CHAPTER I

INTRODUCTION

1.1 Background of the Study

Nepal is one of the least developed countries of the world and has very little development in the part of capital market. The history of capital market in Nepal dates back to 1936 in which year the shares of Biratnagar Jute Mill Ltd. were floated. In 1937, Tejarath was set up to facilitate loans to the government employees and was converted into Nepal Bank Ltd. Government of Nepal introduced the Company Act in 1964 and the first issue of government bonds made in the same year through Nepal Rastra Bank to collect the developmental expenditures. It carried 6 percent rate of interest and had the maturity period of five years. Government of Nepal announced the Industrial Policy in 1974 and under this policy an institution named Securities Marketing Center (SMC) was established to deal in government securities-development bonds and national saving bonds, and corporate securities of few companies. The Company Act was introduced in 1964 and Government Bond was issued in 1964. The Securities Board Nepal, in short SEBON was established on June 7, 1983 with the purpose to regulate the Nepalese security markets under the provision of Securities Exchange Act, 1983. Whereas Nepal Stock Exchange, in short NEPSE, is a non-profit organization, operating under Securities Exchange Act, 1983. The basic objective of NEPSE is to impart free marketability and liquidity to the government and corporate securities by facilitating transactions in its trading floor through member, market intermediaries, such as broker, market makers etc. NEPSE opened its trading floor on 13th January 1994. Government of Nepal, Nepal Rastra Bank, Nepal Industrial Development Corporation and members are the shareholders of NEPSE.

A capital market is a market for securities, where business enterprises companies and governments can raise long-term funds. It is defined as a market in which money is provided for periods longer than a year. Instruments used in capital market are debt, stock, preferred stocks, bonds and convertible issue. The long-term debts are installment debts, commercial debts represented by acceptance bills, commercial debts and accommodation papers etc. Saving and deposits schemes, which are not securities bearings, fall under the non-securities segment of market. Capital markets are also classified as primary market and secondary markets. Primary markets are the markets in which corporations raised new capital and in which newly issued securities are involved. If we were to sell new issue of common stock to raise common stock to raise capital, there would be a primary market transaction. The corporation selling the stock receives proceeds from the sale in the primary market transaction. Secondary markets are those in which previously issued securities are traded by far the most active secondary market and the most important one to the financial managers is the stock market. It is here that price of firms stocks are established and since the primary goal of financial management is to maximize the firm's stock price, knowledge of the market, in which the price is established, is essential for anyone involved in managing the business.

Stock exchanges are intricately inter-woven in the fabric of nation's economic life. Without a stock exchange the saving of the community, the sinews of economic progress and productive efficiency would remain underutilized. The task of mobilization and allocation of savings could be attempted in the old days by a much less specialized institution than the stock exchange. But as business and industry expanded and the economy assumed more complex nature, the need for 'permanent finance' arose. Entrepreneurs needed money for long term whereas investors demanded liquidity – the facility to convert their investments into cash at any given time. The answer was ready market for investments and this was how the stock exchange came into being. Stock exchange means anybody of individuals, whether incorporated or not, constituted for the purpose of regulating or controlling the business of buying, selling or dealing in securities. The securities include shares, scrips, stocks, bonds, debentures, government securities and rights or interest in securities (Bhalla, 2004, page no 96)[1].

The Nepalese capital market in open-market securities is in its infancy stage. The government established 'Security Exchange Center' in 1976 and enacted 'Securities Exchange Act' in 1983 to promote and regulate the market of open-market securities. Thereafter, the center started secondary market operation by listing corporate securities. In order to activate the capital market; the government has massively amended the Act, constituted 'Security Exchange Board of Nepal', and converted Securities Exchange Center into Nepal Stock Exchange. Exchange now provides full-fledge secondary market. Financial institutions like commercial banks, insurance companies, and development banks dominate the trading of securities in NEPSE.

