SHARE PRICE BEHAVIOUR OF SELECTED COMMERCIAL BANKS ON NEPSE

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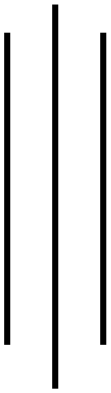

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RECOMMENDATION

This is to certify that the thesis

Submitted by

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Entitled:

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

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VIVA-VOCE SHEET

We have conducted the viva –voce examination of the thesis presented

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And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for Master Degree of Business Studies (M.B.S.)

Viva-Voce Committee

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DECLARATION

I hereby declare that the work reported in this thesis entitled "**SHARE PRICE BEHAVIOUR OF SELECTED COMMERCIAL BANKS ON NEPSE**" submitted to Shanker Dev Campus, Faculty of Management, Tribhuvan University, is my original research work done in the form of partial fulfillment of the requirement for the Degree of Master's in Business Studies (M.B.S.) under the supervision of Mr. Kiran Thapa and Prof. Dr. Kirandeep Dhakal of Shanker Dev Campus, Tribhuvan University.

…….

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Basudev Rijal

Researcher

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ABBREVIATIONS

NABIL	Nabil Bank Limited
SCBNL	Standard Chartered Bank Nepal Limited
HBL	Himalayan Bank Limited
NSBIL	Nepal SBI Bank Limited EBL
	Everest Bank Limited
BOKL	Bank of Kathmandu Limited
NRB	Nepal Rastra Bank
SEBON	Securities Exchange Board Nepal
NEPSE	Nepal Stock Exchange Limited
M.B.S	Master in Business Studies
EPS	Earning Per Share
ROE	Return on Equity
NIDC	Nepal Industrial Development Corporation
F.Y	Fiscal Year
SEC	Securities Exchange Centre
OTC	Over the Counter
ROA	Return on Assets
NIAT	Net Income after Tax
MVPS	Market Value per Share
P/E	Price Earning
E/P	Earning of Price
SD	Standard Deviation
C.V	Coefficient of Variation
Ltd.	Limited

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Due to globalization, present world economy has been more competitive and complicated. Every short of change occurring in one sector of the world affects other. A healthy economy is dependent on efficient transfer of funds from people who are net savers to firms and individuals who need capital. Without efficient transfers, the economy simply could not function. An economic efficiency is simply impossible without a good system for allocating capital within the economy. The development of any country depends upon the investment and mobilization of capital in productive sectors like industries and business. In fact, the developed economy of the world is the results of substantial investment in such productive sectors. In order to best up the economy of any country, financial sectors have crucial role, as they accumulated scattered savings for capital formation. Hence, securities market plays such roles and thus contributes to the nation's economic development.

Nepal is one of the potential countries on hydropower and tourism sector but it is least developed countries in the world. The main reason for this is the lack of capital and unfavorable economic condition due to political instability. Agriculture is the backbone of the Nepalese economy, means of livelihood for the majority of population, and the main sources of gross domestic production, income and employment generation. However, non-agriculture sector like commercial banks and finance companies has also significant contribution in the national economy.

Every business enterprise requires short term, intermediate and long-term capital funds for the smooth operation and expansion of the organization activities. Among these types of funds, the long-term funds are highly significant for future growth and prosperity. Most of the business organization generates these types of funds from the financial market. The purpose of financial market in an economy is to allocate savings efficiently during the period of time- a day-a week or a quarter- to parties who use funds in real assets or for assumption.

A society improves its welfare through investments. Business owners need outside capital for investment because even projects of moderate sizes are beyond the reach of most wealth

individuals. Governments also need funds for public investments. Much of that money channeled through financial markets from savers to borrowers. In so doing, the financial markets provide link between saving and investment and between the present and the future. As a consequence savers can earn higher returns from their savings instead of holding them, borrowers can execute their investment plans to earn future profits, and both are better off. As a result, the economy also benefits by acquiring better productive capabilities. Financial markets therefore facilitate real investments by acting as the sources of information.

Financial market plays a crucial role in mobilization or a constant flow of saving and changing these financial resources for expanding productive capacity in the countries. Financial market can be defined as the centers or arrangements that provide facilities for buying and selling of financial claims and services. Financial markets perform four functions. First, they enable individuals to choose more effectively between current and future consumption. Borrowing enables individuals to consume more, whereas lending enables them to postpone consumption. The economic units that have a surplus (investors) invest in those that have deficit (borrowers). This provides capital to companies in excess of those generated out of business income.

Second, the interaction between buyers and sellers in a financial market determines the price of the assets, or alternatively, the return demanded by investors to invest in the company. Firms can raise further capital if the return on their investment exceeds the return demanded by investors.

Third, financial markets provide liquidity to investors. That is, the owner of the financial asset can sell off the asset in the marketplace to realize cash whenever of funds market chiefly refers to money market and capital market. It facilitated the transfer of funds from the savers to those who wish to invest in capital goods.

Money market may be defined as short financial assets markets. It is the market for short term marketable insurance having less than one-year maturity period, where as capital market is concerned with long-term finance. It renders very valuable services to the community by increasing the productive of the country and by accelerating the pace of economic development. Capital market facilities the allocation of funds between savers and borrows.

This allocation will be optimum if the capital market has efficient pricing mechanism. If the capita; market is efficient, the current share prices of the companies fully reflect available information and there is no question of share price being under or over valuation of shares is possible only in an efficient capital market.

An efficient capital market is an essential prerequisite of economic development and the development of capital market in a country is dependent upon the availability of saving proper organization of intermediary institutions to bring the investors and business ability together for mutual interest, regulation of investment etc. An efficient market provides ready financing for worthwhile business and drain capital away from corporations, are poorly managed or producing obsolete products. It is essential that a country should have efficient capital markets if that country has to enjoy highest possible level of wealth, welfare and education for its population. Growth of the industrial enterprise in a country is limited by the availability of savings. A well-developed capital market presumes the existence of not only the investors- individual and institutional, but more significantly the existence of a network of specialized institutions and agencies, which are always on the lookout or investment in new ventures.

1.2 Constituent of Capital Market in Nepal

1.2.1 Securities Board of Nepal (SEBON)

Securities Board, Nepal was established on May 26, 1993 under provision of Securities Exchange Act, 1993(first amendment). Since the establishment of SEBON, it has been concentrating its efforts on improving the legal and statutory frameworks, which are the bases for the healthy development of the capital market. As a part of its continuous efforts to build a sound system, the securities Exchange Act, 1983 and that was amended for the second time on January 30, 1997. This amendment paved the way for establishing SEBON as an apex regulatory body as it widened and made it mandatory for the corporate bodies to report to SEBON annually as well as semi- annually regarding their performance. Although the second amendment in the act established a direct relationship of SEBON with the market intermediaries and the listed companies, supremacy in its jurisdiction is yet to be established and clearly recognized.

The general objectives of SEBON are to promote and protect the interest of the investors by regulating the issuance, sale and distribution of securities and purchase, sale or exchange of securities, to supervise, look after and monitor the activities of the stock exchange and of corporate bodies carrying on securities business, and to render contribution to the development of capital markets by making securities transaction fair, healthy, efficient and responsible.

1.2.2 Nepal Stock Exchange (NEPSE)

The history of securities market began with the flotation of shares by Biratanagar Jute Mills Ltd. and Nepal Bank Ltd. in 1937. The introduction of the company Act in 1964, the first issuance of Government Bond in 1964 and the establishment of Securities Exchange Centre Ltd. in 1976 were other significant development relating to capital markets.

Securities Exchange Centre was established with an objective of facilitating and promoting the growth of capital markets. Before its conversion into Nepal Stock Exchange, it was the only capital market institution understanding the job of brokering, underwriting, managing public issue, market for government bonds and other financial services.

His Majesty's Government under a programme initiated to reform markets, converted Securities Exchange Centre into Nepal Stock Exchange in 1993. Nepal Stock Exchange, in short NEPSE is a non-profit organization, operating under Securities Exchange Act, 1983.

The basic objective of NEPSE is to impact free marketability and liquidity to the government and corporate securities by facilitating transaction in its trading floor through members, market intermediaries, such as brokers, markers etc. NEPSE opened its trading floor on January 13, 1994 through licensed members. His Majesty's Government, Nepal Rastra Bank, Nepal Industrial Development Corporation and Licensed members are the securities are the shareholders of the NEPSE.

The Board of Directors of the NEPSE consists of nine directors in accordance with the Securities Exchange Act, 1983. Six directors are nominated by HMG/N and different institutional investors. Two from the licensed members and the central Manager of the NEPSE is the Ex- Officio Director of the Board.

The authorized and issued capital of the exchange is Rs.50 million, of this Rs. 34.91 HMG/N, Nepal Rastra Bank, Nepal Industrial Development Corporation and licensed members subscribe million.

The members of NEPSE are permitted to act as intermediaries in buying and selling of government bonds and listed corporate securities. At present, there are 23 member brokers operating on the trading floor as per the Securities Exchange Act, 1983, rules and byelaws of the exchange.

Besides this, the NEPSE has also licensed dealer for primary and secondary market. The primary market dealer operates as a manager to the issues and underwriter whereas the secondary market dealer operates as a portfolio manager.

1.3 Securities Market

In simple sense, securities market is a place where people buy and sell financial instruments. These financial instruments may be in the form of government bonds, corporate bonds or debentures, ordinary shares, preference share etc. So far securities market is concerned; it is an important constituent of capital market. It has a wide term embracing the buyers and sellers of securities and all the agencies and institutions that assist the sale and resale of corporate securities.

Although securities market is concerned in few locations, they refer more to mechanism rather than to place designed to facilitate the exchange of securities. Thus, securities market can be defined as a mechanism for bringing together buyers and sellers of financial assets in order to facilitate trading. In order to allocate capital efficiently and to maintain higher degree of liquidity in securities, the securities market should be efficient enough in pricing the shares solely by economic considerations based on publicly available information.

An efficient market is one where current price is one where current price of the share gives the best estimate of its true worth. Thus, the securities market is a place where shares of listed companies are traded or transferred from one hand to another a fair price through the organized brokerage system. The major function of securities market is to provided ready and continuous market for purchase and sales of securities at a competitive price thereby, importing future market ability and liquidity. It is a medium through which scattered savings

and scarce resources are transferred to productive areas that ultimately help in the economic development and industrialization of the nation.

Further, stock market liquidity may influence economic development. Many productive profitable require a long-term venture capital to finance. Most investors tend to avoid the risk and are often reluctant to tie their savings into long-term commitment. Liquid stock market means the investment less risky and more attractive. It encourage savers to invest in the long term projects, because they can sell the securities quickly and easily if they want to get back their savings before the project matures. While at the same time, companies receive easy access to capital through new issuance of shares, stock market liquidity is positive and robustly correlated with contemporaneous and future rates of economic growth, capital accumulation and productivity growth.

1.3.1 Primary Market

Primary markets denote the market mechanism for the original sale of security by an issue to the public. The volume of new issues in the primary market, particularly of common stock is directly related to market conditions. When the market is rising, the number of new issues being offered to public rises and when the market is falling, the number declines.

It is the market in which securities are sold at the time of their initial issuance. In other words, a market for newly issued securities is called primary market. Corporations and government bodies issue new securities in primary market. These securities can be offered by method of public floatation and private placement. The term primary market can also be defined as the market in which corporations raise new capital.

The corporation selling the newly created stock receives the proceeds from the sale in a primary market transaction. All the securities whether it is in the money or capital markets that, initially issued in the primary market. This is the only market in which the corporate or government issuer is directly involved in the transaction and receives direct benefit from the issue. That is, company actually receives the proceeds from the sale of securities.

1.3.2 Secondary Market

After securities have been purchased from the primary market, they can be traded in the secondary market. The secondary market comprises the organized security exchanges and a specialist facilitates the transaction. The major of all capital market transactions occur in the secondary markets.

Secondary market is the market in which existing, already outstanding securities are traded between investors. Secondary market is popularly known as the stock market. Stock market is a medium through which corporate sector mobilizes funds to finance productive projects be issuing shares in the market. The efficient collection of small amounts of savings and transferring funds in to the competitive and efficient uses requires a well functioning capital market to facilitate the process. It is the market that creates the price and allow for liquidity. If secondary market did not exist, the investors would have no place to sell their assets. Without liquidity many people would not invest at all. The corporations whose securities are being traded are not involved in secondary market transactions and thus do not receive any funds from such a sale. The function of secondary market is to provide liquidity for the securities purchased in the primary market. Thus, Secondary market deals with previously issued shares mainly traded through stock exchange, over the counter market or direct dealing.

1.4 Focus of the Study

Public companies obtain funds from the public investors through financial market. The long run objective of every firm is to minimize shareholders wealth position whereas the investors invest their money with the hope of getting good return in the future.

In the Nepalese context, there is the lack of wider investment opportunities that provide good return. So, there has still been a huge amount of unutilized saving funds with public. But most of the public investors i.e. existing and potential are not well knowledgeable about thee real financial strength and weakness of the public companies in which they are investing or going to invest their funds Further they can not well analyze and interpret the real financial position of a company on the basis of available data an information to reach the right conclusion.

The study may help investors to think about restructuring their investment portfolio. Similarly, potential investors may take better timely investment decision on the basic of the study.

1.5 Statement of the Problem

Nowadays capital market investment plays the major role in the economic development of the country. But this is directly affected by the interference of economic, social and political. The stage of development of capital market in any country and its effective growth depends upon the aggregate economic condition, saving and investment opportunities etc. Although there are various institutions involved in capital market, they have not been able to show good performances according to the investor's expectations. The investors have no self control, self judgment in the choice of securities for investment. The earning information was not made available timely to the investors, so they could not identify the good and bad stocks. The prices of some stocks which have sustained loss for long period reached to peak level while that of some stocks with sustained profits could not increase. Thus having lack of adequate information and knowledge about certain companies, investors are unsystematically investing in stocks.

The price of the securities specially common stock have been randomly fluctuating and decline over the past years due to imbalance economy, instability politics and ineffective implementation of liberal economic policy of the country. Similarly most of the organizations are found ignoring investor's preferences and transparency in the operation. Not only there is a lack of coordination among concerned authorities, market players and other individuals. Insufficient skill manpower and development of human resources are also problems in the capital markets. Low price and low trading volume of the companies have directly related to market value of firm. Thus, the investors whether professional or amateur should analyze the securities in terms of price and volume before investing on them. There are two approaches regarding the share price movement in the market. The first approach assumes that the market is inefficient in pricing of shares, in which the technical analysis theory argues that the analysis of the historical prices and trading of stocks provide meaningful information and which also provide the idea of future price movements to the investors, it attempts to explain and forecast changes in security price by standing the market data rather than information about a company or its prospects.

