Number of securities in portfolio



2.1.10 Capital Assets Pricing Model (CAPM)

"Capital assets pricing model (CAPM) is a model that indicated what should be the expected or required rate of return on risky assets. This transition is important because it helps you to evaluate an asset by providing an appropriate discount rate to use in any

valuation model. alternatively, if you have already estimated the rate of return that you think you will earn on an investment, you can compare this estimated rate of return to the required implied by the CAPM and determine whether the assets is undervalued overvalued, or properly valued.

To accomplish the foregoing, we demonstrate the creation of security market line (SML) that usually represents the relationship between risk and expected or the required rate of return on an assets. The equation of this SML, together with estimated for the return on risk-free asset and so on the based on its systematic risk. You compare this required rate of return to the rate of return that you estimate that you will earn on investment of determine if the investment id undervalued or overvalued. After demonstrating this procedure, we finish the section with demonstration of how to calculate the systematic risk variable for a risky asset (Reilly and Brow; 2004: 247).

“The capital assets pricing model states that the expected risk premium on each investment is proportional to its beta. This means that each investment should lie on the sloping security market line connecting treasury bill and market Portfolio.” (Myers and Brealey; 2003: 200)

“The capital assets pricing model (CAPM) specifies the relationship between risk and required rates of return on asset when they are held in well diversified basic assumptions of the CAPM.

- All investors focus on a single holding, and they seek to maximize the expected utility of their wealth by choosing among alternative portfolios on the basis of each portfolio’s expected return and standard deviation.
- All investors can borrow and lend an unlimited mount are a given risk free rate of interest KRF, and there are no restrictions on short sales of any assets.
- All investors have identical estimated of the expected returns, variances, and covariance among all assets; that is, investors have homogeneous expectations.
- All assets are perfectly divisible and perfectly liquid
- There aye no transaction costs.
- All investors are price takers (that is, all investors assume that their own buying and selling activity will not affect prices)

- The quantities of all assets are given and fixed. (Thapa, Bhattarai and Basnet, 2006: 177).

“CAPM is a model that describes the relationship between risk and expected return. In this model, a security’s expected return is the risk free rate pins a premium based on the systematic risk of the security. The SML equation as suggested for the computation of expected rate of return on common stock. This model is as under:

$R_j = R_f + (R_m - R_f) b_j$

Where,

R_j= The required or expected rate of return of stock j

R_f= Risk free rate of return.

R_m = The required rate of return on the market portfolio.

b_j= The beta coefficient for assets j.

It means the sensitivity of a stocks return. It changes in returns on the market portfolio. The beta of portfolio is simply a weighted average of the individual stock beta in the portfolio” (Van Home; 1997:100).

"The major implication of the CAPM is that expected return of assets will be related at a measure of risk for that asset knows as beta (bj). The exact manner in which expected return and beta rare related is specified by the CAPM. The model provides the intellectual basis for a number of the current practices in the investment industry’ (Sharpe, William, and Alexander; 2002:261),

“CAPM is a model that describes the relationship between risk and return. In this model, a security expected return is the risk free rate plus a premium based on the systematic risk of the security. The model is given below.

$R_j = R_f + (R_m - R_f) b_j$

Where,

R_j = Required rate of return on stock j.

R_f =The nominal risk free rate of return (the real risk free rate of return plus risk premium for inflation).

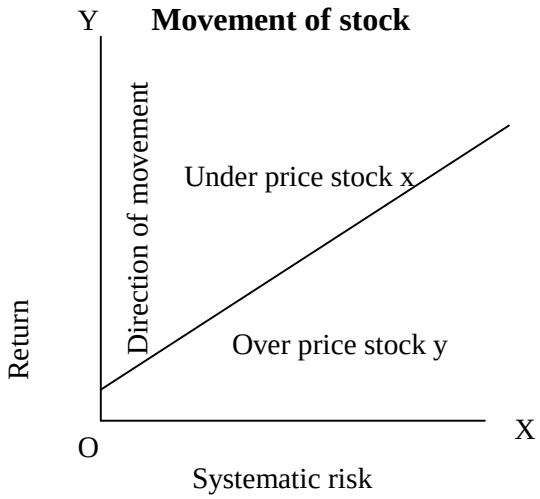
R_m =The expected rate of return on the market portfolio.

b_j=Beta coefficient of stock j.

Most betas lies between 4 and 1.9. “The CAPM provides a means by which one can estimate the required rate of return of a security. ON the basis of price and dividend data, expected return can be calculated, By comparing two or more than two returns, investors can analyze whether the stocks are overpriced or under priced.’ The capital asset pricing model allows us to draw certain implications about the expected return of a specific security. The key assumptions in the model are that5 the perfect capital markets exist and that investors have homogeneous expectations.”(Van Horn; 1997:85)

‘In market equilibrium, the required rate of return on stock equals its expected return. That is all stocks will lie on the security market line, what happens when this is not so? Suppose that ink the given diagram the security market line is drawn on tee basis of what investors as a whole know to be the approximate relationship between the required cal then X and Y is improperly priced. Stock X is under priced relative to the security market line, while stock Y is o.

Diagram 2.2



As a result, stock X is expected to provide a rate of return greater than that required used on its systematic risk. In contrast stock Y is expected to provide a lower return than that required compensating for its systematic risk. Investors seeing the opportunity for superior returns y investing in stock X should rush to buy it. This action would drive the price up and the expected return down. How long would this

continue? It would continue until the market price was seen, the expected return would bow lie on the security market line. In the case of stock Y. investors holding this stock would sell it, recognizing that they could obtain a higher return for the same amount of systematic risk with other stocks. This selling pressure would drive Y's market price down and its expected return up until the expected return was on the SML, When the expected returns for those two stocks return to SML market equilibrium will again prevail" (Van Home and Wachowicz, 1996: 224).

2.1.11 Arbitrage Pricing Theory (APT)

"Arbitrage is the process of earning risk less profits by taking advance of differential pricing for the same physical asset or security. As a widely applied investment tactic, arbitrage typically entails the sale of security at a relatively high price and the simultaneous purchase of the same security (or its functional equivalent) at a relatively low price.

Arbitrage activity is a critical element of modern, efficient security markets. Because arbitrage profits are by definitions risk, less all investors have an incentive to greater resources and inclination to engage in arbitrage than others. However, it takes few of these active investors to exploit arbitrage situations and, by their buying and selling actions eliminate these profits opportunities" (Reilly and Brown; 2004:284).

"Arbitrage is the process of earning risk less profits by taking advantages of different pricing for the same physical asset or security. As a widely applied investment tactic, arbitrage typically entrails the sale of security at a relatively high price and the simultaneous purchase of the same security (or its functional equivalent) at a relatively low price.

Arbitrage activity is a critical of modern efficient security markets. Because arbitrage profits are by definition all investors have an incentive to take advantages of the whenever they are discovered. Granted, some investors have greater resources and inclinational to engage in arbitrage than others. However, it takes relatively few of these active investors to exploit arbitrage situation and, by their buying and selling actions. Eliminate these profit opportunities (Sharpe,Alexander and Bailey, 2003:284)

The APT is said to be more realistic on the ground that it is more general than CAPM. The CAPM assumes that the rate of return on a security is influenced by only one

factor, that is, the awl-age market performance Unlike CAPM, the APT assumes that the rate of return on a marketable security is a linear function of the movement of a set of economic factors common to au securities The random rate of return of return under APT model is linear function of k factors as follow (Pradhan. 2000: 356).