An Investment is sacrificing of current money in expectation of future return. It is a commitment of money that is expected to generate additional money. Every investment entails some degree of risk; it requires a present certain sacrifice for a future uncertain benefit (Francis, 1997: 1, page 73)[2]. Investment, in its broadest sense, means the sacrifice of current dollars for future dollars. Two different attributes are generally involved: time and risk. The sacrifice takes place in the present and is certain. The reward comes later, if at all, and the magnitude is generally uncertain (Sharpe, 2004:1, page 121)[3]. Investment is the sacrifice of certain present value for the uncertain future reward. It entails arriving at numerous decisions such as type, mix, amount, timing, grade etc. of investment and disinvestments. Further, such decision-making has not only to be continuous but rational too. Broadly speaking, an investment decision is a tradeoff between risk and return. All investment choices are made at points of time in accordance with the personal investment ends and in contemplation of an uncertain future. Since investments in securities are

[1] Bhalla V.K, (2004) "Investment Management, Security Analysis and Portfolio Management", 11edition.
[2] Francis Jack Clark (1997/98), "Investment Analysis and Management", 7th edition.
[3] Sharpe, (2004/05), "Investment Management", 8th edition.

revocable, investment ends are transient and investment environment is fluid, the reliable bases for reasoned expectations become more and vaguer as one conceives of the distant future. Investors in securities will, therefore, from time to time, reappraise and reevaluate their various investment commitments in the light of new information, changed expectations and end (Bhalla, 2001, page 131).

1.2 Statement of the Problem

The problem toward which this study is directed is to identify the performance of common stocks listed in NEPSE. Now-a-days, investment in common stocks in Nepal is getting momentum due to flow of information through print media although not so adequate. The individual investors are investing in common stocks despite very little information because of less opportunity available elsewhere. Most of them are based on the price movement of stocks in the market. Not much information is available in the market regarding various risk factors. There are no specific agencies to provide information on the performance various common stocks. Therefore, this study is directed towards the measurement of performance of common stocks. Are the common stocks listed performing well as per their risks? Which common stocks are outperforming the market? To what extent the performance of common stocks is related to the market? How can investors form profitable portfolios out of the available common stocks?

The investors could not identify the good and bad stock in lack of proper information and lack of not creating confidence. Several university researchers that because of the lack of sufficient support, information, and whim had played significant role in share price movements identified it and that investment on common stock is based on institution, imagination, guesswork and conscious judgment based on little understood, statistical probabilities in Nepalese stock market.

Brokers are also supposed to assist in the maintenance of a fair and orderly market but they may not be able to do this job in their full capacity successfully because of the various obstacles presented in the economic environment. So the necessity to analyze the practical situation of the price formation and brokering services in Nepalese stock market is a most in present situation. There were various complaints from the investors about the performance of the brokers, such as:

- Absence from the stock market for a long period without pre-notice to the Nepal Stock Exchange, and
- The maintenance of verbal contracts with some investors by disobeying the rules and regulations.

Stock market provides investors good investment opportunity with fair return and instant liquidity with minimal risk of loss. It helps to mobilize financial resources for the investment in development projects and thereby helps for economic development, in turn, further develop the stock marker. The investment strategy based on the technical analysis is more profitable than buy and hold policy of timing of selling and buying. Fundamental analysis theory holds the view that there exists intrinsic value of the stocks, which helps to select the right stock at a time. Market is efficient in pricing the shares. In that condition, investment decision becomes simple. But investors are losing interest in the performance of share market mainly due to the behavior of fraudulent and scandalous activities. The investors are confused which stock is bad and which stock is good. The study has sought the answer to the following questions.

i) What is the trend of annual turnover of Nepal Stock Exchange?

ii) How many companies are listed for trading in Nepal Stock Exchange.

iii) What is the trend in market capitalization and traded shares quantity?

iv) What is the behavior of group-wise NEPSE Index during the study period?

v) Which is the most dominating sector and among all the sectors on the basis of market capitalization, annual turnover and traded share quantity.

vi) What are the position and behavior of NEPSE in the development of capital market?

1.4 Objectives of the Study

This study was conducted to meet the following objectives:

a) To examine and evaluate the position and behavior of NEPSE in the development of capital market.

b) To analyze the efficiency of the brokers, dealers and investors on price formation of the stock on Nepalese Stock Market.

c) To analyze and forecast the trend of stock market and pricing trend of the stock with the help of NEPSE index.

d) To provide recommendations and suggestions on the basis of major findings.