The second approach, the efficient market theory argues that market is efficient in pricing the shares. In a situation where stock price movement follows random walks and at every point in time actual prices represent good estimate of its intrinsic values, general investors trend to select any security randomly to from his/ her optimum portfolio. As the best investment decision strategy in such market will be random selection of securities.

The present study is intended to examine the weak form of efficient market hypothesis. It also helps to find out whether the price fluctuation is significantly correlated with price movements or not. Furthermore it also explores some ideas whether the stock market in Nepal is efficient in pricing of shares or not.

1.6 Objectives of the Study

The main objective of this study is to analyze the performance of stock market and behaviors of share price of listed commercial banks. Nevertheless, the objectives of the study are as highlighted below:

- To provide a glimpse of the present Nepalese stock market.
  To analyze the share price behaviour of the commercial banks listed at Nepal Stock Exchange.
- To examine the risk involved in the common stock investment of the sampled commercial banks.
- To analyze the flactuation of share price on the base of real information.
- To suggest viable option on the basis of findings.

1.7 Signification of the Study

Stock market Facilities the situation of country's economy. When stock market is booming the financial market is good and when the stock market will be declining financial market is bad. It also represents the countries policy towards industry. Economy policy as well as stock market policy is formulated by government rules and regulation of different sector.

In Nepal, the earning capacity of the people is very low; as a result they can hardly save money to invest in profitable sector. Besides, there is lack of investment alternatives, which provide good return. Furthermore, the present and potential investors do not have fair and accurate information about the financial strengths and weakness of the companies they are going to invest. There lacks investment opportunities due to the different reasons like e.g. due to Moist insurgency, geographic location, small market and lower per capita income etc. so, there is huge amount of savings with the public for investment which provide the good rate of return. Since there is failure of different industries so people are investing their funds in the shares especially of commercial banks and financial institutions. Most of the people purchase shares because they want some return from their savings instead of keeping their fund idle. They unknowingly invest their funds in the securities without having the knowledge and without the analysis of past and present performance of the securities in which they are investing. So this research will help the present

investors about restructuring their investment portfolio. Where the potential investors can take help from the finding of this study, to make beneficial investment decisions.

1.8 Limitation of the Study

The study will have some limitations. Time constraints, financial problem and lack of research experience will be the primary limitation and other limitations are as follows:

- The study will confine only to Nepal Stock Exchange and its members.
- The major portions of analysis and interpretation have been done on the basis of the available secondary data and information. So, the consistency of finding and conclusion is strictly dependent upon the reliability of secondary data and information.
- The study has been designed concentrating at banks listed at NEPSE, which is a part of total capital market. So, the conclusion cannot be generalized on the total capital market.
- For the purpose of study only common stocks or ordinary stocks are taken.
- Due to the financial and time constraints, the study is fully based on the student's financial resources.
- The study is done for the partial fulfillment for M.B.S degree in management, so it is not a comprehensive study.

1.9 Organization of the Study

The study has been organized into five chapters. They are as follows:

Chapter one: Introduction

This is the introductory chapter, which has covered background of the study, focus of the study, statement of the problem, objectives of the study, significance of the study etc.

Chapter two: Review of Literature

This chapter has included conceptual framework i.e. theoretical analysis and review of related different studies. In this chapter has been also considered that how this present studies are different from previous studies.

Chapter three: Research Methodology

This chapter has dealt with the research design, population and sample, sources of data, data collection techniques and data analysis tools (financial tools and statistical tools) and methods of analysis and presentations.

Chapter four: Presentation and Analysis of Data

This chapter describes the research methodology employed in the study. It will include secondary data and primary data presentation, data analysis, interpretation, testing of hypothesis and major finding.

Chapter five: Summary, Conclusion and Recommendations

The last chapter states the summaries, conclusions of the whole study and recommendations. It also offers several avenues for future research. The exhibits and bibliography are incorporated at the end of the study.

CHAPTER II

REVIEW OF LITERATURE

2.1 Introduction

This chapter provides some glimpses and highlights on the literature that is available in the topic. Specially, it covers those studies conducted outside the country by academics and scholars. Similarly, some of the available relevant studies done inside the country are also reviewed.

The first section of this chapter describes about the theories of the stock price behaviour. It includes the fundamental analysis, technical analysis and efficient market theory. The second section of this chapter is confined to review of those related literature carried out previously in the foreign context as well as in the Nepalese context.

2.2 Theoretical Review

In this present context, the investment sector is getting flourished in recent years as other economics sectors. Today most of the developing countries are boosting their economic development sector. Business cycle theories felt that tracing the evolution of several economic variables over time would clarify and predict the progress of the economic through boom and bust periods.

Security analysis is one of the steps performed in the investment process. It involves examining several individual securities (or group of securities) within the broad categories of financial assets. One reason to examine the securities is to identify those that seem missing priced. There are mainly two approaches i.e. classical approach and efficient market theory approach. Classical approach is also known as conventional approach which includes fundamental analysis theory and technical analysis theory. Classical approach assumes market as inefficient whereas the efficient market theory argues that the market is efficient.

2.2.1 Classical Approach

This approach includes fundamental analysis and technical analysis theories. Fundamental approach forecast stock price on the basis of earnings and dividends of

the company whereas technical analysis forecast stock prices on the basis of past price behaviour of the company.

2.2.1.1 Fundamental Analysis

In the simplest form, fundamental analysis begins with the assertion that the true value of any financial asset equals the present value of all cash flows the owner of the asset expects to forecast the timing and size of the asset expects to forecast the timing and size of these cash flows and then converts the cash flows to their equivalent present value using an appropriate discount rate (Sharp, 2000:12).

Fundamental Analysis theory claims that at any point of time an individual stock has an intrinsic value, which is equal to the present value of the future cash flows from the security, discounted appropriate risk adjusted discount rate. “The value of the common stock is simply the resent value of all the future income which the owner of the share will receive (Francis,1986:398).

After estimating the true value of stock of a particular firm, it is compares with the current market price of the common stock to determine whether the stock is fairly priced. Stocks whose estimated value or true value is less than their current market price are known as overvalued and vice versa. Fundamental analysts believe that any notable cases of miss pricing will be corrected by there market in the near future, meaning that prices of overvalued stocks will show unusual appreciation and prices of under valued stocks will show unusual depreciation.

Fundamental analysis involves making investment decision based on the examination of the economy, an industry , and company variables that lead to an estimate of value for an investment , which is then compared to the prevailing market price of the investment (Reilly 2000: 869-70).

Fundamental analysts use public information to calculate a fundamental value for a share and then offer investment advice by comparing the fundamental value with by comparing the fundamental value with the current market price, Fundamental analysis is not possible if capital markets are semi-story from efficient, since security prices

will already fully and fairly reflect all publicly available information (Watson & Head,1998:31-32).

Fundamental analysis approach involves working to analyze various factors like economic influences, industry factors , firm's financial statement , and pertinent company information such as product demand, earnings, dividends and management in order to calculate an intrinsic value for the firm's securities. This theory assumes that knowledge about the future of companies is not perfect, some stocks are under priced and others are over priced. The investor's task is to study certain fundamental factors that may be enable them to select understand stocks for purchase and sell overvalued stocks.

The objective of fundamental analysis is to appraise the intrinsic value of a security. The intrinsic value is the true economic work of financial assets. Therefore, fundamental analysts work to find new information before other investors, so they can get into the position to profit from price changes they anticipate. Fundamental analysts use different models like Top- Down versus Bottom–up forecasting, probabilistic forecasting, econometric models, financial statement analysis etc. To estimate the value of security in an appropriate manner for making investment decision, some limitations of the fundamentals analysis approach are a follows;

a) The approach though sound and based on basic financial figures does suffer from drawbacks and to make this approach work effectively one must be aware of them.
b) The entire fundamental approach is based on a rational scientific analysis of data that the market is rarely rational.
c) The information and analysis itself may be incorrect.
d) Many companies with the help of creative / innovative accounting and accounting cosmetics disguise real earnings.
e) The fundamentalist's estimate of intrinsic value may be incorrect. This is not only possible but probable than not he has to often forecast growth, profit and other factors without having in his grasp all the facts.
f) The fundamentalists may not fully understand the economy or the industry, as there are several external factors.

Therefore, fundamental analysis is a never-ending process because values changes overtime. Ideally, revision in analysis should occur whenever new information affecting the future benefits to holder becomes available.

2.2.1.2. Technical Analysis

In the simplest form, technical analysis involves the study of stock market prices in an attempt to predict future price movement. Past prices are examined to identify recurring trends or patterns in price movements. Then more recent stock prices are analyzed to identify emerging trends or patterns that are similar to past ones. This analysis is done in the belief that these trends or patterns repeat themselves. By identifying an emerging trend or patterns, the analyst hopes to predict accurately future price movements for a particular stock (Sharpe, 2001:12).

Technical analysis can be defined as the use of published market data for the analysis of both the aggregate stock market and individual stocks. It is sometimes called market or internal analysis (Willeyy,1988:396).So, the technical analysis is based on the assumption that the past information of prices and trading of stocks provides some picture of the future prices of stocks. Technicians seek to forecast security prices rather than security value, especially trends in the price changes. Prices and volume are the primary tools of the technical analyst. Technicians believe that the force of supply and demand show up in patterns of price and volume. Volume data are used to gauge the general condition in the market and to help assess its trend. The evidence seems to suggest that rising (falling) stock prices are usually associated with rising (falling) volume. If stock prices rise but volume activity dose not keep pace, technicians would be skeptical about the upward trend. A downside movement from some pattern or holding point, accomplished by heavy volume, would be taken as a bearish sign.

The technician usually attempts to predict short-term price movements and thus makes recommendations concerning the timing of purchase and sales of either specific stocks or groups of stocks (such as industries) or stock in general. It is sometimes said that fundamental analysis is designed to answer the question “what”? And technical analysis to answer the question “when”? (Sharpe, Alexander and Bailey, 1999:344). More especially the technical analyst seems to be trying to forecast

short- run shifts in supply and demand that will affect the market prices of one or more securities.

Typically, technical analysts record historical financial data on charts, study these charts in search of patterns that they find meaningful, and endeavor to use the patterns to predict future price. Some charts are used to predict the movements of market index and, still others are used to predict the action of both individual assets and the market.

Thus, the technical analysts believe that changes in the pattern or trend of security prices take place on account of changes in the demand and supply of the securities, and that crucial insight into these patterns can be obtained by keeping track of price chart. The technical analyst can tell whether the price of a share as on upswing or on the downswing in future.

Technical analysis involves the examination of past market data, such as price and the volume of trading, which lead to an estimate of future price trends and, therefore, an investment decision. Whereas fundamental analysts use economic data that are usually separate from the stock or bond market, the technical analyst believes that using data from the market itself is a good idea because "the market is its own best predictor." Technical analysts base trading decisions on examination of prior price and volume data to determine past market trends from which they predict future behavior for the market as a whole and for individual securities. (Reilly and Brown,2000:870)

Tecchnical analysts maintain that the price of a share at any time (present price) is the balance struck by buyers and sellers at a point in time price movement take place on account of changes in buying and selling pressures. This occurs in account of diverse internal and external factors (profits, political environment, predictions and the likes). Prices stabilize when equilibrium between buyers and sellers in achieved. They believe that record of price movements over a period of time in the past, as the whole theory is based on the assumption that history repeats itself. That human nature does not change and that man is likely to repeat his patterns of past movements will repeat themselves in the future. (Palat, 1991:172)

Technical analysis is essentially the search for recurrent and predictable patterns in stock prices. Although technicians recognize the value of information regarding future economic prospects of the firm, they believe that such information is not necessary for a successful trading strategy. This is because whatever the fundamental reason for a change in stock price, if the stock price responds slowly enough; the analyst will be able to identify a trend that can be exploited during the adjustment period. The key to successful technical analysis is a sluggish response of stock prices to fundamental supply and demand factors. This prerequisite, of course, is diametrically opposed to the notion of an efficient market (Bodie, Kane and Marcus,2002:343).

Tecchnical analysis however may be useful in timing a buy or sell order that they may be implied by the forecasts of return and risk. For example, the technical analysis may reveal that a drop in price is warranted. Postponement of purchase, then if the technical analysis is correct, will raise the forecast holding period yield (HYP).Conversely, a sell order might be postponed because the charts reveal a raise in the price of the security in question (Fisher and Jordon,1995:510).

The methodology of technical analysis rests upon the assumption that history tends to repeat itself in the stock exchange. If a certain pattern of activity has in the past produced certain results nine times out of ten, one can assume a strongly likelihood of the same outcome whenever this pattern appears in the future. It should be emphasized, however that a large part of the methodology of technical analysis lacks a strictly logical explanation. The basic assumptions of technical analysis are as follows (Levy, 1966:348)

a) Share price is determined by the interaction of supply and demand.
b) Demand and supply are determined by various factors, both rational and irrational.
c) Series of prices contain trends that persist for appreciable length of time.
d) Changes in trends are caused by the shifts in demand and supply.
e) Some chart patterns tend to repeat themselves.

Various studies evidenced that technical analysis is useful in enabling investors to beat the market. The analysis, however, attempts to predict future stock prices by analyzing past behavior of stock prices. In general, tomorrow’s stock price is

influenced by today's price. The direction of price change is important as the relevant size of change. With the application of various tools, the technicians attempt to correctly catch changes in trend and take advantage of them.

Technical Tools

a) The Dow Theory: This tool is originated by Charles Dow; founder of the Dow Jones Company is one of the oldest and most famous technical methods of analyzing security prices. The aim of the Dow Theory is to identify long term trends in stock market prices. "According to this theory it is believed that the market is always considered as having three movements, all going at the same time. The first is narrow movement from day to day. The second is the short swing, running from two weeks to a month or more; the third is the main movement, covering at least 4 years duration."(Francis, 1900)

So, we can say that there are three forces simultaneously affecting the stock prices, basically called primary or major trend, secondary or intermediate trend, and finally tertiary or minor trends. The primary price movements are held to constitute the bearish or bullish trends, whereas the secondary movements are regarded as passing phases. Tertiary price movements are daily price fluctuation to which Dow attributes to no significance or ignores the role of this trend.

The Dow Theory employs two indicators called Dow Jones Industrial Average (DJIA) and Dow Jones Transportation Average (DJTA). The DJIA is a key indicator of underlying trends, while the DDJTA usually serves as check to confirm or reject that signal.

The Draw Theory employs two indicators called Dow Jones Industrial Average (DJLA) and Dow Jones Transportation Average (DJTA). The DLTA is a key indicator of underlying trends, while the DJTA usually serves as check to confirm or reject that signal.

The Dow Theory is built upon the assertion that stock prices tend to move together. If the DJTA is rising then the DJTA should also be rising. Such a

simultaneous price movement suggests a strong bull market. Conversely, a decline in both the average suggests a strong bear market. However if the average are moving in opposite direction, the stock market is uncertain regarding to direction of future stock prices.