Rj = Rj + bj1FI+ bj2F2 + …. bjnFn+ej

Where,

Rj =Random rate of return stock j

Rj= Expected rate of return on stock j

b_jn = Sensitivity of stock j's return to nth factor

Fn = Mean Zero nth factor common to the returns of all assets.

rj = Random error term indicating the unique effect on return.

2.1.12 Portfolio Expected Return

"An investor's objective is to make maximum return from his/her fund at the lowest risk. By investing in a single asset, investor can not achieve his/her objective. But it is only possible through portfolio through portfolio. A portfolio is a combination of securities. By the help of portfolio, risk can be diversified. In this context, it can he cleared through a proverb "do not pull 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 can not be diversified by forming portfolio. Tints, the objective of the portfolio analysis is to develop a portfolio that has the maximum return at whatever level of risk the investors deems appropriate"(Thapa, Bhattarai and Basnet; 2006:148)

Expected return on portfolio is the summation of the weighted return of individual security. It is calculated by using probability of each return as weight and summing the products of the rates of return and their respected probabilities.

The expected return on a portfolio is the weighted average expected return of the individual stocks in the portfolio. The weights are equal to the proportion of total funds in each security. Symbolically, expected return of a portfolio,

$R_p = W_1K_1 + W_2K_2 + …….. + W_nW_n$

Where,

R = Portfolio Expected Return

W_1= Weight for stock 1

W_2 = Weight for stock 2

K_1 = Expected Return for stock 1

K_2= Expected Return for stock 2

2.1.13 Portfolio Risk

Portfolio risk is a function of the proportional invested in the components. The riskiness of the components is correlation of returns on the component securities. It is measured by standard deviation. The risk of a portfolio is not a simple weighted average of the standard deviation of the individual securities. It depends on the investment weight on individual security. Risk on individual security and correlation between given securities.

"Portfolio risk is measured by statistical tool standard deviation and variance. It is a function of the proportions invested in the components. The risk ness of the components and the correlation of returns on the components securities. This risk is computed by using the following formula. Risk ness of the components and the correlation of returns on the components securities. This risk is computed by using the following equations:

Variance ($\pm_p^2$) = $w_1^2\pm_1^2 + w_j^2\pm_j^2 + 2w_i w_j \operatorname{cov}(r_i r_j)$

$\pm p = \sqrt{w_1^2\pm_1^2 + w_j^2\pm_j^2 + 2w_i w_j \operatorname{cov}(r_i r_j)}$

Where,

$\pm_p$ =Standard deviation of portfolios rate of return

w_i =Weight for stock i.

w_j =weight for stock j.

$Cov_{ij} = P_{ij}\pm_i\pm_j$

P_{ij} = Correlation Coefficient between variables i & j.

2.1.14 Portfolio Performance Evaluation

Risk and return should e considered by giving important priority when considering a portfolio performance. Due to absence of wither risk or return were can not measure their performance of portfolio effectively. There are various methods applied to measure the portfolio performance. Among them, one of the important techniques that are Shape's Portfolios performance. Measure is considering here in this study:

Sharpe's Performance Measure:

When considering a portfolio's performance, it is important to consider both returns and risk. One performance measure that has been developed to evaluate a portfolio's performance considering both returns and risk simultaneously is the Sharpe Index of portfolio performance. It is defined by equation below" (Clark, 2000: 301).

$$S_p = \frac{Risk \text{ premium}}{Total \text{ risk}} = \frac{r_p - R_f}{\pm_p}$$

Where,

Sp= Sharpe's index of portfolio performance for portfolio p

r_P = Average return for portfolio p

σ_p= Standard deviation of return for portfolio p

R_f= Risk less rate of interest

Treynor's Performance Measure:

"Another index of portfolio performance that is similar to the Sharpe index is the Treynor performance index. The Treynor index, however, is concerned with systematic risk while the Sharpe's index is concerned with total risk as measured by a portfolio's standard deviation of return. The Treynor's index is defined as follows." (Clark, 2000: 301)

$$T_p = \frac{Risk \text{ premium}}{\text{Portfolic beta coefficient}} = \frac{r_p - R_f}{b_p}$$

r_p=The average return for portfolio p

R_f= Risk less rate of interest

B_p = the beta for the portfolio

Jenson's Performance Measure

"Michael Jenson has also developed a method for evaluating a portfolio's of asset's performance The Jenson's measure is computed with regression equation" (Clark, 2000: 301)

$J_p = r_p - r_f + (r_m - r_f)b_p$

Where,

J_p= Jenson's alpha of portfolio or Jenson's performance measure

r_p= Average realized return from portfolio

r_m= Risk free rate of return

b_p= Beta portfolio

Higher the resulting index, the better is portfolio performance.

2.2 Review from Articles

In the Nepalese context, there arc very limited numbers of articles can be found relating to management of commercial banks of Nepal. Specially, it is rate in the case of this research topic. However, there are available some independent studies which are related to the Nepalese Stock Market, Portfolio Management and shareholders democracy are summarized below in detail. Pradhan (1993), carried out a study on the topic of

"Stock Market Behavior in a small capital market: a case in Nepal" in 1993, the study was based on the data collected for 17 enterprises from 1983 though 190.One of the major objectives, which are i-elated to this study, as "To access the Stock Market behavior in Nepal." Pradhan has summarized the following findings;

1. Dividend per share and Market price share was positively correlated.

2. Higher the earning on stocks, larger the ratio of dividends per share to market price per share.
3. There are positive relationship between dividend payment and liquidity (Pradhan; 1993:23).

Chopra, (2046 B.S), in his article "The Role of Foreign Bank in Nepal" conclude that the joint venture banks are already playing dynamic and vital role in the economic development of the country and this will undoubtedly increase with time. (Chopra; 2046:1) Shrestha, (2055 B.S) has given a short foretaste on the "Portfolio Management in Commercial Bank, Theory and Practice". Shrestha has highlighted the following issues in his article. The portfolio management becomes very important for both individual as well as institution investors. Investors would like to select a best mix of investment assets subject to the following aspects.

- Higher return which is comparable with alternative opportunities available according to the risk class of investors.
- Good liquidity with adequate safety of investment.
- Certain capital gain.
- Maximum tax concession
- Flexible investment.
- Economic efficient and effective investment mix.

In view of above aspects, following strategies are adopted:

- Do not hold any single security i.e. try to have a portfolio of different securities.
- Do not put all the eggs in one basket i.e. to have a diversified investment (making investment indifferent sectors).
- Choose such a portfolio of securities, which ensures maximum return with minimum risk or lower of return but added objectives of wealth Maximization.

However, Shrestha also presented the following approaches to be adopted for designing good portfolio and its investment:

- To find out the invisible assets (generally securities) having scope for better returns depending upon individual characteristics like age, health, need disposition, liquidity, tax liability etc.

- To find out the risk of securities depending upon the attitude of investor toward risk.
- The develop alternative investment strategies for selecting a better portfolio this will ensure a tradeoff between risk and return to attach the primary objective of wealth maximization lowest risk.
- To identify securities for investment to refuse volatility of return and risk.