1.5 Significance of the Study

This research study has much significance to many. Stockbrokers to evaluate the investment alternatives for the interested investors can use it. There are various factors that cause marker fluctuation of stock price in the market; mainly two factors economic and non-economic factors. The most fundamental factor in stock price fluctuation is change in corporate earnings, interest rates and business cycle trends contribute to makeup the economic factors. Political changes, administrative changes, changes in weather and other natural conditions. The volumes of transaction, institutional investors, transactions etc directly affect the stock price. Although margin transactions increase purchase whose stock price is going up, once the price begins to fall, they become a selling factor and accelerate price decline.

The listing of shares in stock exchange center and their trading in the stock market is not too long. The stock market has been providing capital for investment in industrial productive sector, financial sector, service sector and other.

1.6 Limitations of the Study

No research works are free of some shortcomings or limitations. So this research study also has some limitations. The main limitations are mentioned below.

(a) This study is based on secondary sources of data available from NEPSE and SEBON.
(b) Various trading costs (e.g. brokerage commission, taxes) etc are excluded from the study.
(c) Market return is based only on NEPSE index.
(d) The scope of the study is limited within the assumption that, only the shares are the market instrument used in Nepalese capital market.
(e) The study covers the data from 2006/07 to 2010/11.

1.7 Research Methodology

Research methodology is the sequential steps followed by a researcher in studying a problem that helps to obtained reliable and actual result from the study. The research methodology enables to describe the method and techniques applied the study including research design. The research methodology concentrates on the following sub topics.

1.7.1 Research Design

This research study is based on certain research designs. Selection of appropriate research design is necessary to meet the objective of the study. This study emphasizes on descriptive and analytical study of collective data over a period of time and it gives suggestion on the improvement of capital structure. So this study is based on descriptive and analytical research designs.

1.7.2 Sources and Procedures of Data Collection

This study is based completely on historical data. The data required for this research study are particularly collected from secondary sources. It contains mostly the annual reports, profit and loss account, comparative summary sheet and balance sheet of concerned companies. The data are collected from various annual reports, trading reports and financial statements, various articles and journals available in central library, library of Central Department of Management and library of the NEPSE and SEBON. Besides, website of NEPSE and SEBON was also used to collect relevant data.

1.7.3 Tools of Analysis

The tools used for the analysis of the data include both financial and statistical. Financial tools used in this study are the formulas of returns and risks for the individual securities and the portfolios. The statistical tools used are: measures of dispersion (variance, standard deviation and covariance), and correlation and regression techniques.

1.7.4 Various Indexes used in Performance Evaluation

i) Rate of Return

In analyzing a common stock's performance, the holding period return on the common stock needs to be correctly calculated over the period of the evaluation. The single period rate of return is the basic random variable in investments analysis.

$$R_t = \frac{EP - BP + D_t}{BP}$$

Where,

EP = Ending price of stock;

BP= Beginning market price of stock; and

D_t= Dividend received during the period of the evaluation

ii) Standard Deviation (SD)

It is quantitative measure of the total risk of assets. It provides more information about the risk of the asset. It is a measure of the total risk of the asset. It measures the dispersion of returns around the mean.

$$\pm = \left[\frac{\sum_{t=1}^{T} \left(r_{i,t} - \bar{r}_i \right)}{T-1} \right]^{1/2}$$

where,

$r_{i,t}$ = Rate of return of asset i in period t; and

$\bar{r}_i$ = Average rate of return of asset i.