The forecasting result of Dow Theory is less accurate. It might work only when a long, wide upward or downward movement is registered in the market. It is mostly unsuitable as a market predictor when the market trend frequently reverses itself in the short or the intermediate-term. This theory also fails to explain a consistent pattern of the stock price movements.

b) Barron's Confidence Index: In literal sense, the confidence index is defined as the ratio of high grade bond yields divided by low grade bond yields. The ratio is supposed to reveal how willing investors are to take investment risks. Barron's confidence index is constructed by using Barron's index of yields on high-grade bonds and low- grade bonds.

The confidence index is usually, but not always, a leading indication. Like most of other technical indicators, the confidence index may sometimes issues erroneous signals and should therefore not be used without confirming evidence from other indicators. (Francis, 1991:531)

c) Odd Lot Theory: This theory concerns the purchase and sales of securities by small investors. These investors do transactions of less than 100 shares. Some technicians take the ratio of these odd lot purchases to odd lot sales as an indicator of the direction of future prices. An increase in the index suggests relatively more buying; a decrease indicates relatively more selling. During most of the market cycle, odd lottery are selling the advance and buying the declines.

Odd looters try to do the right thing most the time; that is they tend to busy stocks as the market retreats and sell stocks as the market advances. However, technicians feel that odd looter is inclined to do the wrong thing at turns in the market.(Fisher and Jordan,1995:515)

2.2.2 Efficient Market Theory

In a competitive market, the equilibrium price of any good or serves at a particular moment of time is such that the available supply is equated to aggregated demand. This is the true worth of the goods or serves, based on all publicly available information. The new equilibrium price will hold until another bit of information is available for analysis and interpretation. When security prices at all times rationally reflect all available, relevant information, the market in which they are traded is said to be efficient. This implies that any new information coming to light, which bears on a particular firm, will be incorporated into the market price of the security. An efficient capital market is one in which security prices adjust rapidly to the arrival of new information and therefore the current prices of securities reflect all information about security.

An efficient market is one where shares are always correctly priced and where it is not possible to outperform the market consistently except by luck (Pike and Neal, 1996:133). In an efficient capital market current market prices fully reflect available information (Fama, 1996:133). Therefore if market is efficient, it uses all available information to it in setting price.

There are several concepts of market efficiency and there are many degrees of efficiency, depending on the market. Markets in general are efficient when: I) prices adjust rapidly to new information; II) there is a continuous market, in which each successive trade is made at a price close to the previous price (the faster that the price responds to new information and the smaller the difference in price changes the more efficient the market); III) the market can absorb large amounts of securities without destabilizing the prices (Block and Hirt, 11998:420).

An efficient market is defined as a market where are large numbers of rational profit maximizes actively competing with each trying to predict future market values of individual securities, and where important current information is almost freely available to all participants. In an efficient market, competition among the many intelligent particulars leads to a situation where at any point in time , actual prices of individual securities already reflect the effects of information based on both on

events that have already occurred and on events which as of row, the market expects to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimated of its intrinsic values (Fama, 1970:384-85).

In an efficient market, a security price would correctly reflect the important variables for that security and would represent and unbiased estimate of its investment value (Cheney and Moses, 1992:746). The efficient market hypothesis suggests that investorscannot expect to outperform the market consistently on a risk – adjusted basis over an extended period of time. This hypothesis is based on the premise that security prices reflect all available information concerning a firm and that security prices change rapidly in response to new information. Market efficiency also implies that as new information becomes available, the market quickly analyzes it, and any necessary price adjustments occur rapidly.

The requirements for a securities market to be efficient are:

a) A large numbers of rational, profit-maximizing investors exist who actively participate in the market by analyzing, valuing, and trading stocks. These investors are price takers; that is, a new participant alone cannot affect the price of a security.
b) Information is free of cost and widely available to market participants at approximately the same time.
c) Information is generated in a random fashion such that announcements are basically independent of one another.
d) Investors react quickly and accurately to the new information, causing stock prices to adjust accordingly.

In an efficient market, all prices are correctly stated and there are no bargains in the stock market. “Efficiency in this context means the ability of the capital markets to function so that prices of securities react rapidly to information. Such efficiency will produce prices that are appropriate in terms of current knowledge, and investors will be less likely to make unwise investments. A corollary is that investors will also be likely to discover great bargains and thereby earn extraordinary high rates of return (Bhalla, 1973:3).

In an efficient market, investors should expect to make only normal profits and earn a normal rate of return on their investments. In such a market, any new information immediately and fully reflected in price. New information is just that new, meaning a surprise. In a perfectly efficient market, price changes are close to random. The efficient market hypothesis has been subdivided into three categories. They are; i) Weak-form efficiency, ii) Semi-Strong form efficiency and iii) Strong-form efficiency.

Under the weak form of efficiency, stock price are assumed to reflect any information that may be contained in the past history of the stock price itself. It helps to test whether all the information contained in historical prices is fully reflected in current prices. This hypothesis holds that no investors can earn excess return by developing trading rules based on historical prices or return information. The significant conclusion derived from the weak form hypothesis is that past rates of return and any over security market information should have no relationship with future stock prices o future rates of return. There have been a number of tests conducted to verify the weak form version of the efficiency market hypothesis. While exceptions have been found the bulk of the evidence supports the notion that stock prices do indeed fully reflect all security market information.

Under the semi strong efficiency market hypothesis states that stock prices fully reflect all public information considered by the weak form in public. However public information also includes economies, the current political state abroad or specific, stock splits etc. The implication of the semi strong form efficiency market hypothesis is that investors should not be able to derive above average rates of return from public information. A number of tests have been conducted to verify the semi strong form of the efficiency market hypothesis with majority of tests providing mixed evidence. Some of the notable exceptions include a January effect, in which stocks that experienced losses during the prior year tended to provide abnormal rates of return around January 1 and 2 a Monday effect, and a book value to market value effect.

The strong form of the efficiency market hypothesis states that stock prices fully reflect all public and private information. The strong form encompasses both the weak form and the semi strong form. This version implies that no opportunities

should exist for any investor to derive above- average rates of return. Like the semi-strong version, the tests of this hypothesis provided mixed results. However, the bulk of the tests were supportive. Two glaring anomalies exist: corporate insiders and market specialists seem to be able to consistently earn above average rates of return, which implies that they possess monopolistic access to important information. In addition, there was evidence to support the notion that superior security analysts could also consistently earn above-average rates of return, although this group tends to be very small.

2.2.2.1 The Random Walk Theory

The weak form says that the current prices of stocks already fully reflect all the information that is contained in the historical sequence of prices. Therefore, three is no benefit as far as forecasting the future is concerned in examining the hysterical sequence of prices. This weak form of efficient market hypothesis is popularly known as the random walk theory.

Random walk theory describes whether past prices can predict future prices. "Random walk theory implies the future path of price level of a security is one more predictable than the path of series of cumulated random numbers. The series of price changes has no memory; that is, the past cannot be used to predict the future in any meaningful way." It means that the current size and direction of price changes are independent and unbiased outcome of previous prices. "The underlying theory of random walk in stock price behavior statistically consists of two separate assumptions; a) Price changes are independent random variable, b) Price changes conforms to some probability distribution without specifying the particular shape or form of the distribution." Of the two hypotheses independence is much more important assumption which means that the previous price changes following the current change will not be influenced by the sequence of preceding price changes.
Mathematically, independence means that:
P (xt=x/xt-1, xt-2,……..) = Pr (xt=x)

The left hand side of the equation is the conditional probability that the price changes will take the value of x conditional upon knowledge of previous changes xt-1, xt-2, etc. The right hand side of the equation is the unconditional probability that price

change on t will take the value of x. The stock market is always subjected to a steady inflow of information, which will have an effect on the set of anticipations that determine price of a particular security. Some of the information has a whole market wide impact such as change in monetary and fiscal policy on security prices. Similarly, information regarding the change in government's tax policy will have industry –wide impact. Another set of information such as announcement of earning and dividend affect the price of the particular security. All these incoming information are refined and translated into change in the investor's set of anticipations that determine security price changes. Some participants estimate the intrinsic value of the individual securities from the received information. According to Fama, "the existence of intrinsic value for individual securities is not inconsistent with random walk hypothesis, in the market securities sre over or under valued because of inappropriate estimation of the incoming information by the investors. This means, there is a gap between the actual price and intrinsic value of a particular security and this can be used by the speculator to evaluate the influence of an appearance of incoming information on security price to improve his prospects of gain. But in the world of uncertainty, the intrinsic values of securities are not known exactly. It depends on the earning prospects of the company, economic, political, industrial and company specific factors, cover the tune as new information appears, the intrinsic value of the security may change that affect the prospects of the company. If this information arises independently across time and the parcipants do not show dependent tendency about intrinsic value, the subsequent price changes in stocks will e independent. However, in the real world, there may be dependencies in the reaction of participants led to deviate the anticipated value far below or above from its true values. It means there may exist two types of sophisticated traders namely superior intrinsic value analysts and technical analysts. Superior intrinsic value analysts have much better capacity to predict the appearance of new information and accordingly estimate its effects on intrinsic values. Similarly, technical analysts have much better skill at doing statistical analysis of price behavior. The random walk theory asserts that price movements will not follow any patterns or trends and that past price movements cannot be used to predict future price movements.

According to French Mathematician Louis Bachelier (Ph. D dissertation titled "The theory of speculation", 1900)," The mathematical expectation of the speculator is

zero" and he described this condition as a "fair game".(Fischer and Jordan, 2000:553) Random walk model say that previous price changes in return are useless in predicting future prices or return changes. It means if we attempt to predict future prices in absolute terms using only historical price change information, we will not be successful i.e. successive price change at any time will on the average reflect the intrinsic value because of, among other things, different investors evaluate the available information differently or have different insights into future prospects of the firm, professional investors and astute nonprofessional will seize upon the short term or random deviations from the intrinsic value, and through their active buying and selling of the stock in question will force the price back to its equilibrium position.

2.3 Review of Previous Studies

Scholars have been studying the way security price fluctuate for over a century. "the empirical evidence in the random-walk literature existed before the theory was established. This is to say, empirical results were discovered first, and then an attempt was made to develop a theory that could possibly explain the results. After these initial occurrences, more results and more theory were uncovered. This has had then to a diversity of theories which are generally called the random-walk theory."

2.3.1 Foreign Context

All of the empirical work on efficient markets can be considered within the context of the general expected return or "fair game" model; in particular, the expected profits to the speculators should be zero. The pioneer work in this field is due to French mathematician Louis Bachelier (1900) who used the data of commodity speculation in France was "fair game" that has no expected profits for buyers and sellers. Unfortunately, his insights were so far ahead of the time that was largely unnoticed for a long period until his paper was rediscovered and eventually translated into English and published in1964.

Additional evidence that security prices followed a random walk was found by Halbrook Working in 1934. He extensively analyzed commodity prices and noted that speculative price patterns might be shown to be random comparing with artificially generated series of price. According to him, "It has several times been noted that time

series commodity posses in many respects the characteristics of series of cumulated random numbers. The separate items in such time series are by a means random in character, but the change between successive items tends to be largely random."

In 1953, Kendall examined the behaviour of weekly changes in nineteen indices of British Industrial share prices and in spot prices for cotton (New York) and wheat (Chicago). He found no relationship between share price change in the current week and the previous week. After extensive analysis of serial correlations, he suggested that "the series looks like a wandering one, almost as if once a week the demon chance of drew a random number from a population of fixed dispersion and added it to the current price to determine the next week's price.

In 1959, H.V. Roberts compared Dow Jones Industrial Index with simulated price index generated on the basis of series of random numbers for 1956. He found considerable similarity in the graphs of these two series and it was difficult to distinguish between the series of random numbers and the stock market index. Thus, monthly end volume series from the New York Stock market using Dow Jones, Standard & Poor and other various indices as well as price series if individual stock. Especially there exists no linear relationship of dependence between lagged price changes.

In 1965, Samuelson though lacked theoretical discussions in his paper, but his findings supports the independence hypothesis of random walk theory in stock prices. He concluded that if a market has zero transaction costs, if all available information are free to all interested parties and if all market participants either potential and existing have the same time horizons and expectations about prices, the market will be efficient and prices will fluctuate randomly.

In 1965, Fama analyzed the movement of stock market price changes of all the stocks that make up Dow Jones Industrial index for the period end of 1952-1962, and investigated the daily proportional price changes of those 30 industrial stocks and auto correlation were estimated for a variety of lags ranges from 1 to 10 days. In his study, he found that the auto correlation coefficients for daily changes are small, the average being 0.03, near to zero. Out of thirty, eleven auto correlation coefficients

were significantly different from zero and lagged price changes show some degree of dependence. He found analyzed the data by run tests by total numbers of runs, number of runs by signs, and distribution of runs by length. He found slight tendency for this to occur, but again the results were sufficient to accept the random walk hypothesis.

King in 1966 also examined the behaviour of 63 securities from six industries of New York Stock Exchange, from 1927 to 1960. This study also concludes that there exists low degree of co- efficient estimates of serial correlation, i.e. 0.018 which is close to zero. This helped him in concluding that stock market process follows random walk model.

Brealy (1970) examined the various stocks using similar methodology to that used by Fama in 1965 also supported the random walk model and concluded that successive price changes in stock market are independent. Cootner(19964) tested the randomness of series by using serial correlation on the logarithms of daily price changes of 45 companies stocks from New York Stock Exchange. In this study he found the low serial correlation coefficients of -0.046, which are insufficient to predict the future price changes.

In 1966, Fama & Blume used the filter technique to overcome the shortcomings of Alexander's mechanical rules. They tested the profitability of 24 filters ranging from 0.5% to 50% to buy and hold return of each of the stock of the Dow Jones. Ignoring transaction costs, only two out of thirty is superior to buy and hold policy, when commissions are taken into consideration only four out of thirty have positive returns and not comparable with buy and hold return. Therefore, according to their demonstration, it seems that filter technique cannot provide returns larger than those under a naïve buy and hold policy.

Sweeney (1988) developed a filter rule that was able to earn modest profits. He replicated Fama and Blume's resulted in the short positions usually generated the trading losses. In Contrast, Sweeney found that the long positions were often profitable. S he used an X% filter rule as follows:

If the price of a security rises at least X%, buy and hold the security until its price drops at least X% from a subsequent high. Then, liquidate the long position and invest the proceeds in risk free short term bonds until price reaches its next through and then rises X%. Sweeney also found that filter rule trading tended to be fairly and consistently profitable in some stocks while being fairly consistently unprofitable year after year in other stocks. This filter rules could mechanically trade some stocks and earn a statistically significant rate of profit after deducting tiny trading costs incurred. However this filter rule seems to be unprofitable if the higher commission rates that most investors pay were deducted.