In this study, Shrestha has presented two types of investment analysis techniques i.e. fundamental analysis and technical analysis to consider any securities such as equity, debentures bond and other money and capital market instruments. He has further suggested that the banks having been international net work can also offer assess to global financial market. He has also point out the required skilled work force research and analysis and proper management information system in any type of commercial banks to get success in portfolio management and customers' confidence (Shrestha; 2055: 13)

Shrestha, (2057 B.S), in his article Commercial Banks Comparative Performance Evaluation" concluded that the joint venture bank ale new operationally more efficient, having superior performance while comparing with local banks that are operating in Nepal.

Better performance of joint venture banks is due to their sophisticated technology, modern banking method and skill. Their better performance is also due to the governments branching policy is rural areas. Local bank are efficient and expertise in rural sectors but having number of deficiencies. Thus, local banks are facing growing constraints of socio-economic, political system on one hand spectrum and that of the issues and challenge of joint venture banks is due to their sophisticated technology, modern banking method and skill. Their better performance is also due to the governments branching policy is rural areas- Local hank are efficient and expertise in rural sectors but having number of deficiencies. Thus, local banks are facing growing constraints of socio-economic, political system on one hand spectrum and that of the issues and challenge of joint venture bank commanding significant banking business on other spectrum (Shrestha; 2057: 44)

2.2.1 Review of Thesis

Shah (2004) in her thesis *"Impact of Interest Rate Structure on Investment Portfolio of (Commercial Banks in Nepal"* has been done in 2004. The main objective of the study is to analyze the interest rates structure and its impact on various activities of commercial banks. Other objectives are as follows;

- To present the concrete picture of the interest rates structure before and after liberalization.
- To study the relationship between interest rates and other economic variables like deposit loan, and advances, total investment and credit flow of commercial banks.
- To evaluate the trends of deposit, loan, and advances, total investment and credit position of commercial banks.
- To analyze loans and advances in different sectors of investment portfolio of commercial banks.
- To study the current impact of deregulation on interest rate and its effects on related fields.

Measuring interest rate impact in terms of return in investments, researcher used financial tools to calculate interest returns in savings and fixed deposits as well as the impact on loan distribution patterns. Research gave the key to find out the significance difference of interest rate structure between deposits and loans. Taking the liberalization policy as a marginal impact researcher tried to conclude the research by assessing various ratios in terms of interest.

Major finding:

- The interest rates on saving deposit are less or more constant in five years of before liberalization but it started to decline after liberalization. In the same way the f5xed deposit rates also started to decline after liberalization. Thus the deposit is increasing at decreasing rate. The lower rates of interest rates decrease deposit. Deposit rate is the most important determinant of the deposit collection.
- The lending rates on purpose wise loan i.e. industrial sector, agricultural sector increased in average after liberalization hut decreased in commercial sector.

Increasing in lending rates resulted in the decrease in credit flow, which consequently decreased the profit of commercial banks.

- The amount of deposit increased after liberalization hut the growth rate in average comparison to before liberalization increased only by 0.44%. Thus the deposit had not increased more even after the existence of liberalization is due to the declining deposit rates.
- CBs investment in government and other securities highly increased in the year liberalization, which is due to the lack of proper utilization of collected resources. But started to decline after two years of liberalization and reached to negative point due to the higher rate and enough promising investment opportunities available in private sectors.

Shrestha, Natasha (2005) in her thesis entitled *"Portfolio Analysis of Common Stock of' Commercial Banks in Nepal"* has been done in 2005. The main objective of the study is to find out level of portfolio risk and return on stock of commercial hank investment and other objective are;

- To analyze the trend of NEPSE index.
- To analyze the risk and return of common stock of reviewed banks.
- To analyze the market price movement of the common stock.
- To try to find out the best portfolio from NEPSE.

Various tools are used to analyze the data to support the conclusion. Trend analysis showed the trends of NEPSE Index. Risk and return tools like Beta coefficient, Portfolio risk and return, Expected return, holding period return along with statistical tools like CV, Standard Deviation, Correlation and Regression are used to find out the relevance of data collected.

Major Findings:

- Expected return of HBL stock is highest i.e. 53.68% and NABIL is lowest i.e. 32.72% among the banks. NBBL and SCBL have expected return of 47.05% and 39.02% respectively. The risks of NBBL is highest i.e. 93% and SCBL has a lowest risk i.e. 55.42% HBL and NABIL have a risk of 84.98% and 60.86% respectively.
- The correlation of stock, return and market shows that all of the banks stock are highly positive correlated with the market. The correlation values of common stock of all bank with the markets is nearly equal +1. Stock of NBBL is highest positive correlation which has values of +0.918 and HBL is lowest positive correlated which has a value of +0.82.
- All of banks beta of common stock is greater than 1. Beta greater than 1 implies that stocks are more volatile than market or said to be aggressive stock. NBBL has the highest beta i.e. 2.1785 and SCBL has the lowest beta i.e. 1.2142. All of the stocks are aggressive.
- Among four banks optimal portfolio return and risk shows that return NBBL is highest i.e. 32.7% and return of HBL is lowest i.e. 24.9% and HBL has a highest portfolio risk of i.e. M% and SCBL has a lowest portfolio risk of 34.8%.

Shrestha (2006) in his thesis entitled "*A Study on Investment Portfolio of Commercial Banks in Nepal*" has been done in 2006. The general objective of this research is to identify the current situation of investment portfolio of CBs in Nepal. The main objectives are as follows:

- To analyze the investment portfolio of Commercial Banks
- To analyze the risk and return of selected commercial banks on investment using Portfolio concept.
- To forecasting and examine the trend of investment and to provide complementary measures based on analysis.

Methodology used to analyze the data includes common financial tools like return on share and debenture, return on government securities, return on loan and advances and return on portfolio. For risk measurement, it was measured on risk on individual assets and risk on portfolio. The major ratios like return on total asset ratio, total investment

to total deposit ratio, loan and advances to total deposit ratio, government securities to total deposit ratio are used. To verify the assumption, there used common statistical tools like standard deviation, arithmetic mean. co- variance, correlation and regression analysis.

Major Findings:

- Proper investment on various securities i.e. balance allocation of funds on various government securities such as Treasury bills, National saving bonds, Development bonds etc and fixed income percentage rate that help to reduce the variability of return. In the analysis of risk and return comparatively SCBNL have more return from investment on government securities like same NABIL has better position on investment on loan and advances.
- The return on share and debenture of commercial banks shows vide fluctuation. These fluctuations in returns are caused mainly by the volatility of the shares prices in market and by the changes in dividends in some extent. Comparatively to other assets, share and debenture has higher return and higher risk. 1-lence, it is cleared from analysis that investment on share and debenture is high risky assets.

Paudyal (2006) conduct a study on *"A study on Portfolio Analysis of Commercial Banks in Nepal"* with the objective of

- To evaluate financial performance of commercial banks of Nepal.
- To examine the existing situation of portfolio management of Nepalese commercial hank.
- To analyze risk and return of commercial banks.
- To analyze the investment and loans and advance portfolio of commercial banks.
- To show the present position trend of loan and advance and investment to total deposit and forecast it.