σ = Standard deviation

iii) Coefficient of Variation (CV)

CV is the qualitative measure of the dispersion. To compare more than two assets co-efficient of frequency variation is used. It is relative measurement of dispersion based on standard decimation.

$$CV_i = \frac{\pm_i}{\bar{R}_i} \text{ x } 100$$

where,

σ_i = Standard deviation of asset i

Ri= Average expected return of assets i

CV_i = Coefficient of variation of asset i

iv) Coefficient of Correlation

Correlation analysis is statistical tool for measuring the intensity or magnitude of linear relationship between the two variables series. It is the statistical tool that can be used to describe the degree to which one variable is linearly related to another.

$$rxy=\frac{N\sum XY-\sum X.\sum Y}{\sqrt{N.\sum X^2-\left(\sum X\right)^2}.\sqrt{N.\sum Y^2-\left(\sum Y\right)^2}}$$

Where,

N= No of pair of observation

X= Dependent Variable

Y= Independent Variable

1.7.5 Method of Analysis and Presentation

Data are presented in tabular, dioramic or graphic form. The analysis is based on the gathered data by using above-mentioned tools. The result of analysis is presented in tabular, diagrammatic and graphic form whichever is appropriate.

1.8 Organization of the Study

Chapter 1: Introduction

Chapter 2: Review of Literature

Chapter 3: Research Methodology

Chapter 4: Presentation and Analysis of Data

Chapter 5: Summary, Conclusion and Recommendations

This thesis report is organized as required by the research department of Faculty of Management, Tribhuwan University. It is divided into five chapters. The first chapter of this thesis report is an introductory chapter. It provides background information of the study; it also states the objectives, problem statement, significance of the study, and limitations of the study. The second chapter deals with the previous research writings and studies made by other researchers relevant to the problem being explored; it is titled as "Literature review". The third chapter explains the related theoretical concept required for this thesis report. Besides, it also explains in details how this research study was conducted. The fourth chapter is the most important part of the study and it is the body of the thesis report. It deals with Nepal Stock exchange and securities market in Nepal. In this chapter the function of them is analyzed. The fifth chapter pulls the study together with the conclusions, recommendations of its findings, and summary of the entire research report.

CHAPTER – II

REVIEW OF LITERATURE

Review of literature means reviewing research studies or other relevant preposition in related area of the study so that all past studies, their conclusions and deficiencies may be known and further research can be conducted.

The main reason for a full review of research in the past is to know the outcomes of those investigations in areas where similar concept and methodologies has been used successfully. Further, an extensive or even exhaustive process of such review may offer vital link with the various trends and phases in the researches in one's area of specialization, with the characteristic percepts, concepts and interpretation, with the special terminology, with the rationale for understanding one's proposed investigation.

There is a significant importance of review of literature in any type of research work some of which can be pointed as follows:-

- To identify research problems which previous works has been conducted?
- To avoid unintentional replication of previous studies
- To interpret the significance of researchers result in precise manner
- To determine the methodology for research work and scope for the studies

Hence, in this chapter, the focus has been made on the review of literature relevant to the role of NEPSE and SEBON in development of capital market. For this study, different Journals, Article, Books, Annual reports, and some research paper related with this topic has been reviewed. It needs to review related literatures in this concerned area which will help me to get clear ideas, opinions and other concepts. 'What other has said? What other has done? And what other have written?' these all and other related questions are reviewed which has provided useful inputs in this research work.

2.1 Conceptual Review

As per the objectives of the study, emphasis is given to the review of major related literatures and research conducted in Nepalese capital market as well as in foreign capital markets.

2.1.1 Financial Markets

A financial market is a market in which people and can entities trade financial securities, commodities, and other fungible items of value at low transaction costs and at prices that reflect supply and demand. Securities include stocks and bonds, and commodities include precious metals or agricultural goods.

In economics, typically, the term market means the aggregate of possible buyers and sellers of a certain good or service and the transactions between them.

The term "market" is sometimes used for what are more strictly exchanges, organizations that facilitate the trade in financial securities, e.g., a stock exchange or commodity exchange. This may be a physical location (like the NYSE, BSE, NSE) or an electronic system (like NASDAQ). Much trading of stocks takes place on an exchange; still, corporate actions (merger, spinoff) are outside an exchange, while any two companies or people, for whatever reason, may agree to sell stock from the one to the other without using an exchange (WIKIPEDIA).