In 1971, Niarchos studied price series of 15 individual stocks from Athens Stock Exchange for the period from 1957-i968. He found the serial correlation coefficients for individual stock as 0.036, close to zero. So, he concluded that the price fluctuations were random walk and past price has no meaningful information to predict future prices.

Dryden (1970) conclude that the share price movement were non random. However in his later study, he used serial correlation and runs analysis to examine the daily closing prices of 14 individual stocks of U.K. market and supported that the independence hypothesis of successive price change. Similarly, Kemp and Remp's and study (1971) was also against the random walk theory. They derived the conclusion that share price movements were conspicuously non random over the period considered.

Fama, Fisher, Jensen and roll examined the effect of stock splits on security prices. A number of prior studies had suggested that stock splits increase the value of the firm. This was disturbing to many because stock splits simply involve changing the percentage ownership of any share holder or the asset or earning of the company. Fama and other scholars argued that stock splits might be associated with other more fundamental changes and the effects that researchers were attributing to stock splits might be better attributed to these other phenomena.

While talking about Indian context, Rao (1988) conducted the study on the weekend prices of the eight blue-chip stocks for five years from July 1982 to June 1987. He

applied serial correlation analysis, runs tests, and filter rule technique. The result from al the tests supported the random walk hypothesis.

Thus, on the basis of above mentioned review of previous research works, it can be concluded that stock market prices shows random movement and the security prices appear to be serially independent. So, investors cannot develop any profitable trading strategy using the information of past series.

2.3.2 Nepalese Context

In Nepalese context, there are few studies on the stock market prices. Some of the available relevant studies are reviewed in this part.

Bhattarai (1992) has carried out "**A study on share market in Nepal**". In which, he emphasized the historical background and the analysis of various financial variables affecting the smooth operation of share market. The study was mainly based on secondary data obtained from various sources. He has applied both financial and statistical tools in the study. He found that out of 12 sample companies, only 2 companies were useful to cross over the average price earning ratio, as a result, market price of shares were highly skewed. Moreover, there was mismatch between calculated and quoted price. However, he concluded that the movement of more and more institutions as well as individual investors in capital through broker's network raised the transaction volume. Rumors spread by brokers, and create genuine speculation. Fair play of bulls and bears makes equilibrium resulting price stabilization. Speculation on the trading of shares is encouraged. Thus, the market starts to walk randomly reflecting the value of shares. Investors are facilitated by providing alternative to make diversified portfolio.

Aryal (1995) has studied **"Behavior of stock market prices"** with the objective to discuss the movement of stock market prices and to develop the empirical probability distribution of successive price change of an individual common stock and a stock market as a whole. This study was based on secondary information obtained from Nepal stock exchange. This study covers almost 8 months period and the sample was 21 listed stocks. He applied serial correlation and runs test as statistical tools to

analyze the data. Through the analysis he has concluded that the assumption of independence, as predicted by random walk model of security price behavior has been refused at least for Nepalese context as the first approximation even in the rough way for early days of stock market operation. This rejection of hypothesis made clear that the knowledge of past and present becomes useful in predicting the future movements of stock market prices. The investors, on the floor of exchange, can make higher expected profits in the future based on these historical price series. In other words, the dependence nature of price series produced by general market fluctuation statistically implied, today's change is positively depending upon yesterday's price changes. This implied that there is a sufficient lack of financial and market fluctuations, predicting the occurrence of future potential and economic events that their eventual affects on price series.

Bhatta (1995) has conducted **"A study on assessment of the performance of listed companies in Nepal".** The study was based 10 listed companies with data from 1990 to 1995. In this study, he has focused on the performance of listed companies in terms of i) company's performance in market, in PE multiples, dividend yield, liquidity, leverage, and profitability ii) risk and return in term of expected rate of return and internal rate of return, systematic risk and diversification of risk through portfolio. He has analyzed the companies' performance in the market in relation to the market price of shares. He found that highly significant positive correlationship between risk and return characters of the company. Investors expect higher return from those stocks which associates higher risk. Nepalese stock market is not efficient one so the stock prices do not contain all the information relating to market and company itself. Investors in Nepal have not yet participated to invest in portfolio of securities. An analysis of two securities portfolio shows that the risk can be minimized if the correlation is perfectively negative. The analysis shows some have negative correlation and some have positive one. Negative correlation between securities return is preferred for diversification of risk. On the basic of findings he concluded that many companies have higher unsystematic or specific risk. There is a need of expert institution, which will provide consultancy service to the investors to maximize their wealth through rational investment decision.

Sharma (1997) conducted research on the topic "**Dynamics of stock Market in Nepal"** with the objectives to diagnose and compare sectorial financial status of the stocks in Nepalese stock market. The main conclusion of his research was that the stock market and economic activities move in similar direction and EPS and ROE have a decisive effect on the market share prices of stocks. The investors are interested to invest their resources in the shares of corporate sector through the stock market in the Nepalese economy. It is necessary to develop the entrepreneurship and encourage entrepreneurs to start the productive venture as soon as possible. The main back bone of an economy is to develop the manufacturing sector, which in turn, assists to foster banking, finance and insurance sectors. But unfortunately, the manufacturing sector doesn't have good performance in Nepalese economy. The secondary aspect of stock market is also not functioning well in Nepal. There is almost no liquidity in the stock market for shares except that of banking and some finance and insurance sectors. Although it has become late to take steps to overcome such problems of the Nepalese stock market in order to make it active and supportive, the stock market has good prospect for the resources mobilization to finance the productive enterprises in Nepalese economy.

Shrestha (2002) has conducted research on **"Stock price behavior in Nepal"** which aims to examine the efficiency of the stock market in Nepal. For this propose he used the data constituting the daily closing price of 30 stocks out of the total listed companies in NEPSE. He applied serial correlation and runs test as statistical tools. The serial correlation coefficients of the daily price changes for 1 to 15 lag days, and runs of the series of daily price changes lead him to conclude that the successive price changes are not independent random variable for the 30 sample stocks. Therefore, the random walk theory is not suitable description for the stock market price behavior in Nepal. The dependence in the series of price changes observed implies that the price changes in the future will not be independent from the price changes of the previous days. It also implies that the information of the past price changes is helpful in predicting future price changes in a way that the speculation through technical analysis can make higher expected profit than they would be under naïve buy-and-hold policy. Therefore, opportunities are available to sophisticated (both institutional and individual) investors to earn higher return in the market.

The existence and participation of the sophisticated investors have not been realized from the findings of this study.

Gurung (2004) has also carried out a study on **"Share Price Behavior Of Listed Companies."** He applied statistical tools like percentage, correlation coefficient, bar graphs, and line charts for analyzing the data. The findings of the study are; the correlation coefficient of 0.97 between the number of traded and listed companies is significant, whereas it is negative in trading group and perfectly positive in the case of banking group. The market capitalization value was in erratic trend for every group in each year. The proportion of market capitalization of banking group was the highest among other groups. During the study, the number of transactions in banking group was highest which showed that investment in this group was highly attractive and liquid. The capital market in Nepal was bullish in the initial periods but it turned bearish in the successive year. In the initial period share prices, trading turnovers, market index as well as earnings have moved positively except market capitalization, but they moved negatively in the subsequent years. Thus now the capital market is passing through the bearish trend in Nepal and there is a lack of investor's opportunities and the economy is passing through the recession year by year.

Paudel (2005) undertake his study on **"Share Price Movements of Joint Venture Commercial Banks"** by using various financial and statistical tools like, standard deviation, correlation, beta, t-test etc. The major objective of the study was to examine Nepal stock exchange market and to judge whether the market shares of different banking indicators (book value per share and major financial ratio) explain the share price movements. After applying the sated methodologies he concluded that the market share and the growth rates of different banking indicators used are not captured by the market shares of these banks. The ordinary least square equation of book value per share on market value per share reveals that the independent variable does not fully explain the dependent variable on the basis of above mentioned points. So, Nepal stock exchange operates in a weak from of efficient market hypothesis, indicating that the market prices move randomly. The market value per share does not accommodate all the available historical information. The beta coefficient which measures the riskiness of individual security in relative term,

suggests that the stocks of joint venture commercial banks are less risky as compared to other average stocks traded in the stock exchange.

Bhattarai (2006) has also performed study on **"Efficiency of Nepalese Stock Market"** the objectives of this study were to find out the level of efficiency of NEPSE and to find out some facts about the Nepalese investors and their behaviour. Using serial correlation and runs test for the daily market return he found significant first order correlation .Which means the market return of today in NEPSE is affected by the return of yesterday. The stock price movement is not independent rather than it has some relation with the past price sequences. Similarly, runs test for the daily market return has also revealed the similar result that the stock price formation process in NEPSE is not independent from the historical price series. The subjective analyses of Nepalese investors are based on the rumors and speculations. They do not compare the yield of their investment with other opportunity, rather they look at the market movement and if they found stocks to be increasing, they buy the security and if it is decreasing they sell the security. Nepalese investors are not familiar with investment banking. They do not have any idea about the mutual funds so they are making direct investment towards the companies. Thus, he concluded that the average Nepalese investors are behaving irrationally and the market inefficiency is also the consequence of irrational behaviour of Neplese investors.

Dahal (2006) conducted his study on **"Stock Market Behaviour"** by taking 67 sample companies. To analyze the gathered data he used simple percentage and paired t-test as an analyzing tools. He found that most of the investors were attached with banking sector for investment. On analyzing primary data it was found that the stock market in Nepal is in developing stage as investors are not well aware about the investment process and its other factors like NEPSE index, price trend and investment facilitator's are not doing their work in systematic way. It is also found that the investor's motive for owning shares of company is to receive the dividends from the shares. On analyzing the price trend of two years NEPSE index in different months with the help of monthly trend showed that the price trend of different months of the year 2000 was in increasing trend, while that of year 2001 was in decreasing trend. Similarly, the result of paired t-test for signaling factors with

reference to major seven events showed that signaling effects had played major role in fluctuation of stock prices.

Kharel (2006) also studied **"Stock Market Efficiency and Behavior of Shares Prices"**. He used serial correlation test and runs test as statistical tools, further he used technical trading rule named filter rule for analyzing the data. He found that standard deviations of each and every individual stock's price changes are higher than the mean. Thus, the general shape of empirical frequency distribution is flatter than normal distribution's shape. Most of the results obtained from the serial correlation test for 30 stocks are absolutely large and significantly isolated from zero. The results obtained from the runs test are also consistent with the result of serial correlation test. When the runs test analyzed by lengths, it was found that actual numbers of runs are not normally distributed. Therefore, there exists substantial persistence in the successive price changes series of Nepalese stock market. Similarly, the result obtained from the filter test showed that sophisticated mechanical trading rule can beat the average market returns. As most of the filter's trading returned higher than buy-and-hold strategy, it supports the results of serial correlation and runs test. Thus he concluded that today's price changes are not an unbiased outcome of yesterday's price changes.

Poudyal (2007) also conducted the study on **"Share Price Behavior of Joint Venture Commercial Banks"** He used two- tailed t-test and other financial tools in analyzing the data. He found that the analysis of growth rates of each of the banks under study in different key areas of the performances of the banking firm had been devised; in this it is conclude that the growth rate analysis as a stand alone may not be adequate for the analysis of the share price behaviour. Market share analysis of different banking indicators used is not completely captured by the market value of these banks but the importance of such analysis cannot be underrated anyway as the firms under the study grow mature. Market share of the banks in different key business area plays a great role in share price representation by the historical information. The ordinary least square equation of book value per share on market value per share and other test conducted within this frame reveals that the independent variable does not fully the dependent variables. Values/growth analysis however showed some rosy picture for the investors as in most of the time this analysis

explained the market status of the shares on the basis of corporate and market generated information. To make it clear it should be revealed that sometimes there were contradictions between the inferences extracted form the two different tools of Values/growth analysis. Through the analysis of data he came into conclusion that Nepal stock exchange operates in a weak form of efficient market hypothesis, indicating that the market prices move randomly.

Mainali (2007) also conducted the study on **"Share Price Behaviour of Listed Commercial Banks."** He used serial correlation and run test. Which means the market return of today in NEPSE is affected by the return of yesterday. This cannot show clear picture about share and their relation on behalf of price. He used few techniques to identify share price behaviour which are not sufficient. The share price behaviour is affected by lots of factor so few technique cannot show their actual behaviour. He tries to show share price behaviour data from NEPSE price index for certain time which is not sufficient to predict future share price. He presented different techniques in vast way, which is not understandable for general investor. He used natural logarithms, which is difficult to know about finding? Thus he concluded that most of banks are offering cash dividends every year which may not be applicable to other types of non banking firms, there is a race of investors towards the stocks of banking sector.

Thus, various studies have been conducted in the field of share price behaviour. As the share prices are the crucial phenomenon in the stock market and large numbers of investors are attracted in this investment, updating of previous studies is the most important. The new aspect of this study is to find out whether the successive daily price changes of all listed commercial banks are independent or not in natural logarithms. In the same time risk and return of the sampled commercial banks are also examined to analyze the individual returns patterns and risk involved

2.4 Securities Market in Nepal

2.4.1 Historical Development

Though the historical development of securities market is not very old in Nepal, the organization of security market has changed radically in several new dimensions. The remarkable event in the development of securities market can be observed only after enactment of company act for the first time in 1936. In 1937, the ordinary shares of Biratnagar Jute Mills Ltd. & Nepal Bank Limited were issued under the company act 1936. There was a long gap till 1976.

The real trend of new issue market was organized only after the establishment and operation of Securities Marketing Center in the year 1976. It was the first institutional establishment for the purpose of developing security market in the country. Initially, the Securities Marketing Centre was assigned the task of promoting the secondary market for government securities. But due to the lack of proper mandate and sufficient rules and regulations the center has not been able to conduct a secondary market for shares. With the objective of developing a market for stocks, the Securities Exchange act was enacted in 1983. With this Act in place, the Securities Marketing Centre was converted into the Securities Exchange Centre in 1984. Apart from dealing in government securities the SEC was also assigned the additional job of conducting transactions in stocks of private corporate sector. Thus the development of stock market began since 1984. Reforms in the stock market began in 1993. Two tasks of the SEC, trading and regulatory aspects, were separated and assigned to two separate institutions. With the amendment in the Securities Act, the Nepal Stock Exchange Ltd. (NEPSE) was established with a objective to impart free marketability and liquidity to government and corporate securities by facilitating transaction in its trading floor through market intermediaries, such as brokers, market makers and securities dealers. At the same time, the Securities Exchange Board of Nepal (SEBON) was constituted to oversee the regulatory provisions. Presently in Nepal, NEPSE is the only secondary market (organized stock exchange) of the country for security transaction. Other forms of secondary market such as OTC market, the third and fourth market are not initiated till date. NEPSE appointed five market makers and twenty-five brokers to smooth daily transaction of buying and selling of securities under its restrictive programmed in 1993.