Using common financial tools like ratios, portfolio returns, port-folio risk, systematic and unsystematic risks, and researcher tried to give up the insights of financial performance. To process the financial data, some common statistics tools like correlation, covariance, and coefficient of determinant are used to find the relevance and significance of the samples.

Major Findings:

- The industrial mean ratio of investment to total deposit is 21.86%. The only EBL has a greater ratio above industrial mean ratio i.e. 2477>21.8. But other banks have lower investment to total deposit ratio than industrial mean ratio. It shows that EBL has effective mobilization its deposit on investment to generate the return. But other banks are investing its deposits in lower ratio than average industry ratio. Similarly, the CV of EBL is the lowest i.e. 19.9%. Lover ratio indicates that cost consistent which is better than high consistent. The industry CV ratio is 32.37%. The EBL and HBL have the lesser CV ratio to the comparison with industrial CV ratio. It shows variability of ratio of EBL and FIB 1, is the most consistent.
- BOKL stock has the highest expected return i.e. 8.34% and 1-IBL has the lowest expected return i.e. -8.82%. NIBL has also negative return i.e. -7.71%. The market expected return is -6.47%. The risk of BOKL is the highest i.e. 57.14% and 1-1RL has the lower risk i.e. 15.26%. NIBL and ERL have risk 19.41% and 36.03% respectively. The market risk is 15.68%. In conclusion we can say that higher the risk higher the return and vice versa.
- Total risk of BOKL stock is highest and total risk of HEL stock is lowest among four commercial banks.

Shrestha (2009) has conducted a study on "*Investment Policy and Portfolio Management of NCC Bank Limited*. " The main objective of the study was to appraise the Investment Policy of NCC Bank and to evaluate its portfolio as well. The major objectives of the study were given below:

a. To evaluate the Investment Policy of the bank for loans and advances and that for investment on securities.
b. To analyze the investment portfolio of bank in ground of portfolio's liquidity, portfolio management, portfolio performance and portfolio's profitability.
c. To analyze how efficiently the resources have been utilized.
d. To evaluate changes in the portfolios after the improvement in the Capital Adequacy position of the bank.

The research was conducted mainly on the basis of secondary data. The research findings of the study are as under:

- It was found that hank has formulated a satisfactory loans and advances policy. Most of the credit related matters were found well incorporated in the policy documents. 1-Towever, due to Jack of written and clear-cut policy statement since the commencement of the hank, the investment portfolio deteriorated in terms of profitability. Formal credit policy 2002 was made effective on 2002 (2059 BS) After this, the portfolio also appeared improving

- There was not investment policy for investment on shares, bonds and debentures till the FY 2063/64. All the investments were used to make with the decision of the Treasury Manager and the Chief of the Bank. So, this category of investment operation was not well massaged in the bank. As a result of this, there was significant proportion of unmarketable, illiquid and unyielding assets in securities portfolio of bank. Such assets were hampering the liquidity arid profitability of banks. From the FY 2064/65, the Bank has been following the provision of Investment Policy for mailing investment in Government Securities, Shares and Debentures.

- Though there was not investment policy for investment on shares, bonds and debentures till FY 2063/64, the existence of clear-cut policy for credit operation has kept the overall investment operation as guided by acceptable policies

- Thus, to sum up, the study on investment policy suggested that the bank is following a "Sound" investment policy to conduct its investment function as suggested by policy scores.

Shrestha, (2010) conducted a study on *"A Comparative Analysis on investment performance of commercial banks in Nepal"* with the following objectives:

- To analyze the investment activities and fund mobilization with respect to fund based on-balance sheet transactions and fee based off-balance sheet transactions
- To study the asset utilization system, profitability and risk position of commercial banks under study
- To assess the deposit utilization trends and its projection for the future

- To evaluate the growth ratios of loan and advance and total investment and respective growth rate of total deposit and net profit
- To appraise the suggestion on the basis of findings for further growth of the banks tinder study

The study was conducted on the basis of secondary data. The research findings of the study were as follows:

- The liquidity position of NIBL was stronger than NABIL and HBL. At the same time, liquidity position of NIBL was highly fluctuating, which showed that NIBL bore higher risk than other two banks.
- NIBL had the least investment in Government Securities, which considered the least risky asset. From the analysis of assets, management ratio of NIBL in comparison to NABIL and HBL was more successful regarding asset management and deposit mobilization. NIBL's investment on shares and debentures was high in comparison to the other two banks but its performance regarding total investment has been very poor. In the profitability analysis, none of the three banks' profitability position was clearly better. However, NABIL was slightly better profitability. Therefore, their profitability ratios were in rnoderate position.
- From the risk point of view, NABIL and NIBL were facing higher risk than HBL. but the risk level of all three banks seemed almost the same, From the analysis of growth ratios, NIBL's collection of deposit, granting of loans and advances and net profit were better hut in terms of investment, HEL is better.
- The coefficient of correlation analysis between different variables of NABIL, NIBI, and HBL revealed that NABIL was weaker regarding mobilization of deposits as loans and advances and NIBL was performing extremely well regarding earning profits from outside assets.
- From the trend analysis study, it was found that all banks were mobilizing their total deposits into loans and advances in increasing trend, which was the indication of efficient mobilization,

Adhikari (2011), has conducted a research on "A Study on Investment Policy of Nabil And Everest Bank Limited." The main objective of this study is to examine the investment policy of two joint venture banks (JVBS), namely NABIL and EVEREST Banks Ltd. the specific objective are given below:

a) To evaluate the liquidity, profitability, and risk position of the banks.

b) To find the empirical relationship between deposits, loans and advances, investment and net profit.

c) To provide suggestion on the basis of major finding.

The research was mainly based on secondary data with negligible information and data collected from primary sources. The data required for the analysis are directly obtained from the balance sheet and P/L account of concerned bank's annual reports.

The major findings of the study were derived with the help of analysis of financial and statistical tools of Nabil and Everest hank are as follows.

- Liquidity position of Nabil is comparatively lower than Everest bank. It has lower cash and bank balance to total deposit, cash and hank balance to current assets and investment on government securities to current assets. It has maintained highest ratio on loan & advance to current assets.
- The mean ratio of loan & advance to total deposit of Nabil is lower than Everest hank. It indicates Everest has utilizing its deposit in loan & advance better than Nabil hank.
- Investment on government securities to total working fund ratio of Nabil is lower than Everest bank. It indicates that the investment policy of Everest is better to utilize its working fund.
- The mean ratio of in-vestment on shares and debenture to total working fund of Nabil is higher than Everest bank.
- The mean ratio of return on total working fund ratio of Nabil bank is higher than Everest bank. Nabil bank is successful to maintain higher ratio of investment return on total working hind.
- The growth ratio of' loan &advance of Nabil lower than Everest bank, which indicates that the performance of Everest to grant loan& advance is better than Nahil hank.

2.3 Research Gap

Risk, return and portfolio are the most important part of finance because they can strong impact on investment. Thus, it is not totally new concept. Many researchers

have done research on this aspect. As long as researchers knows, no specific research has yet been able to go in depth of the topic and has successfully of this topic has been based on only showing the risk and return analysis of the stocks of commercial banks. Hence, this research will the prevailing research gap by calculating the portfolio risk, return and market price of different companies and estimating the optimal portfolio among the common stock on the basis of all relevant data and information of the latest ten fiscal year of six. Nepalese joint venture banks, which are the major concern of public share holders and others stockholders. Furthermore, the portfolio performance has also been evaluated with using Sharpe index of portfolio performance measure, which has not been calculated on other studies.