2.1.2 Capital Markets

Capital market is a market for securities (debt or equity), where business companies and governments can raise long-term funds. It is defined as a market in which money is provided for periods longer than a year. The capital market includes the stock market (equity Securities) and the bond market (debt). Money markets and capital markets are parts of financial markets. Capital market includes:

- Activity relating to the organization, distribution, and trading of securities.
- Organization, which facilities this activities.
- Individuals and institutions, which buy and sell securities.
- Rules and regulations, customs and practices that control the organization and conduct the business in the market.

Securities are marketable financial instruments that allow their owners the right to make specific claims on particular assets. An individual security provides evidence of either creditor ship or ownership depending on whether it is a bond or a stock respectively. A bond is a loan that is paid off with interest; the investor lends money to the borrowing company that issued the bond. In contrast, stockownership represents a cash investment in the future of a corporation; the investor owns a part of the corporation and shares in its profit.

A Firm either may have debt and equity in its capital structure or only equity but no any firm can separate without equity. So, equity is the compulsion of every corporation. The main characteristic of equity investment is that investor is liable only up to the amount they have invested.

Common stock has one important investment characteristic and one important speculative market price tend to increase irregularly but persistently over the decades as their net worth builds up through the reinvestment of undistributed earnings. However, most of the time common stocks are subject to irrational and excessive price fluctuations in both decisions as the consequence of the ingrained tendency of most people to speculate of gamble, i.e. to give way to hope, fear and greed.

Capital markets may be classified as primary markets and secondary markets. Primary market is the one where new stock or bond issues are sold to investors via a mechanism known as underwriting. In the secondary markets, existing securities are sold and bought among investors or traders, usually on a securities exchange, over-the-counter, or elsewhere. The secondary market can be views as a 'used' securities market. The development of the securities market enables the efficient transformation of savings from the hands of surplus spending units to those of direct spending ones who can use them more productively with lesser risk.

The stock exchange is the secondary market. It is a form of exchange which provides services for stock brokers and traders to trade stocks, bonds, and other securities. Stock exchanges also provide facilities for issue and redemption of securities and other financial instruments, and capital events including the payment of income and dividends. Securities traded on a stock exchange include shares issued by companies, unit trusts, derivatives, pooled investment products and bonds.

Actually market mechanism establishes the existence of random walk theory that the successive price changes to be independent. The stock market poses steady inflow of information that influences the set of anticipation's of the individuals. Independence is an important property of random walk hypothesis. Proponents of random walk recognize that, in general, strictly an independence assumption doesn't exist in real world.

2.1.3 Capital Market Instruments

Capital market instruments include such marketable debt securities with long term financial instruments, such as equities and bonds. It also includes such marketable debt securities with maturities of a year or more and equity securities.

i) Equity Share or Common Stock

Equity share is also known as common stocks or ordinary shares. Common stock represent an ownership position in a company, hence, common shareholders are the real owner of a company. Equity referred to as shareholders' fund on balance sheets consist of equity capital, retained earnings and preference capital. However, in most cases, it is considered as equity capital.

The holders of common stock are the owners of the firm, have the voting power that among other things elects the board of directors, and have a right to the earnings of the firm after all expenses and obligation have a right to the earrings of the firm after all expenses and obligation have been paid; but they also run the risk receiving nothing if earning are insufficient to cover all obligations.

Common stock holders hope to receive a return bared on two sources dividends and capital gains. Dividends are received only if the company earns sufficient money and the board of directors deems it proper to declare a dividend. Capital gains arise from an advance in the market price of the common stock, which is generally associated with a growth in per-share earnings. Earnings often do not grow smoothly over time. This fact points the need for careful analysis in the selection of securities for purchase and sale, as well as in the timing of these investment decisions for common stocks has no maturity date at which a fixed value will be realized. People invest in equities because they want to make more income than they do in a savings account. For the possibility of making more income, they assume more risk. There are several advantages and disadvantages of investing in stocks. The likelihood of dividends and price appreciation motivates most investors to consider common stocks. Many companies may declare relatively small cash dividends, perhaps with a return of only 2 or 3 percent. But these companies may also offer a good chance for price appreciation over time. Equity investments also offer a high potential return. Greater than average returns are possible if one buys and sells the correct stocks.