NEPSE opened its trading floor on 13th of 1994 for its newly appointed brokers and market makers.

Table 2.1

Ownership Structure of NEPSE

S.No.	Shareholders	Rs. In Million	Percentage (%)
1	Government of Neal	20.48	58.67
2	NRB	12.08	34.60
3	NIDC	2.14	6.13
4	Members	0.21	0.60
	Total	**34.91**	**100**

(Source: NEPSE: Annual Trading Report, 2007/08)

The authorized capital of the NEPSE is Rs. 50 million. Out of the Rs. 50 million issued capital Rs. 34.91 millions is subscribed by HMG/N, Nepal Rastra Bank, Nepal Industrial Development Corporation and licensed members.

NEPSE has experienced many rise and fall of stock market since its origination. At one time, there had been sufficient investor's optimism over the performance of companies that have raised capital by floating shares to the public. Brokers were busy in transaction of shares with good income in their as well as investor's favor. But as the time passed by, stock market began to be inactive and slack due to several reasons. The listed companies made in prospectus. The political uncertainty as a result of change in government has also affected the environment to some extent .The trend of movement of price of stock shows that the market is largely rumor oriented because when the earning is not satisfactory the prices o some securities goes very high than their book value which results in over valuation and under valuation of the stock. The prices are also deeply affected by the factors like issuance of right shares and bonus shares.

Of all the economic and financial market, the stock market probably has greatest glamour and is perhaps least understood. Some observers consider it as a legalized

place for gambling and many investors considers that stock market investing as a game in which the sole purpose is picking winners.

2.4.2 A Glimpse of Stock Market Trading

The main purpose of this section is to simply provide quantitative information of stock market functioning. The organized stock market is a recent phenomenon in Nepal. In the beginning of organized open cry- out system, there was a brick in stock market activities. Share prices increased tremendously and the turnover volume was also high.

2.4.2.1 Behaviour of NEPSE Index

Market index have always been of great importance in the world of security analysis and portfolio management. This index is used as a bench mark by the individual and institutional investors to evaluate the performance of their own or institutional portfolio. Market indices are used to determine the relationship between historical price movements and economic variables and to determine the systematic risk for individual securities and portfolios. The index can also be used as measuring tool whether the performance of stock market is good or not. This clearly focuses on the price of stocks that is increasing or decreasing in the market. Higher the index means the better performance of stock market and vice versa.

From the below table it is clear that by the end of this fiscal year, NEPSE index closed at 963.36 points. NEPSE index at the end of the last fiscal year was 705.96 points. During this fiscal year the highest point of NEPSE index was 1025.91 recorded in the month Nov/Dec, while the lowest point was 705.96 recorded on Jul/ Aug The monthly trend of NEPSE index is presented in below chart.

Table 2.2

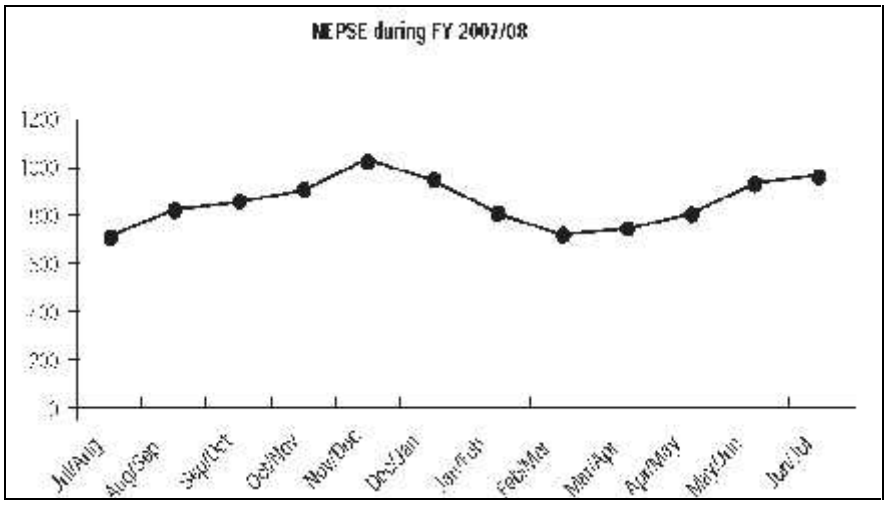
Monthly Closing NEPSE Index (Fiscal year 2007/2008)

Month	**NEPSE Index (Closing)**
Jul/Aug	705.96
Aug/Sept	817.08
Sept/Oct	861.37
Oct/Nov	915.38
Nov/Dec	1025.91
Dec/Jan	958.91
Jan/Feb	814.43
Feb/Mar	714.76
Mar/Apr	746.69
Apr/May	806.26
May/June	930.65
June/July	963.36

(Source: SEBON: Annual Report, 2007/08)

Figure 2.1

Monthly Closing NEPSE Index



(Source: SEBON: Annual Report, 2007/08)

2.4.2.2 No. of Listing and Delisting of Companies

As concerned with the number of listed companies presented in table 3 shows that there is 9.62% change in the rate of listing companies for the fiscal year

2006/07 to fiscal year 2007/08.While talking about in terms of numbers it is 135 for the fiscal year 2006/07 and 148 for the fiscal year 20007/08. The highest rate of listing companies is12.50% for the fiscal year 2002/03. But there is decrease in number of listed companies for the fiscal year 2001/02 with 16.25% lesser than that of previous year. This is due to delisting of the companies by NEPSE as there is a provision provided by stock exchange act.

Table 2.3

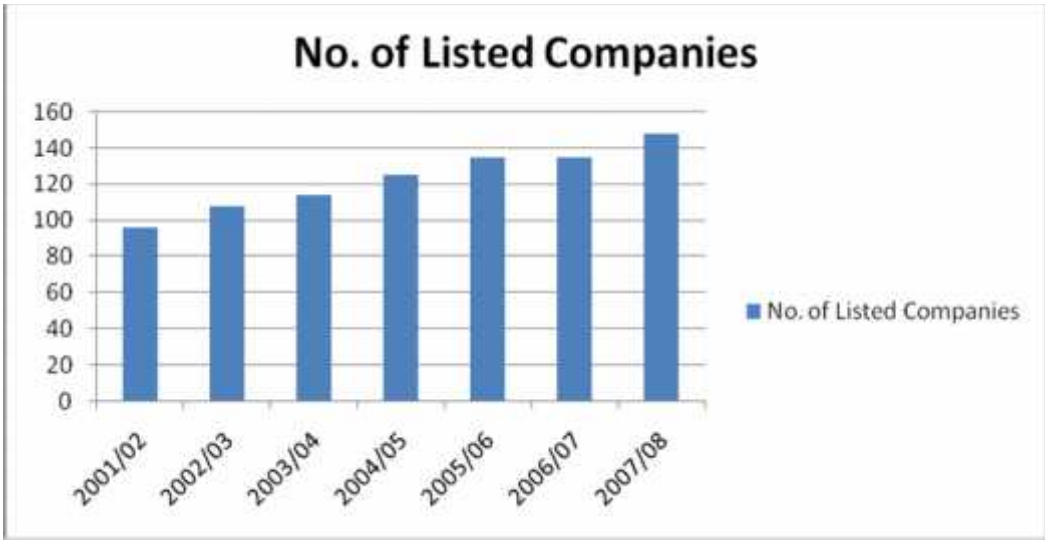
Listing Rate of Companies in NEPSE for Different Fiscal Years

Year	**No. of Listed Companies**	**Percentage change**
2001/02	96	-16.25
2002/03	108	12.50
2003/04	114	5.55
2004/05	125	9.65
2005/06	135	8
2006/07	135	-
2007/08	148	9.62

(Source: NEPSE: Annual Trading Report, 2007/08)

Figure 2.2

No. of Listed Companies

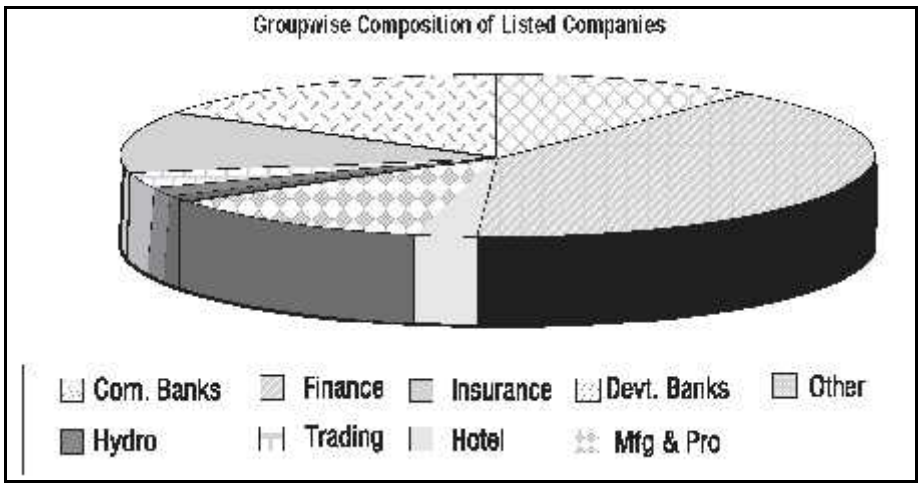


The number of listed companies in the FY 2007/08 reached 148 with the listing of 13 new companies. However, the number of listed companies at the end of the fiscal year came down to 142 with the delisting of five companies and merger of two. De-listed companies have been either already closed or have not held annual general meetings or have not audited their results for more than two years. Altogether 0.17 million unit shares amounting Rs.174.91 million have been de-listed during the year. At the end of

the FY 2006/07 there were 17 companies listed under the commercial bank group. Similarly, there were 23 companies in the development bank group, 17 companies in the insurance group, 55 companies in the finance group, 18 companies in the manufacturing and processing group, 4 each in the hotel and trading group, 1 in other group and 3 in the hydropower group. During the year, a total of 7.49 million units of ordinary shares mounting Rs. 749.40 million, 38.45 million units of rights shares amounting Rs. 384.56 million, 18.69 million units bonus shares amounting Rs. 1869.73 million were listed for trading. With the listing of these shares the number of listed securities other than corporate and government bonds reached 321.13 million units in the FY 2007/08. This is an increase of 31.9 per cent, from 243.50 million units in the previous year. The paid-up value of listed shares reached Rs. 29.46 billion during the FY 2007/08, which rose by 35.50 percent over the previous year. Likewise, for the first time 2 million units of convertible preference shares amounting Rs.200 million were listed during the review period.

Figure 2.3

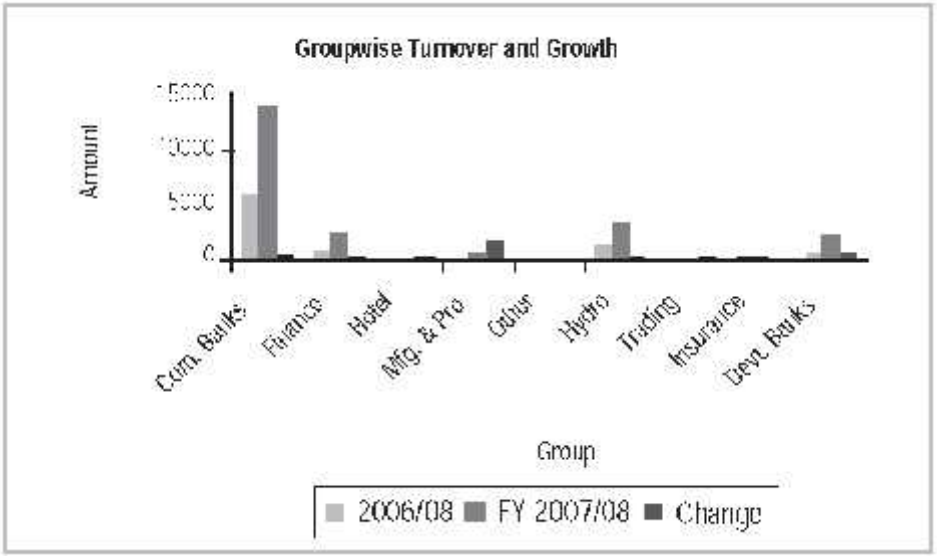
GroupWise Composition of Listed Companies (in fiscal year 2007/08)



2.4.2.3 Group-wise Turnover:

Figure: 2.4

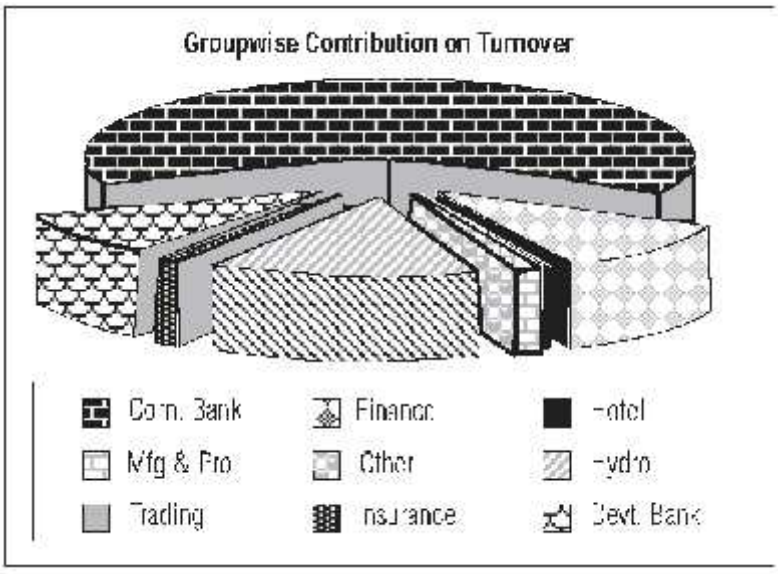
GroupWise Turnover and Growth



Since 24 August 2007 trading is being done through the Automated Trading System (ATS), a fully automated screen-based trading system (Details has been given in the paragraph 5.1). The introduction of the ATS, extension of trading hours and listing of new companies has contributed to a substantial increase in trading activities. The total transactions of shares in terms of value increased by 172 percent to Rs. 22.82 billion in the FY 2007/08, while it was Rs. 8.36 billion last year. Similarly, the number of transactions increased by 25.1 percent to 15.08 hundred thousand, and it was 12.05 hundred thousand last year. The number of shares traded during the year increased by 17.2 percent to 136, whereas it was 116 a year before. Likewise, the number of ordinary shares traded during the review period was 28599.77 million, which is a 57.6 percent increase from previous year. The daily average turnover recorded in the review year was Rs. 97.11 million; the turnover was Rs. 78.22 million last year. Similarly, the market opened for 235 days this year, three days more than last year.