CHAPTER III

RESEARCH METHODOLOGY

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are adopted by a researcher in studying his research problem along with the logic behind them (Kothari, 1990:10). This chapter will includes research design, a nature of data, data gathering procedure, population and samples and data processing procedures.

3.1 Research Design

A per nature of the study, descriptive cum analytical research design has been followed. The descriptive research design describe about the pattern of the Nepalese investor, problem and uses of portfolio management, structure of business etc. The analytical research design makes a critical evaluation.

3.2 Source of Data

This research study is mainly based on secondary data. Published affiRm1 report of the concern banks are taken as the basic source of data. Similarly, related books, magazine, journals, articles, reports, bulletins, data from Nepal Stock Exchange and Nepal Rastra bank Banking directive and financial statistic, related website etc as well as other supplementary data and various economic survey's are also used. Previous related studies to the subject are also counted as the source of information.

3.3 Population and Sample

All licensed Nepalese commercial banks will consider as the total population of our then this study will be concern with two commercial bank as a sample, those banks are: Nabil Bank and Himalayan Bank. Because these banks are categories at same category. Their market prices of stocks are also not so vast different between each others. There establishment and operation date are also not so different. Their Earning per Share are also not so different between each other.

3.4 Data Gathering Procedure

As this study will mainly base on secondary data, Primary data will be used it necessary. The secondary will be collected from various libraries, various related

literatures, from related website, from concern bank's information section. Primary data will collect by developing as schedule questionnaire and distributing it to manager and finance chief that will available. To get most reliable result discussion with respondent will be conduct. In this way data will collect and use analysis and interpretation.

3.5 Data Analysis Tools

On the basis of historical data financial as well as statistical tools are used to make the analysis more convenience, reliable and authentic.

3.5.1 Financial Tools

The following financial tools have been used while making analysis of data.

Portfolio Expected Return

"The expected returns of a portfolio are the weighted average of the expected returns of the individual assets in the portfolio. The weights are the proportion of the investor's wealth invested in each asset." (Cheney mid Moses, n.d:652)

$$R_p=W_1K_1+W_2K_2+\ldots\ldots\ldots\ldots...+W_nK_n$$

Where,

R_p= Portfolio of Expected Return

W_1= weight for stock 1

K_1= Expected Return for Stock 1

W_2= Weight for Stock 2

K_2= Expected Return for Stock 2

Portfolio Risk

"The calculation of the portfolio risk is not as straight forward as the calculated of a portfolio's expected return. In order to calculate the portfolio consideration must he given not only to the risk of the individual assets in the portfolio and their relative weights but also to the extent to which assets' returns move together We measure the risk of an individual assets by the variance of returns or its square root, the standard deviation, The degree to which the assets 'returns move together is measured by the covariance or correlation coefficient. By combining the measures of individual assets risk (variance or standard deviation), relative asset weights, and the co- movement of

assets return (covariance or correlation). The risk of the portfolio can be estimated" (Cheney and Moses, n.d:653).

For the portfolio consisting of two assets A and B

$$\pm_p = \sqrt{W_A^2 \pm_A^2 + W_B^2 \pm_B^2 + 2W_A W_B Cov_{AB}}$$

$\pm_p$ = Standard deviation of portfolios rate of return

W_A = Weight for stock A W_B = Weight for stock B

Cov = Covariance of returns between assets A and B

Minimum Risk Portfolio

It is the portfolio with the lowest level of risk in the efficient frontier. It is also called risk minimizing weight or optimal weight. In two stock portfolios, the optimal weight to invest in stock A and stock B is calculated as follows (Thapa, 2001:32)

$$W_A = \frac{\pm_B^2 - Cov(R_A R_B)}{\pm_A^2 \pm_B^2 - 2Cov(R_A R_B)}$$

Where,

W_A = Optimal weight to invest in stock 'A'

W_B= Optimal weight to invest in stock 'B'

Portfolio Performance Measure

Sharpe's Performance Measure:

"When considering a portfolio's performance, it is important to consider both returns and risk. One performance measure that has been developed to evaluate a portfolio's performance considering both returns and risk simultaneously is the Sharpe Index of portfolio performance. It is defined by education below." (Clark. 2000:301)

$$S_p = \frac{Risk \text{ premium}}{Total \text{ risk}} = \frac{r_p - R_f}{\pm_p}$$

Where

S_p= Sharpe's index of portfolio performance for portfolio p

r_p= Average return for portfolio p

$\pm_p$ = Standard deviation of return for portfolio p

R_f= Risk less rate of interest

Treynor's Performance Measure:

"Another index of portfolio performance that is similar to the Sharpe index is the Treynor performance index. The Treynor index, however, is concerned with systematic risk while the Sharpe's index is conceined with total risk as measured by a portfolio's standard deviation of return. The Treynor's index is defined as follows." (Clark, 2000:301)

$$T_p = \frac{Risk \text{ premium}}{Portfolio \text{ beta cofficeint}} = \frac{r_p - R_t}{b_p}$$

Where,

T_p= Treynor's index of performance for portfolio p.

r_p = the average return for portfolio p

R_f = Risk less rate of interest

B_p=the beta for the portfolio

Jenson's Performance Measure;

"Michael Jenson has also developed a method for evaluating a portfolio of asset's performance The Jenson's measure's computed with regression equation." (Clark, 2000; 301)

$J_p = r_p - r_f + (r_m - r_f)\, b_p$

Where,

J_p= Jenson's alpha of portfolio or Jenson's performance measure

r_p= Average realized return from portfolio

r_m= Risk free rate of return

b_p= Beta portfolio

Higher the resulting index, the better is portfolio performance.

3.5.2 Statistical Tools

The following statistical tools have been used while making analysis of data.

"Expected return (Arithmetic Mean)

Expected return is the arithmetic average of the historical returns forecasted for next period. It is obtained by dividing the sum total of the returns by the number of the

observation. In probability distribution, the expected return is obtained as the weighted average of the probability and the forecasted returns.

$$\Sigma(Rm) = \frac{ER_m}{N}$$

Standard deviation

Standard deviation (SD) is defined as the positive square root of the mean of the square of the deviation taken from the arithmetic mean. It is denoted by ± .t is said to be the best measure of dispersion as it satisfies most of the requisites of a good measure of dispersion. Standard deviation is an estimate of the likely divergence of an actual return from an expected return. It measures the risk of the return. The higher the standard deviation, the more risk will he in an assets.

$$\pm_m = \sqrt{\frac{(R_m - R_m)^2}{N-1}}$$

Where,

$\pm_m$ = Standard Deviation of market

R_m= Risk of Market

R_m= Expected Return of Market

N = No of observation

Variance of stock

Variance is the square of standard deviation. It is denoted by sigma square (o). It is the sum of the squared deviation from mean divided by number of observation in case of historical returns. In case of probability distribution, it is the sum of the squared deviations multiplied by the probabilities. The variance also shows the total risk of investment,

$$\pm^2 = \sqrt{\frac{(R_m - R_m)^2}{N-1}}$$

Where,

± =Variance of the stock

R_m= Risk of market

R_m = Expected Return of Market

N= No. of observation

Coefficient of Variance

Coefficient of variation is the standardized measure of risk per unit of return. It is calculated as the standard deviation divided by the expected return. It provides a more meaningful basis for a comparison when two or more than two investment of different expected return and standard deviation are to be compared. Other things held constant, the lower the CV. if E(r) is the arithmetic mean and the standard deviation of the distribution, then the CV. is define by

$$C.V = \frac{\pm}{x} \times 100$$

Where,

σ =Standard Deviation

$\sum$ (r) = Expected return

Total Risk

Total variability of returns of an asset or portfolio is measured by variance and standard deviation. This total risk can be divided into two parts i.e. diversifiable and undiversifiable risk.