Figure: 2.5

Group Wise Contribution on Turnover



In the total turnover, the commercial banking group's overall domination continued as before because of a better performance of commercial banks. Almost all commercial banks have posted profit in the review period in which the turnover of the commercial banking group was Rs. 5.56 billions. However, in total composition of turnover share of commercial bank declined slightly compared to 63 percent in the review year which occupied 65 percent in the FY 2006/07. The Hydropower group came second on the basis of annual turnover. This group's turnover was Rs. 3.19 billion, which accounts for 15 percent of the total transaction. In the same way, finance companies occupied 10 percent and development banks 9 percent. But, the contributions of the manufacturing and processing group, other group, trading group and hotel group was insignificant as these groups contributed less than one percent in total turnover. The block transaction of Bottlers Nepal Limited contributed to tremendous growth of the manufacturing and processing group in terms of turnover. This group posted a 100 times growth in the review period. Similarly, the turnover of the development banking group increased by approximately five fold compared to the previous year. The commercial bank, finance, hotel and trading groups posted a good rate of growth on the basis of turnover while insurance companies posted a relatively moderate growth but that of hotel and trading companies declined. The ratios of turnover to market capitalization and turnover to GDP are 6.2 percent and 2.8 percent

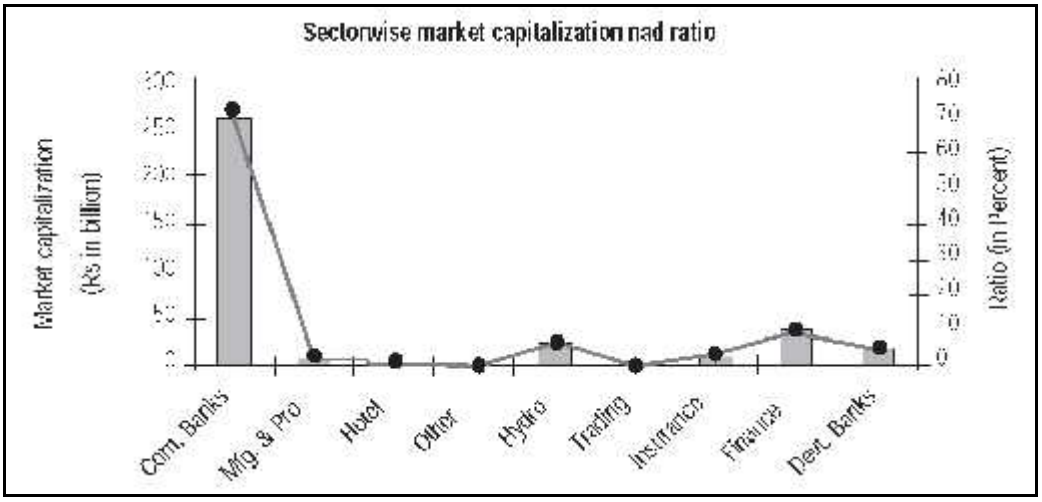
respectively--a significant improvement over the previous years' 4.5 percent and 1.1 percent.

2.4.2.4 Market Capitalization

Due to a whopping increment in the share prices of banks, financial institutions, hydropower companies and development banks, the NEPSE index increased notably over the year. The restoration of peace, an improvement in listed companies' financial performance and, most importantly, the central bank's direction, dated 26 March 2007, to double paid-up capital for banks and financial institutions contributed to a remarkable increment in share prices and subsequently the stock market indices. The stock market opened with the NEPSE index of 683.95 points at the beginning of the FY 2007/08 and ended with 963.36 points during the year. The year on year NEPSE index increased by 40.9 percent. It reached the high of 1064.09 on 17 December 2007 and the low of 677.98 on 18 July 2008. Of the NEPSE Index, banking sub-index went up by 181.39 points to 985.65 (which is also the highest point) during the year. The banking sub-index measures the transactions of companies listed under commercial bank group. It touched the lowest point of 759.67 on 31July August 2007. The twelve-month standard deviation stood at 110.8 in mid-July 2008 compared to 87.4 a year ago, reflecting an increased volatility in the stock market. The sensitive index, unveiled from 1 January 2007, which shows the share price movement of the companies categorized under Class A reached 253.72 point at the end of the fiscal year registering a rise of 44.9 points. It recorded the low of 172.19 on 30 July 2007 and the high of 275.21 on 19 December 2007.

Figure: 2.6

Sector wise Market Capitalization and Ratio



The total market capitalization of listed shares almost doubled to Rs.366.24 billion during the review year. The central bank's directive to increase the capital base of banks and financial institutions has a major impact on the market value of listed shares. Most of the companies opted to issue bonus and right shares to increase their capital base, which attracted lots of investors. With the steep increase in market capitalization, its ratio to GDP went up to 44.3 percent this year. It is a notable increment over previous year's 29.8 percent level. In terms of market capitalization, the commercial bank sector again dominated the stock market. The market capitalization of the commercial banking group touched Rs.259.55 billion in the FY 2006/07, which is 72 percent of the total market capitalization. Hydropower companies occupied 7 percent of the total market capitalization. Similarly, shares of finance companies, insurance companies, development banks, manufacturing and processing, hotels occupied 10 percent, 3 percent, 5 per cent, 2 percent and 1 percent of the total market capitalization whereas others and trading each occupied less than 1percent.

2.4.2.5 Trading performance of Sample Stocks:

The table in appendix-3 gives, different quantitative information about the stock market functioning during the fiscal year 2007/08 for each and every companies taken as sample. In the first column of the table the number of outstanding shares has been demonstrated. In the second column, closing price of securities has been given. Column 3, 4, 5, and 6 contains the paid up value, number of transactions, shares

traded in units and traded amount respectively. Within the samples highest number of transaction has been secured by BOK which is 4005 along with number of shares traded which is 803 thousands shares and also the highest traded amount among the samples which is Rs. 603.14 millions. Column 7, presents total paid-up values of common stocks. Each entry in this column is derived by multiplying the outstanding equity with paid up values. The highest total paid up capital is Rs. 810.81 millions for HBL and lowest value belongs to EBL with Rs. 378 millions. Column 8 which contains total market value is derived by multiplying the outstanding equity and closing price of shares of each company. The highest market value is Rs. 24795.25 millions which is for NABIL among all whereas the lowest total market value is Rs. 7618.16 millions Recorded for NABIL.

CHAPTER III

RESEARCH METHODOLOGY

In the previous chapter review of the available literatures has been done and now it has been attempted to present a basic frame of methodology with in which the research will be conducted.

3.1 Research Design

This research attempts to get the empirical result of the stock price movements. To conduct the study, analytical and descriptive research approach is adopted for the readily available historical data. All the data used in this study are secondary in nature.

3.2 Population and Samples to the study

All the companies listed with NEPSE are considered to be the total population of the study. Out of them the commercial banks that were listed and are doing share transactions in NEPSE were considered as the sample of the study. This study will try to explore the objectives set in the previous section and it is also expected that this study will help in analyzing the stock market scenario. This study is aimed at producing affect of historical information on future price movements of the commercial bank's stocks. Therefore, following six banks have been considered as so far:

- Nabil Bank Limited
- Standard Chartered Bank Limited
- Himalayan Bank Limited
- Nepal SBI Bank Limited
- Everest Bank Limited
- Bank of Kathmandu Limited

3.3 Sources of Data

The data used in this study consists of daily closing price of each of the listed commercial banks in NEPSE. All the obtained price series data that are used in this study are from the daily newspaper and records of NEPSE. The sample period covers 2001-2007 for examining the relationships as well as for using different indicators.

The review of theory of the proposed study was based on textbooks, official publications such as trading reports annual reports of NEPSE, publications of Securities Board of Nepal and renewed journals such as Economic Journal of Money, Credit and banking and American Economic Journal. Journal of Money, Credit and Banking and American Economic Review have been referred as to relate the study to some empirical evidence previously worked out. The facilities available at the central library and other concerned agencies were used, which have a wide range of related books, journals and other publications.

3.4 Analysis of the Data

The book value per share is the total equity divided by numbers of common shares outstanding. The book value will increase with an increase in equity capital components or with a decrease in number of shares outstanding. Other things remaining the same, a growing firm's book value per share will increase every year with the amount of increased profits. The amount of profits can be utilized to pay out dividend or to retain in the firm. The dividend has rising trend of market value per share. On the other hand if the firm retains a large portion of profits in business, the value per share will be affected with the changes in the book value. Therefore, our assumption for testing the form of stock exchange is based on whether the book value of share s dictate the market value of the shares or not. In other words, if a linear relationship exists between the variables, the stock exchange may be regarded as a semi-strong form of the secondary market. If no any relationship exists, in that case the form of stock market may be weak.

In order to test the significance of correlation co-efficient and regression equation, a two tailed t-test will be applied .Financial performance analysis is another way to test the objectives of the proposed study. Therefore, the financial analyses, which include

different indicators that are major in analysis of the share prices, will be used to test why the shares of commercial banks emerge as blue chips for the prospective investors. For this growth rate analysis, market share analysis and ratio analysis of key performance indicators are attempted. Element of risk and return is inherent to every type of investment portfolio. In order to test the risk the riskiness of shares, the risk and return analysis have been attempted in this the expected rate of return over the period of review, the standard deviation, and the coefficient of variation stock will be used in form of statistical tools. In the market sensitivity analysis, beta coefficient of individual stock has been presented for the understanding of market volatility in Nepal. In addition to that, growth vs. value analysis and discriminate analysis has been attempted.

3.4.1 Standard Deviation

It is quantitative measure of total risk of assets. It provides more information about the risk of the asset. The standard deviation of a distribution is the square root of the variance of returns around the mean. The following formula is applied to calculate the standard deviation, using historical returns:

$$Standard\ Deviation\ (\sigma_j) = \sqrt{\frac{(R_j - \overline{R}_j)^2}{n-1}}$$

Where, σ_j = standard deviation of stock j

R_j = realized rate of return at a time

$\overline{R}_j$ = expected realized rate of return.

n = number of observations in sample.

Symbolically,

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

Where, P_t= current market price of share. $P_{(t-1)}$= previous market price of share.

D_t= dividend in cash or stock (if any). In case of dividend other than cash,

Total dividend = cash dividend + stock dividend % x next year

MPS Symbolically,

$\overline{R}_j$ = Average of Realized rates of return over the sample period.

3.4.2 Coefficient of variation

The coefficient of variation measures the risk per unit of return, can be used to measure the inherent risk of individual securities.

$$Coefficient\ of\ Variatino\ (CV) = \frac{\sigma_j}{\overline{R}_j}$$

Where CV_j= Coefficient of Variation.

$\overline{R}_j$ = Expected realized rate of return

σ_j = Standard deviation of stock j.

3.4.3 Beta Coefficient

The beta coefficient is an index of systematic risk. It may be used for ranking the systematic risk of different assets. If beta is larger than one, then the asset is more volatile than the market which is used is called aggressive asset. If the beta is less than one, then the asset is considered defensive asset as its price fluctuations are less than the market. On the other hand, if the beta is equal to one, then the asset is said to average as its price moves proportionate to the market changes.

$$\beta_j \frac{Covarience\ (R_j, R_m}{\sigma_m{}^2}$$

Where, β_j = beta coefficient of stock j.

Covariance (R_j,R_m) = covariance of the returns of stock j and market

$\sigma_m{}^2$ = market variance

CHAPTER IV

PRESENTATION AND ANALYSIS

This chapter deals with the presentation analysis and interpretation using different tools and techniques of analysis. In this, different types of analysis have been attempted the share price behavior with a huge practically as it has academic importance.

4.1 Market Share Analysis

For the purpose of analysis the market shares of each individual banks, the following indicators have been used:

-Market Shares of Deposit	:	Individual bank deposit/ Total deposit
-Market Shares of Loan	:	Individual bank loan/ Total loan
-Market Share of Investment	:	Individual Investment/ total investment
-Market Share of Total Assets	:	Individual Total Assets/ Total Assets

4.1.1 Market Share of Deposits

The market shares of deposits of individual bank in penetrating the market of individual savers. Hence higher the shares of the deposits in the market, the bank's performance can be regarded as better in comparison. It is known that, higher share in the deposits give market better opportunity for the investment and flow off loans to the selected sectors.

The market shares of the deposit in the market, the bank's performance can be regarded as better in comparison. It is known that, higher share in the deposits give market better opportunity for the investment and flow of loans to the selected sectors.

The market shares of each of these banks are shown in the following table:

Table: 4.1

Market Share of Deposits

Banks	2002/03	2003/04	2004/05	2006/07	2007/08
NABIL	15839.01	15506.44	13447.65		
SCBNL	15430.05	15835.74	18755.64	19335.50	23061.03
HBL	17532.40	18619.37	21007.37	24514.01	26490.85
NSBIL	6612.29	5572.47	6522.82	8654.77	11000.20
EBL	4574.51	5466.61	6694.95	10097.69	13502.44
BOKL	5724.13	5723.28	6170.70	8975.78	10485.35
Total	**65712.39**	**66723.91**	**72599.13**	**86164..35**	**103887.08**

Source: Appendix 4-9

Table: 4.2

Market Share of Percentage of Deposit of Each Bank

Banks	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	Averag
NABIL	24.10	%	18.52%	17.58%	16.93%	18.62%	19.83%
SCBNL	23.48	23.73	25.83	26.35	22.44	22.20	24
HBL	26.68	27.90	28.94	27.41	28.45	25.50	27.48
NSBIL	10.06	8.35	8.94	8.96	10.04	10.59	9.49
EBL	6.96	8.19	9.22	10.04	11.72	13	9.82
BOKL	8.71	8.58	8.50	9.64	10.42	10.09	9.32
Total	**100**	**100**	**100**	**100**	**100**	**100**	

Source: Appendix 4-9

The market share of loan of NABIL show decreasing trend from 2002/03 to 2004/05 and it increases in 2006/07 and 2007/08. SCBNL show decreasing trend it had 16.68% in 2002/03, 14.83% in 2005/06 and 14.605 in 2007/08. HBL has the highest market share of loan in 2005/06 i.e.27.65%. The market share of NSBIL decreases in 2004/05 and 2005/06 i.e. 11.96% and 11.90% and again increases in 2006/07 and 2007/08 i.e. 12.21% and 12.46% respectively. The market share of loan of HBL is in increasing trend i.e.8.70% in 2002/03, 13.61% in 2005/06 and 16.02% in 2007/08. The market share of loan o BOKL is increased up to 2005/06 and decreased in 2006/07 and 2007/08 i.e.11.62% and 11.86% respectively.

4.1.2 Market Share of Loan

Market share of loan means the total of the bank's flow of the find in the area of loans and advances. This is the major business on which a bank survives hence better performances in this particular sector of the banking operations gives the glimpse of future potentiality of earnings of a bank.

The following table shows market share of loan of each of these banks. Flow of available of resources to the portfolio of loan an important operational activity of commercial bank. This is the activity on which the banks live on and management of loan is considered one of the.

Table: 4.3

Market Share of Loan in Amount

(in Rs.'000000)

Banks	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
NABIL	8324.44	7437.90	7755.95	8189.99	10586.1	12922.5
SCBNL	5763.13	5364.00	5695.82	6410.24	8143.20	8935.41
HBL	9015.35	8913.73	10001.8	11951.8	12424.5	14642.5
NSBIL	4188.41	4299.25	4468.72	5143.66	6213.87	7626.73
EBL	3005.76	3948.48	4908.46	5884.12	7618.67	9801.30
BOKL	4256.28	4613.70	4542.70	5646.69	5912.57	7259.08
Total	**34553.3**	**34577.0**	**37373.5**	**43226.5**	**50899**	**61187.6**

Source: Appendix 4-9

Table: 4.4

Percentage of Market Share of Loan of Each Banks

Banks	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	Average
NABIL	24.09%	21.51%	20.75%	18.95%	20.80%	21.12%	21.20%
SCBNL	16.68%	15.51%	15.24%	14.83%	16.00%	14.60%	15.40%
HBL	26.09%	25.78%	26.76%	27.65%	24.41%	23.93%	25.70%
NSBL	12.12%	12.43%	11.96%	11.90%	12.21%	12.46%	12.10%
EBL	8.70%	11.42%	13.13%	13.61%	14.97%	16.02%	12.90%
BOKL	12.32%	13.34%	12.15%	13.06%	11.62%	11.86%	12.30%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Appendix 4-9

4.1.3 Market Share of Investment

Commercial Bank's investment in government securities provide a cushion against unanticipated deposits withdrawal from deposits previously they were required to place a certain % of their deposits into government securities, however, under existing regulatory provisions. It is not mandatory to place certain % of their total deposits in specified securities such as government securities and the NRB bonds. A major part of commercial banks investment comprises of investments made in government securities the remaining part of investment is made against share and debentures of public limited companies most of the banks have made priority sector program targets set by Nepal Rastra Bank. The market shares of investment of each of these banks are presented in the following table.

Table: 4.5
Market Share of Investment

(in Rs. 000000)

Banks	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
NABIL	2752.78	4143.51	3611.77	5835.94	4267.23	6178.53
SCBNL	9559.17	9275.87	10357.68	11360.32	9702.55	12847.53
HBL	4083.16	9157.11	10175.44	9292.10	11692.34	10889.03
NSBIL	373.63	600	1207.28	1907.52	2607.68	3610.77
EBL	901.72	1657.87	1653.97	2535.65	2128.93	4200.51
BOKL	419.81	667.46	1816.15	2477.40	2595.25	3374.71
Total	**18090.27**	**25501.82**	**28822.29**	**33408.93**	**32993.98**	**41101.08**

Source: Appendix 4-9

Table: 4.6

Percentage of Market Share of Investment of Each Bank

Banks	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**	**Average**
NABIL	15.22%	16.25%	12.53%	17.47%	12.93%	15.03%	14.91%
SCBNL	52.84	36.37	35.94	34	29.43	31.26	36.64
HBL	22.57	35.91	35.30	27.81	35.44	26.49	30.59
NSBIL	2.06	2.35	4.19	5.71	7.90	8.79	5.17
EBL	4.98	6.50	5.74	7.59	6.45	10.21	6.91
BOKL	2.32	2.61	6.30	7.41	7.87	6.45	5.79
Total	**100**	**100**	**100**	**100**	**100**	**100**	

Source: Appendix 4-9

From the above table, it is revealed that the market shares of investment of each of these banks do not show consistence trend over the period. Accepting deposits and extending credits for production units of the economy are the two traditional but primary activities to be carried out by the commercial banks. In above all sample years NABIL, SCBNL and HBL have better performance in investment. These banks capture almost market share of investment. The reduction in size of investment may be due to present security problem in Nepal, lack of investment opportunity and to extending credit facilities to the business sector with the objective of achieving high-yield returns. Over the last few years of time period the interest rate on government bond (T-bill) remained at more or less five percent. Therefore, investing a high percent of available fund in low yield securities like government may not even cover the cost of raising funds either from borrowings or from deposits. Therefore, it can be conclude that investment in securities may not be a good indicator to measure the banks financial position.

4.1.4 Market Shares of Total Assets

The total of year end balance sheet has been used to analyze the market shares to total assets. The results are presented below.

Table: 4.7

Market Share of Total Assets

(in Rs. 000000)

Banks	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
NABIL	18808.88	17629.25	16562.61	16745.45	17186.3	223229.94
SCBNL	19703.42	18443.12	21000.50	23642.03	21893.55	25776.31
HBL	19544.34	20672.43	23355.22	24762	27128.35	29438.63
NSBIL	7385.29	7021.13	7566.34	8440.39	9955.74	13011.26
EBL	5218.68	6607.18	8052.20	9608.54	11707.92	15951.81
BOKL	6608.30	6356.65	7444.81	9496.31	9861.42	12270.94
Total	**77268.91**	**76729.77**	**83981.68**	**92694.72**	**97733.28**	**118778.89**

Source: Appendix 4-9

Table: 4.8

Percentage of Market Share of Total Assets of Each Bank

Banks	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	Average
NABIL	24.34%	22.97%	19.72%	18.06%	17.58%	18.80%	20.25%
SCBNL	25.50	24.04	25	25.50	22.40	21.70	24.02
HBL	25.29	26.94	27.81	26.71	27.76	24.78	26.55
NSBIL	9.56	9.15	9	9.10	10.19	10.95	9.66
EBL	6.75	8.61	9.59	10.36	11.98	13.43	10.12
BOKL	8.55	8.28	8.86	10.24	10.09	10.33	9.39
Total	**100**	**100**	**100**	**100**	**100**	**100**	

Source: Appendix 4-9

From the above table, according to sample year the market shares of NABIL and SCBNL showed a decreasing trend, whereas rest of the banks were able to absorb a higher share of markets with the total assets. In an average NABIL, SCBNL and HBL occupied high market share of each having more than 20% in average. Rest of the banks had less than10% of market shares.

4.1.5 Implication of the Market Shares Analysis on Share Price Behavior

Now it is attempted to make a comparison of the banks under study on the basis of the indicators examined above and ranked their performance to understand their strength and weaknesses towards the status of the bank in the market. The following table represents the ranking of the banks on the basis of market share analysis.

Table: 4. 9

Ranking of the Banks on the Basis of Market Share

Banks	Deposits	Loan	Investment	Total Assets
NABIL	3	2	3	3
SCBNL	2	3	1	2
HBL	1	1	2	1
NSBIL	6	6	6	5
EBL	4	4	4	4
BOKL	5	5	5	6

The market share analysis may be a good tool of ranking the performance of an individual corporate entity. Ranking may give the glimpse of understanding of the overall performance, strength and weaknesses of the particular company. And such

strengths and weak points of the company can be used for the implication of share price behavior as is done by the fundamental analysts. Here, it is attempted to evaluate the individual banks overall performance on the basis of their market occupancy and rank these banks in order as per the penetration of the market by them in several aspects during the period of the sample. From the above table it is crystal clear that the SCBNL dominates the market share in the sector of investment. At loans, deposits and total assets HBL has higher performance than remaining banks. From the above presentation it can concluded that NABIL, SCBNL and HBL dominates the market share in the above sectors but remaining banks have weak performance.

4.2 Financial Ratio Analysis

Financial ratio analysis is one of the widely used techniques to evaluate the overall financial position of a business concern. By establishing the relationship between the two components of the financial statement figures the analyst can evaluate the performance of the firm in the area of the analysis. The degree of results of the analysis can show the way of predicting future of the firm in that particular area of performance and declaring the current performance level of the firm as well. Ratio analysis included per groups comparison, industry average comparison and trend analysis.

Banking institution do not produce the tangible goods or products rather it renders the services to the customers in the form of credit facilities, deposits acceptance and other many services for the communities. In fact, loan and deposits are the products/services offered by the commercial banks to the society. Therefore, commercial banks' investments in the fixed assets such as land and building may constitute a very nominal part of their total assets.

Moreover, deposits liability and loan advanced are the major items of the balance sheet of the banks constituting the relatively bigger size of the total assets or total liabilities. Since there is no need of holding inventories by the banking institutions, it is advised not to administer the current ratio analysis banks. In this section we will try to use and infer the implications of the ratios recommended to banking institutions which are internationally recognized for the purpose of analysis of ratios of the

financial institutions. In this section the following rations of the banks under study would be discussed for the estimate of the prices of the shares on basis of the financial performance of the individual banks.

- Net Margin
- Assets Utilizations
- Return on Assets (ROA)
- Profit to total income
- Total costs to profit
- Earning to Price Ratio

4.2.1 Net Margin

Net margin is the indicator that indicates the proportion of the net income before tax in the total income. This indicator is one of the very useful tool for analyzing the efficiency of a banking institution in converting the total revenue to the net income or efficiency in minimizing its expenses in relation to total income, hence higher the ratio the higher is the efficiency of the bank and vice versa.

Following relations represents the net margin ratio:

$$Net\ Margin = \frac{Net\ income\ before\ tax}{Total\ income}$$

Net margin ratios of the banks under study over the period of reviews are shown in the table.

Table: 4. 10

Net Margin

Banks	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
NABIL	30%	25%	43.11%	47.75%	58.66%	50.39%
SCNBL	40.83	45.85	47.56	47.35	47.94	51.84
HBL	27.61	25.11	24.75	39.08	37.19	34.22
NSBIL	9.96	11.18	12.20	36.21	38.84	35.96
EBL	21.92	23.54	21.38	39.16	40.98	41.34
BOKL	16.24	4.70	19.19	39.28	42.29	39.83

Source: Appendix 4-9

From the above table it can be seen that the net margin ratio of SCBNL has increasing trend and remaining banks has fluctuate net margin. The performance of the NABIL,

SCBNL, HBL and EBL are in between 20% to 50% and above in most of the year. Rest of the two banks under the study has their measurement of the performance is between 5% to 40%. Hence we can make a prediction that the banks with higher level of performance should have higher prices in the secondary market if the fundamental theory of the price behavior is to hold good and should the market be somehow efficiency.

4.2.2 Assets Utilization

Assets utilization indicates that how well a particular bank is doing in relation to its assets utilized. The ratio of total income to total assets also implicitly states the degree of earnings in relation to the total assets employed. Assets utilization ratios of different banks have been depicted in the table10. The utilization ratio is widely used tools all over the analysis of market behavior of the shares in the security market. The following formula is applied for finding assets utilization ratio:

$$Assets\,utilization = \frac{Total\,income}{Total\,assets}$$

Table: 4.11
Assets Utilization

Banks	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
NABIL	8.36%	9.29%	8.61%	7.02%	7.29%	6.86%
SCNBL	8.38	7.84	7.16	5.54	5.78	5.58
HBL	8.06	6.72	6.23	5.67	5.97	6.26
NSBIL	6.84	7.24	7.48	6.88	6.35	5.81
EBL	8.72	8.19	8	8.02	7.08	6.58
BOKL	8.70	9	8.54	6.81	6.94	6.57

Source: Appendix 4-9

From the above table it can be seen that asset utilization ratio is not great efficient of these sample banks under sample year. NABIL has efficient asset utilization then remaining banks it has greater value then other. Based on ratio no. 1 ranking is NABIL, 2nd is BOKL, 3rd is EBL and so on.

4.2.3 Return on Assets

Return on assets is the ratio of net income after tax to total assets. The following table 11 represents the return on assets of the banks under study for over the period of the review. Return on assets is one of the key indications to analyze the behavior of share price regarding the utilization of corporate information. Hence, this performance indicator is regarded as one of the key sector of financial analysis in share price behavior.

The following relation has been employed for finding return on assets.

$$Return\ on\ Assets = \frac{Net\ income\ after\ tax}{Total\ assets}$$

Table: 4.12
Return on Assets

Banks	2002/03	2003/4	2004/05	2005/6	2006/07	2007/08
NABIL	1.55%	1.54%	2.51%	2.15%	2.90%	2.28%
SCBNL	2.19	2.60	2.41	1.63	1.58	1.80
HBL	1.44	1.14	0.91	1.58	1.43	1.41
NSBIL	0.17	0.58	0.64	1.92	1.78	1.45
EBL	0.62	1.29	1.17	2.44	2.20	2.05
BOKL	0.99	0.14	1.10	2.07	2.25	1.81

Source: Appendix 4-9

From the analysis of the above table it has been perceived that NABIL seemed to be the best performance because it has greater value of return on assets then remaining banks. It dominates other banks. On the of ranking,1st is NABIL, 2nd is SCBNL, 3rd is EBL and so on. In conclusion it can be deterred NABIL and SCBNL were the best and steady income generating banks among the sample taken; hence these two banks should be the best doing company in the secondary market as well for most of the years of the review period.

4.2.4 Profit to Total Income

Profit to total income ratio is another key indicator of performance evaluation of a financial institution, which measures the capacity of a financial institution in converting its income in to the profit. The major causes of this indicator being high is better utilization of the non- profiting assets or lower rate of the expenses in other than interest. Higher of this ratio is preferred by the investors in analyzing the

efficiently of the bank that indicates the efficiency of the management in controlling the administration cost and better utilization of human resource. Table 12 indicates the ratios of different banks under study for the period of review presented in terms of the percentage. Following relation been used to find profit to total income.

$$Profit\ to\ total\ income = \frac{Net\ income\ after\ tax}{Total\ income}$$

Table: 4.13

Profit to Total Income

Banks	**2002/03**	**2003/04**	**2004/05**	**2005/06**	**2006/07**	**2007/08**
NABIL	18.50	16.57	29.16	30.60	39.70	33.23
SCBNL	26.09	33.12	33.71	29.37	27.27	32.33
HBL	17.82	16.91	14.58	27.85	23.96	22.56
NSBIL	2.47	8.03	8.61	27.83	28.11	25.02
EBL	6.95	15.77	14.82	30.39	31.10	31.12
BOKL	11.37	1.62	12.91	30.44	32.39	27.58

Source: Appendix 4-9

From the above table and ratio concerned, it can be said that NABIL has highest profit to total income ratio and the SCBNL, BOKL, EBL respectively. These four banks are the best among the sample taken converting its revenues into the net profit that reveals the operational success of the management team of the bank. In general it can be inferred that NABIL seemed to be the best performer among all the samples to the study. Hence this way it can be estimated that the banks standing best and next best should perform well and according in secondary market as well.