Therefore,

Total risk = diversifiable risk+ Un-diversifiable risk

$$\pm_j^2 = Var(e) + \ {}_{jm}^{2}\pm_m^2$$

Diversifiable Risk

Diversifiable risk is also known as unsystematic risk. This types of risk unique to an organization and can he largely eliminated by holding a diversified portfolio of investment. It is caused through the event like, labor strikes, management errors, invention, advertising campaign, and shifts in consumer test, availability of raw materials. It can be stated as:

Therefore Unsystematic risk = Total risk-systematic risk

Var (e) = $\pm_j^2 - {}_{jm}^2 \pm_m^2$

Where,

Var (e) = variance of standard error

Un-diversifiable Risk

Un-diversifiable risk is known as the systematic risk. This risk is those portions of total variability in return caused by market factor (also called market risk) that simultaneously affect the price of all securities. This risk created due to the changes in macro economic factor like, interest rate, inflation, investors' expectations, gross domestic product (GDP etc. Un-diversifiable risk is that part of total risk that can not he eliminated by allocating capital to a diversified portfolio of investment. It can be stated as: (Bhattarai, 2004: 121-123)

Systematic risk= Total risk — unsystematic risk

$${}_{jm}^2 \pm_m^2 = \pm_j^2 - Var(e)$$

Proportion of Systematic Risk = $\frac{\text{Systematic } Risk}{Total \text{ risk}} \times 100$

Proportion or percentage of systematic risk is also measured by coefficient of determination. Coefficient of determination is the square is the square of correlation coefficient. It can be states as:

Coefficient of determination (P^2_{jm}) = $\frac{\text{Systematic } Risk}{Total \text{ risk}} \times 100$

Covariance

Covariance is a statistical measure of the relationship between two random variables. That is a measure of two random variables, such as the return on securities I and j ,"move together". A positive value for covariance indicates that the securities returns tend to move in the same direction. A negative covariance indicates a tendency for the returns to offset one another. A relatively small or zero value for the covariance indicates that there is little or no relationship between return for two securities.

$$\text{Cov}(r_i, r_m) = \frac{\Sigma(Rr_i - R_i)(R_m - R\overline{m})}{N - 1}$$

Where,

Cov (r_i, r_m) = Covariance of stock l and Market

Correlation

Correlation is a statistical concept measuring the extent to which two variables tend to move together.

Where P_{ij} (the Greek letter rhea denotes) the Correlation Coefficient between the return on security I and return on security j. The correlation rescales the covariance to facilitate compassion with corresponding values for other pairs of random variables. Correlation Coefficient always lies between -1 and +l. A value of-I represent perfect negative correlation, and a value of +1 represents perfect positive correlation. Most cases lie between these two extreme values, When the two variables have no relationship, they are on correlated and the correlation coefficient is zero, if the two assets have perfectly negative correlation, the minimum risk of the portfolio of those assets is zero meaning it is possible to create a risk less portfolio by perfectly negatively correlated assets. If the assets are perfectly positively correlated, no risk can he reduced by making the portfolio of such assets. If the correlation is less than +1, risk reduction is possible by making the portfolio (Dahal: 2003),

Correlation coefficient between two assets return can be calculated as below;

$$\text{cov}(r_i, r_m) = \frac{\text{Cov}(r_i r_m)}{\pm_i \pm_m}$$

Where:

Cor (r_i, r_m) = correlation of stock I and Market.

Cor (r_i, r_m) = Covariance of stock I and Market.

Coefficient of determinants

$$P^2_{jm} = \frac{\text{Systematic } Risk}{Total \text{ risk}}$$

$$= \frac{^2_j \pm ^2_m}{\pm ^2_j}$$

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter summarize the whole study summary of the study has been mentioned in the first section. The second section reflects the conclusion drawn from the study. The Third part is recommendation to enable the weakness drawback of concern banks and portfolio investment on the basic of finding and conclusion of the study.

5.1 Summary

The investment decision is one of the major functions of financial management. It depend upon two factors i.e. risk and return. Risk is the fluctuation of actual returns and expected return. Higher risk may have greater possible return. Investor attitude, perception and risk handling capacity also play essential role in rational investment decision.

The risk is involved in every step of return every investor wants a maximum return from minimum level of risk. So as to minimize the risk investor should diversify their investment by the means of portfolio.

The basic objective of portfolio management is to minimize. The risk at the given rate of return, Portfolio management is one of the changing tasks for every financial institution. Now a day there is very high competition in banking industry but very less opportunity to make on investment without proper management of portfolio any institution cannot compete effectively in market. Portfolio management of bank assets basically means allocation of fund to different degree of risk and varying rates of return in such V.-ay that it can balance the conflicting goal of maximum yield in minimum risk. Bank has to invest its resources in different productive sector of investment alternative to earn profit. Uncertainty of profit creates risk to an investor. So every investor has to diversify their investment indifferent sector to minimize risk. Diversification of assets on different sectors lowers the risk of portfolio.

The main objective of the study is to identify the situation of portfolio management of commercial banks of Nepal, analyze the risk return on common stock investment level of portfolio risk and return of commercial banks. While making an analysis and

interpreting the data on portfolio various financial tools like holding period return, CAPM models. Portfolio performance measures etc and statistical tools like mean S.D coefficient of variation, Covariance, correlation, coefficient of determination trend analysis etc have been used. Information are tabulated and presented as per the requirement of study. The data which are used in this study are mainly secondary nature, From this study it is fund that those investor who had made diversification on their investment in different sector have got a better result rather then investing in only one sector,

5.2 Conclusion

As per the objectives and analysis of study the following conclusion have been drawn:

- The stock price of two commercial banks is higher than NEPSE average price of stock. Stock price of two commercial banks are in fluctuating trend than NEPSE index.
- NABIL has the highest expected return than the HBL. So the investor can get the highest return by investing in common stock of NABTL.HBL has the lowest expected return but it has highest CV.
- The correlation coefficient measure the degree of relationship of movement of stock return, Correlation coefficient always lies between +1 and -1. A value of +1 represent perfectly positive correlation and value -l represent perfectly negative correlation. The two commercial banks correlation coefficient values are nearly to equal +1 So stock return are perfectly positive correlated with market,
- The beta itself measures the sensitivity of the stock's return with respect to the change in market return. Stock with beta greater then I is an aggressive stock because it is more volatile then the market portfolio. NABIL's beta of common stock is greater than I
- Coefficient of determination shows [he proportion of systematic risk in total risk, Higher the systematic risk higher will be the coefficient of determination and vice versa, Among the banks l-IBL has a highest portion of diversified (unsystematic risk.), unsystematic risk can be eliminated by allocating the investment.