4.2.5 Total Cost to Profit

Total cost to profit ratio can be taken as another vital analysis for understanding the performance level of the banking institutions under the study. This ratio is presented in the manner of times, where higher times term

of ratio represents the higher involvement of the cost for generation of given level of profit and vice-versa; hence it can be considered that the lower ratio of this performance is taken as better than the comparatively higher ratio. Table 13 depicts the concerned figures and the ratios involved as well. Since we do not have average industry norms for such performance it can be compared with the samples each other

for the shake of ranking of the performance following relation has been employed to find total cost to profit.

$$Total\ cost\ to\ profit = \frac{Total\ expenses}{Net\ income\ after\ tax}$$

Table: 4.14
Total Cost to Profit

Banks	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
NABIL	3.78	4.53	1.95	1.71	1.04	1.49
SCBNL	2.27	1.63	1.55	1.79	1.91	1.49
HBL	4.06	4.43	5.16	2.19	2.62	2.91
NSBIL	36.42	11.70	10.88	2.29	2.17	2.56
EBL	11.23	4.85	5.30	2	1.90	1.89
BOKL	7.37	58.68	6.25	1.99	1.78	2.18

Source: Appendix 4-9

From the above table it is clear that early established banks are better in this performance and similarly the banks established latter particular performance rating NABIL seemed to be the best in an average however NSBIL seem to be the poor performer although didn't have negative indicators.

4.2.6 Earning to Price Ratio

This ratio is typically calculated as follows. First the accounting value of the firm's earnings per share is determined by using the most recent income statement and dividing the firm's earnings after taxes by the number of shares outstanding. Second, the market price of the firm's common stock is determined by taking the most recent price of which the firm's common stock was traded. Lastly the earning per earning per share figure is divided by the market price is stock to arrive at the P / E or E / P ratio. Relatively low values characterized growth stocks and relatively high values called characterized value stock.

$$Earning\ price\ ratio = \frac{Earning\ price\ per\ share}{Market\ price\ per\ share}$$

Table: 4.15

Earning to Price Ratio

Banks	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
NABIL	0.0395	0.075	0.11	0.0926	0.0687	0.0577
SCBNL	0.0592	0.091	0.091	0.0823	0.0612	0.038
HBL	0.0624	0.06	0.059	0.584	0.0560	0.0538
NSBIL	0.0058	0.023	0.044	0.0464	0.0422	0.0298
EBL	0.0195	0.076	0.067	0.0670	0.0431	0.004
BOKL	0.1029	0.0078	0.089	0.0929	0.07	0.0514

Source: NSPSE and Appendix 4-9

From the above table it can conclude that NABIL has the highest E/P ratio i.e. 0.11 so it characterized value stock and EBL has the lowest E/P ratio i.e.0.004 so it characterized growth stock. SCBNL also posses' value stocks in most of the review periods. In first year BOKL also posses value stock. But NSBIL places in the category of growth stocks because its E/P ratio is low in most of the review periods. E/P ratio of HBL is in descending position. Above calculation shows earning ratio or position of individual bank under particular year.

4.3 Risk and Return Analysis

Risk and return analysis is considered to be one of the best ways of analyzing the behavior of prices of the shares in the market. It involves the analysis of capital gain from the investment in the securities and the dividend yield, augmented there of as well. In this analysis it is attempted to find out periodical realized return to the investment, its expected return or average rate of return over the period of the review, the standard deviation of the return over the period co-efficient of variation and Beta. In the following paragraph, statistical facts of each bank will be calculated and interpreted.

4.3.1 Risk and Return Analysis of Individual Banks

It is very useful to analyze the individual returns patterns and risk involvement of any company while investigating the causes and the path of movement of the share price behavior. The following table depict the statistical facts directly through excel spread

sheet. For all individual banks under the study having its base in the year end closing prices of shares of banks and dividend announcement during the year of well.

4.3.1.1 Standard Deviation

Standard deviation is a strong statistical device to measure the total risk involved in an investment which consists of both market risk and diversifiable risk. Moreover it denotes the volatility or the expected rate of return. The calculated value of expected return and standard deviation are presented in the below table.

$$Standard\ deviation(\sigma_j) = \sqrt{\frac{(R_j - \bar{R}_j)^2}{n-1}} \therefore (Total\ risk\ of\ assets)$$

Table: 4.16

Standard Deviation of Individual Banks

Banks	Expected Return (Er)	Standard Deviation	Ranking based on Standard Deviation
NABIL	8.23	35.29	4
SCBNL	21.37	31.65	5
HBL	-2.61	21.14	6
NSBIL	0.91	3471.69	3
EBL	333..72	293897.28	1
BOKL	23.67	4562.08	2

Source: NEPSE,Appendix 10

Based on the implicit assumption of the standard deviation investment in the common stocks of EBL are more risky and then BOKL which is followed by NSBIL. The stock of HBL could be considered as less risky being the standard deviation lower than that of other Banks though it has negative expected realized return. The common stock of EBL is associated with 293897.28% of the highest risk which indicated that the expected return can be deviation by 293897.28 in case of common stock investment. Hence, there exists less volatility or risk level in the market return than in the individual common stock investment.

4.3.1.2 Co-efficient of Variation (CV)

The standard deviation may not be appropriate measure of risk when the realized rates of returns are not same in all of the companies taken under consideration. Here also the average realized rate of return are not same for the entire sample. Therefore, it is recommended to use the coefficient of variation to measure the risk involved in individual banks. The coefficients of variation of the realized rate of the sample are shown in the following table.

$$Coefficient\ of\ Variation\ (CV) = \frac{\sigma_j}{\bar{R}_j} \therefore (Risk\ per\ unit\ of\ return)$$

Table: 4.17

Coefficient of Variation of Individual Banks

Banks	Co-efficient of variation (CV)
NABIL	4.59
SCBNL	1.45
HBL	-8.10
NSBIL	64.98
EBL	1.64
BOKL	2.85

Source: NEPSE, Appendix 10

On the basis of the coefficient of variation common stock of NSBIL seems to be most risky. The common stock of SCBNL seems to be less risky. As the realized rate of return of HBL is negative its coefficient of variation is also recorded negative. Remaining sample banks have average risk for invest in common stock.

4.3.1.3 Beta Coefficient

Standard deviation measures the total risk of an investment and the coefficient of variation measures the risk per unit of return. But the beta coefficient measures the market sensitivity or systematic risk of an investment. As e know, systematic risk is that portion of risk which is directly associated with market phenomenon and cannot be reduced by diversification. The beta coefficient of an individual stock provides the clear picture about the tendency of movement of the stock with market. It measures the stock volatility relative to that of the average. An average stock is

that which tends to move up or down with the general market as measured by some index. Here, NEPSE index is taken into consideration to measure the movements of the general market regarding the stocks of listed commercial banks. Higher beta indicates the greater reaction by individual common stock with the given movement in the market status. The following table shows the degree of riskiness of each stock of entire sample in relation to the general market.

$$\beta_j \frac{Covariance\ (R_j, R_m}{{\sigma_m}^2} \therefore It\ measures\ systematic\ risk$$

Table: 4. 18

Beta Coefficients of Sampled Commercial Banks

Stocks	Beta Coefficient	Ranking of riskiness based on beta
NABIL	0.39	1
SCBNL	-0.23	3
HBL	-0.20	2
NSBIL	-0.41	4
EBL	-13.48	6
BOKL	-0.56	5

Source: NEPSE, Appendix 10

By analyzing the above table, most of the banks have negative beta coefficient less than 1, which show that they are not so more sensitive to the market in comparison to the commercial banks. Only NABIL have positive beta coefficient i.e. 0.39 which is also less than 1. According to ranking based the NABIL has higher risky than other banks though it has less than 1 beta coefficient and EBL has less risky i.e. -13.48.These results might have been the outcome of the availability of data for a very short span of time period because of lately listing of the stock of those banks with the secondary market.

4.4 Major Findings of the Study

Based on the analysis of data and their interpretation the study's major findings in relation to the objectives set could be summarized as follows:

- Market share analysis of different banking indicates used is not completely captured by the market value of these banks but the firms under the study grow mature market share of the bank in the different key business areas play a greater roles in the share price representation by the historical information.
- The analysis of ratio more or less simulates the historical impact of the firm the prices of same in the secondary market. Hence at professional level as well the power of ratio analysis and interpretation can be embraced as the market price coverage of a security is reasonably represented by the key financial ratios.
- The risk and return analysis is the other major tool used in this study. It was observed that this analysis can give better results only when the long range of past information is available for the analytical purpose. But the case in different in present context as most of the banks do not have long history in the security market the result of the analysis could not fully explain the behavior of the share prices in the market.
- The established banks have good track record of their financial position and the newly established banks are penetrating the market. All the banks are operating in prices although some of them suffered from losses during their initial stapes. This investor's attitude towards the shares of these banks seems to be positive. Whatever be the potentially of firms of other institutional investors illogically prefer stocks of the banks.
- Most of the banks are offering cash dividends every year, which may not be applicable to other types of non-banking firm, which might be the reason behind the race of investors towards banking stocks.
- Having good track record of the financial positions market penetration and continuous declaration of dividends encourage the potential investors to buy the shares of commercial banks.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter deals with the findings and conclusion derived from the study of share price behavior of six commercial banks in Nepal. This chapter consists of three sectors: First Section provides the summary of the study, the second section draws the conclusions of the study and finally, the third section proposes recommendations to deals the problems observed because of the findings.

5.1 Summary

The study was conducted with the main objective to analyze the share price behavior of listed commercial banks. Capital market is basically a place or platform where transfer of funds takes place from the savers to the borrowers. The firms obtain funds and utilize them for the purpose of attaining defined objectives. To get higher rate of return in the market people has developed a concept to invest in the securities of the publicly quoted companies, whole the major role is played by the level of understanding of investors getting involved in the market of speculation and for such knowledge about security market can be achieved through better analysis of the security. And the corporation to which the security belongs to. The long objectives of the firm should be to maximize the wealth of the shareholder and maximizing the market value of shares of the company.

In order to conclude the study in a manner of the academic research, this study follows the conventions of the methodology set by university. In the first chapter introduction to the security/capital market, statement of problem, objective of the study, significance of the stubby and limitations of the study were attempted. Next to this follow, the chapter of review of literature in this chapter the concept of security market, theories of share price behavior, studies on the security market conducted held inside the country and abroad are explored and dealt with the overview of the Nepalese stock market. The recent position and performance of stock market in Nepal has been analyzed. The Nepalese stock market has not developed remarkably in the economy because of various market imperfections like limited number of buyers and sellers, stringent government policies, negligible development of corporate sector etc

After that, methodology of research is dealt in detail for the basic understanding of the methods applied in the conclusion of the study. Fifth chapter is. The next chapter is the major part of the study, in this the analytical exploration and manipulation of data has been attempted within the frame of the methodology insisted in the chapter of research methodology. Then come the present chapter namely summary, conclusion and recommendations. In this chapter, the summary of the study, conclusions derived out of the study and recommendations have been presented.

According to prior was setting, the prior is that the Nepal Stock Exchange is a weak form of the market and the share price behavior of commercial banks walk randomly, market share analysis and analysis of financial ratios have been employed. Different ratios like interest margin, Net margin, Assets utilization, Return on Assets, Profit to total income, total cost to profit ratio and earning to price ratio were utilized.

To address the issue of banks share being blue chips, combine effect of analyses are considered. In which it ranges from financial analysis to risk and return analysis as well. In regarding to the categorization of the banking sector's shares as value was employed. To relate the study towards the market sensitivity beta coefficient was analyzed and explained. The study concerning the riskiness of shares, risk and return analysis was applied to the data of the each individual banks in which expected rate of return; standard deviation and coefficient of variation were used. Though most of the commercial bank's common stocks seem to be riskier than that of average stock, lots of investors are attracted in trading these stocks. This is due to the good track record of financial positions, market penetration and continuous declaration of dividends which encourage the potential investors to buy the shares of commercial banks.

5.2 Conclusions

The major results of the study on share price behavior of commercial banks in Nepal are summarized as under:

- The market share and growth rates of different banking indicators used are not completely captured by the market value of these banks.

- The risk and return analysis of the banks share showed mixed result. New established banks shares did not represent the actual image of the risk and return scenario, the possible cause for this is listed in the limitations of the study.
- Nepal Stock Exchange operates in a weak form of efficient market hypothesis, indicating that the market price move randomly.
- The established banks have good track record of their financial position and the newly established banks are penetrating the market. All the banks are operating the market. All the banks are operating in profit, although some of them suffered from losses during their initial stage. The investor's attitude towards the shares of these banks seemed to be positive.
- Most of the banks are offering each dividend every year, which may not be applicable to other types of non banking firms.
- Having good track record of the financial position, market penetration and continuous declaration of dividends encourage the potential investors to buy the share of commercial banks emerge as the blue chips in the Nepalese Stock Market.
- The average realized rate of return of all these banks are not same over the sample period. Therefore, the coefficient of variation can be preferred over the standard deviation as measure of risk. On the basis of coefficient of variation NABIL shares can be considered as more risky where as SCBNL shares can be considered as less risky.
- The beta coefficient in the selection of market sensitivity analysis, which measures the riskiness of individual security in relative term, suggest that most of the shares of these six banks are nor high risky. Therefore, even a risk quarter can go for making an investment in share of these banks. The shares of publicly quoted commercial banks are less risky as compared to other average stocks traded in the stock exchange.

5.3 Recommendations

The findings of this study may provide important information for those who are concerned directly or indirectly with the stock market activities. Thus, the following recommendations can be outlined:

Because of the persistence in stock price movements, professional traders either institutional or individual can beat the market. Thus, it is recommended that the investors should be alert to explain the opportunities through short-term speculation.

- There exists excessive price fluctuation as observed from the stock market while collecting the data. To control such erratic price fluctuations the regulatory body should impose effective provisions to the exchange members.
- Most of the stocks in the sample are undervalued. So, the stock market investors are recommended to buy those securities.
- The public investors should not direct their savings in shares haphazardly. They should at least analyze or get suggestions from expert about the financial position and level of risk prior to taking an investment decision.
- It is also recommended to the concerned body to carry out or help to carry out further research on stock market behaviour for the betterment of stock market.
- Security Board of Nepal should be in the state of high alert for checking deregulation and violations affected by the corporate sectors, investors and other related professionals. Securities Board of Nepal being the apex body in our nation for the regulation and development program continuing education program seminars and workshops in the interval of time related with securities, security market and its price.
- Nepal Stock Exchange limited being a major operative body in the area of secondary market should keep on developing the different parameters related to the congenial functioning of the stock market. It needs to get into the modernization and further to this it needs to develop efficient and effective channels of information related to investment and companies listed with it.
- There are some recommendations to the HMG Nepal as well.

In order to develop the healthy economic system in the country government should be keeping on devising and issuing rules and regulations regarding the operations of stock market, however the rules so emerging should be on the interest of the general

public and the development of securities market. Further to this, government should arrange to trade its securities on the floor, of Nepal Stock Exchange limited, the only organized Stock market in the country, which will avail the investors wide security options under the same roof which will strengthen the position of security market and the Nepal Stock Exchange limited as well.

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