- All of commercial bank's required rate of return is less than expected rate return and are under priced. Thus from the investor's point of view under priced stock should be purchased so that long position strategy would be beneficiary. Higher will be the required rate of return and vice versa.
- The portfolio risk and return analysis shows that higher amount of investment in risky assets, highest will be return and the higher will be risk as well and vice versa. Likewise higher amount invested in the risk free assets lower will be the return and lower will be the risk also and vice versa.

5.3 Recommendations

- Proper way of construction of portfolio will reduce considerable potential loss, which is defined in terms of risk. But portfolio is a dynamic job. For optimum portfolio select a stock having negatively correlated stock, positive correlated stock could not diversity the risk properly.
- NEPSE need to modernize the trading system and effective information channel. It needs to develop different program for private investor such as meeting and seminar indifferent subject matters.
- Lack of information with the regard to trading procedure in NEPSE also is a one of the causes of trading volume.
- The common stock returns of commercial bank are sensitive to Market. They are positively correlated to the market. So, market Condition should be analyzed.
- Return on portfolio of NABIL is less among the two bank so to increased its portfolio returns. NABIL should increased its more investment fund on risky assets (share & Debenture) and less find on risk free assets (government securities)
- Expected rate of return is greater then required rate of return of all banks stock. So all of the stock is under prices, so stock of these banks should be purchased by an investor. Without proper analysis of individual securities industry and overall market, common stock investment will not be fruitful. To make investment fruitful, buy the under price common stock when market is rising and sale the over price common stock.

- The NABIL bank has highest un systematic risk. The management can eliminate the unsystematic risk. For which NABIL should take on some action to reduce its risk.
- Portfolio condition of bank should be regularly revised from time to time and should maintain the equilibrium in the optimal portfolio condition.
- The banks should always try to make continuous efforts to explore competitive and highly yielding investment opportunities to optimize its investment portfolio.
- Construction of portfolio is a dynamic job. Because efficient portfolio depends on market Movements. For construction of portfolio, select the stocks that the higher return with negatively correlated stocks. Positively correlated stock can not diversify the risk.
- Investment on common stock is risky job. It doesn't guarantee return and principle. So investor should be acquainted with associated risk and work out their attitude towards the riskiness of various investment strategies.
- Generally, it is believed that higher the return, higher will be the risk. Investment risks are better covered through a large and diversified portfolio. Diversifying an investment is a way of reducing the risk

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ANNEX-1

ANALYSIS OF INDIVIDUAL BANKS

Analysis of Himalayan Bank Ltd.

Calculation of HPR, ER, S.D., C.V. , Cov($r_j r_m$), Cor($r_j r_m$) and Beta of HBL

Fiscal Year	MPS	TOTAL DIV (Dt)	$Ro = \frac{(P_t - P_{t-1} + D_1)}{P_{t-1}}$	$(Ro - \overline{Ro})$	$(Ro - \overline{Ro})^2$	$(Rm - \overline{Rm})$	$(Rm - \overline{Rm})^2$	$(Ro - \overline{Ro})(Rm - \overline{Rm})$
2005/06	1505	840	-	-	-	-	-	-
2006/07	1100	639	0.15548	-0.1784	0.031826	0.1661	-0.0259	-0.02874
2007/08	1740	807	1.3155	0.9816	0.96353	0.5798	0.3362	0.56913
2008/09	1980	817	0.5338	0.1999	0.03996	0.2201	0.0484	0.04399
2009/10	1760	267.45	0.07446	0.0673	0.0673	-0.4107	0.1687	0.106535
2010/11	816	218.18	-0.41242	0.5569	0.5569	-0.9127	0.8330	0.6811
Total			1.6698		1.6595		1.412	1.3720

$$\overline{Ro} = \frac{\Sigma R_O}{n} = \frac{1.6698}{5} = 0.3339$$

$$\text{Var} \pm_o^2 = \Sigma(Ro - \overline{Ro})^2 / n - 1 = 1.6595 / 5 - 1 = 0.41487$$

$$\text{Standard Deviation } \pm_0 = \sqrt{0.41487} = 0.644107$$

$$\text{C.V. } \pm_0 \sqrt{R_O} = 0.644107 / 0.3339 = 1.9290$$

$$\text{Cov(Ro, Rm)} = \frac{\Sigma(Ro - \overline{Ro})(Rm - \overline{Rm})}{n-1} = \frac{1.87206}{5-1} = 0.3430$$

$$\text{Cov(Ro, Rm)} = \frac{Cov(Ro, Rm)}{\pm_0 \pm_m} = \frac{10.3480}{0.6441007 \times 0.5941} = 0.8963$$

$$\beta_0 = \frac{Cov(RoRm)}{\pm_m^2} = \frac{0.3430}{0.3530} = 0.9716$$

Analysis of NABIL Bank Ltd

Calculation of HPR, ER, S.D., C.V. , Cov($r_j r_m$), Cor($r_j r_m$) and Beta of NABIL

Fiscal Year	MPS	TOTAL DIV (Dt)	$Ro = \frac{(P_t - P_{t-1} + D_1)}{P_{t-1}}$	$(R_1 - \overline{R}_1)$	$(R_1 - \overline{R}_1)^2$	$(Rm - \overline{Rm})$	$(Rm - \overline{Rm})^2$	$(Ro - \overline{Ro})(Rm - \overline{Rm})$
2005/06	1505	-	-	-	-	-	-	-
2006/07	2240	4377	3.3967	1.572	2.4734	0.1661	-0.0259	0.25336
2007/08	5050	7485	4.5939	2.7719	7.6834	0.5798	0.3362	1.60714
2008/09	5275	4959	1.0265	-0.7975	0.6360	0.2201	0.0484	-.1755
2009/10	4899	2026	0.3128	-1.5112	2.2837	-0.4107	0.1687	0.6206
2010/11	2384	1465	-0.2143	-2.0383	4.1546	-0.9127	0.8330	1.86035
Total			9.1176				1.412	4.1659

$$\overline{R}_1 = \frac{\Sigma R_1}{n} = \frac{9.1176}{5} = 1.824$$

$$\text{Var} \pm_o^2 = \Sigma(R_1 - \overline{R}_1)^2 / n - 1 = 17.2312 / 5 - 1 = 4.3077$$

$$\text{Standard Deviation } \pm_1 = \sqrt{4.3077} = 2.0755$$

$$\text{C.V. } \pm_1 \sqrt{R_1} = 2.0755 / 1.824 = 1.1378$$

$$\text{Cov(Ro, Rm)} = \frac{\Sigma(R_1 - \overline{R}_1)(Rm - \overline{Rm})}{n-1} = \frac{4.1659}{5-1} = 1.0414$$

$$\text{Cov(Ro, Rm)} = \frac{Cov(Ro, Rm)}{\pm_1 \pm_m} = \frac{1.0414}{0..0755 \times 0.5941} = 0.8446$$

$$\beta_1 = \frac{Cov(R_1 Rm)}{\pm_m^2} = \frac{1.0414}{0.3530} = 2.95014$$

ANNEX 2

Analysis of Market

Fiscal Year	MPS	Rm	$(Rm - \overline{Rm})$	$(Rm - \overline{Rm})^2$
2006/07	386.83	0.34939	0.1611	0.0259
2007/08	683.95	0.7681	0.5798	0.3362
2008/09	96..36	0.4085	0.2201	0.0484
2009/10	749.10	-0.2224	-0.41087	0.1687
2010/11	477.73	-0.3622	-0.9127	0.8330
Total		∑Rm=0.9127		$\sum(Rm - \overline{Rm})^2$=1.4122

$$\overline{Rm} = \frac{\Sigma Rm}{n} = \frac{0.9414}{5} = 0.18839$$

$$\text{Varm}(\sigma m^2) = \frac{\Sigma(Rm - \overline{Rm})}{n-1} = \frac{1.4122}{5-1} 0.3530$$

$$\text{S.D. } (\sigma m) = \sqrt{0.353.} = 0.5941$$

$$\text{C.V.} = \frac{\pm m}{\overline{Rm}} = \frac{0.5941}{0.1883} = 3.1553$$

Weighted Average Tresury Bill rate (364)

Fiscal Year	Average Rate (in %)
2006/07	6.9604
2007/08	7.275
2008/09	7.3556
2009/10	8.1312
2010/11	9.062

Source: NRB

6.9604+7.275+7.3556+8.1312+9.062

=7.757

ANNEX 3

Weight of Individual Banks

Individual Amount on Stocks and Government Securities of HBL

Fiscal Year	R_f (Government Securities in Million)	W_{rf}	R_m (Share and dehenture in Million	W_m	Total Investment (million)
2006/07	4565.3	0.9916	38.5674	0.0084	460.87
2007/08	6079.4	0.9881	73.4238	0.0119	6125.82
2008/09	7166.5	0.9877	89.56	0.123	7256.06
2009/10	3907.3	0.9765	93.88	0.0235	4001.18
2010/11	3455.30	0.9777	78.88	0.1223	3533.91
Total		4.9216		0.0784	

$$Wrfo = \frac{\Sigma Wrf}{n} = \frac{4.9216}{5} = 0.9843$$

$$Wmo = \frac{\Sigma Wm}{n} = \frac{0.0784}{5} = 0.0157$$

Rpo = (Rf × Wrfo) + (Rm ×Wmo)

= (7.757×0.9843)+(18.838×0.0157)

= 7.9309

σ po =Wmo ×σ m

= 0.0157×59.41

=0.9327

Total Risk = Systematic Risk + Unsystematic Risk

$\sigma o = \beta o^2 + \sigma m^2 + Var(e_o)$

$0.4148 = 0.9716^2 \times 0.3530 + Var(e_o)$

$Var(e_o) = 0.2377$

$$\text{Coefficient of determination } (\beta o^2) = \frac{o^2 \times \pm m^2}{\pm o^2} = \frac{(0.9716)^2 \times 0.3530}{0.4141} = 0.9843$$

=0.80336

Investment Amt. on Stock and Government Securities of NABIL

Fiscal Year	R_f (Government Securities in Million)	W_{rf}	R_m (Share and dehenture in Million	W_m	Total Investment (million)
2006/07	122.468	0.9965	4.192	0.0034	1223.66
2007/08	4085.84	0.9343	286.95	0.0656	4372.79
2008/09	3788.38	0.9214	323.256	0.0863	4111.63
2009/10	1838.82	0.8382	354.93	0.1417	2193.75
2010/11	5865.88	0.9442	346.85	0.0558	6212.73
Total		4.6346		0.3651	

$$Wrfo = \frac{\Sigma Wrf}{n} = \frac{4.6346}{5} = 0.9269$$

$$Wmo = \frac{\Sigma Wm}{n} = \frac{0..3651}{5} = 0.0705$$

Rpo = (Rf × Wrfo) + (Rm ×Wmo)

= (7.757×0.9269)+(18.838×0.07052)

= 8.518

σ po =Wml ×σ m

= 0.07052×59.41

=4.518

Total Risk = Systematic Risk + Unsystematic Risk

σ 1 =β 1^2 +σm^2 +Var (e_o)

4.3077=2.95014^2 ×0.3530+ Var (e_o)

Var (e_1)= 1.235

$$\text{Coefficient of determination } (\beta\ o^2) = \frac{o^2 \times \pm m^2}{\pm o^2} = \frac{(2.95014)^2 \times 0.3530}{4.3077}$$

=0.7132

ANNEX 4

Calculation of Sharpe's Portfolio Performance Measure

Banks	$\bar{r}p$	σp	$Sp = \frac{\bar{r}p - rf}{\pm p}$
HBL	7.9309	0.9327	0.1894
NABIL	8.5185	4.188	0.1818

Where,

Rf = 7.757

Calculation of Treynor's Portfolio Performance Measure

Banks	B_t	Market Capitalized	Wp	Bp = bp×wp	$\bar{r}p$	$Tp = \frac{rp - rf}{bp}$
HBL	0.9716	12824.371	0.32	0.310912	7.9309	0.56
NABIL	2.95014	27393.052	0.68	2.00695	8.5185	1.12
Total				2.317864		

Where,

Rf = 7.757

Total weighted average beta = ģwpbp =2.317864

Thus, the weighted average of selected commercial banks's (b_{BI}) =2.317864

Calculation of Jenson's Portfolio Performance Measure

Banks	$\bar{r}p$	Bp=Bp ×Wp	Jp= rp –rf +(rm-rf)bp
HBL	7.9309	0.310912	3.7172
NABIL	8.5185	2.00695	22.39

Where,

Rf = 7.757

$\bar{r}m = 18.83$

ANNEX 4

Calculation of Realized rate of return, Standard Deviation and Variance of banking Industry

Fiscal Year	Banking Index	$R_{BI} = \frac{Bl - Bo}{Bo}$	$(RB_1 - RB_1)$	$(R1 - \overline{R}1)^2$
2006/07	404.16	-	-	
2007/08	789.21	0.9527	0.8369	0.7004
2008/09	985.65	0.2489	0.1331	0.0177
2009/10	780.87	-0.2078	-0.3236	0.1047
2010/11	456.93	-0.4148	-0.5306	0.2815
Total		0.5790		1.1043

Expected Return of Banking Industry (RBI) $= \frac{\Sigma R_{BI}}{n} = \frac{0.5790}{5} = 0.1158$

Standard Deviation (σ_{BI})= $\sqrt{\frac{\Sigma(R_{BI} - R_{BI})^2}{n-1}} = \sqrt{\frac{1.1043}{5-1}} = 0.5254$

Variance (σ_{BI}^2)= $(0.5254)^2$=0.2730

Calculation of estimated population Standard Deviation of Beta

Banks	Beta (B_t)	$(B1 - \overline{B}1)$	$(B1 - \overline{B}1)^2$
HBL	0.9716	0.107	0.00014
NABIL	2.95014	1.9895	3.9571
Total	3.92174		3.9572

We have

Average Beta Coefficient, (B1)= $\frac{\Sigma\ i}{n} = \frac{3.92174}{2} = 0.9609$

Standard Deviation of Beta S= $\sqrt{\frac{\Sigma(\ t - \overline{\ t})^2}{n-1}} = \sqrt{\frac{3.9572}{5-1}} = 0.9946$

Estimated Standard Deviation of population = 0.9946