ii) Preferred Stock

Preferred stock is a fixed income security. Preferred stock is similar to bonds in some respects and to common stocks in other ways. Another means of raising funds is preferred stock. Preferred stock is a security, which is accorded certain preferential treatment over common stock. Its claim isn't really fixed and definite in the sense that it can force the firm into bankruptcy if it is not paid in full. On the other hand, its claim is limited in size to a specified amount. In general no dividends can be paid on the common stock until the specified amounts have been paid to preferred stocks. Preferred are usually perpetual however some can be callable also (Haugen, 1997). Preferred shareholders do not share in the profitability of a firm beyond the stated dividend rate, in this ground it is rather curious why they are called 'preferred'. But, they are superior in two areas:

1. Although they have no rights on dividends, if corporation allocates earning to declared dividends, preferred shareholders must receive before common shareholders.
2. In the event of forced liquidation, preferred shareholders have a claim on remaining assets up to the par values, as a priority over common shareholders.

iii) Bonds

Bond as a debt security is given different names in different countries. In the United Kingdom and India the term 'bond' common, but in the United States the popular term is 'bond'. In Nepal the term is generally referred debenture mostly. Typical debt securities are called 'notes', 'debentures', 'bonds'. Bonds are also known as contractual obligations since the creation of a debt is implemented by some form of contract fixing the rate of interest and defining the terms and conditions of repayment. Bonds exist in a variety of forms- the corporate bonds (debentures), government bonds, municipal bonds, etc. The firm which wants to raise a few million amount prints up fancy pieces of paper called bonds and try to sell them. Many individuals and financial institutions are interested in buying these papers. The paper also states when the bond will mature- the date when the loan will be paid off to whoever owns the bond at that time. Some bonds have an original maturity of only a few years, while others have twenty or thirty years. At times, perpetual bonds called consol have been issued (Ritter and Silber, 1993).

There are two key features of corporate bonds that play critical role in their value. Beyond interest rate risk that affects nearly all debt, the price an investor is willing to pay for corporate issue will be influenced by7 its call ability and credit quality. Most corporate bonds contain call provisions that allow the issuer to retire the b bonds beyond some specific call date but prior to maturity.

Usually, there is a modest premium (e.g., one-half a coupon) paid above par value by corporation to the bond holders when exercising this call. Some bonds are convertible into common stock at a pre-specified price. This is attractive to investors because investors can benefit from appreciating stock prices by converting into common shares, while being protected from depreciating stock price by retaining the bond status. Because of this attractive feature, convertibles have lower promised coupon payments than ordinary bonds. The option of conversion is a sweetener attached to straight debt. Since holders of a convertible have a choice to convert debt into equity, the agency problem is reduced.

2.1.4 Definition of Stock Exchange

A stock exchange is a form of exchange which provides services for brokers and traders to trade stocks, bonds, and other securities. Stock exchanges also provide stock facilities for issue and redemption of securities and other financial instruments, and capital events including the payment of income and dividends. Securities traded on a stock exchange include shares issued by companies, unit trusts, derivatives, pooled investment products and bonds.

To be able to trade a security on a certain stock exchange, it must be listed there. Usually, there is a central location at least for record keeping, but trade is increasingly less linked to such a physical place, as modern markets are electronic networks, which gives those advantages of increased speed and reduced cost of transactions. Trade on an exchange is by members only. The initial offering of stocks and bonds to investors is by definition done in the primary market and subsequent trading is done in the secondary market. A stock exchange is often the most important component of a stock market. Supply and demand in stock markets are driven by various factors that, as in all free markets, affect the price of stocks (WIKIPEDIA).

2.2 Evolution of Capital Markets in Nepal

The history of capital market in Nepal dates back to 1936 in which year the shares of Biratnagar Jute Mill Ltd. were floated. In 1937, Tejarath was set up to facilitate loans to the government employees and was converted into Nepal Bank Ltd. Government of Nepal introduced the Company Act in 1964 and the first issue of government bonds made in the same year through Nepal Rastra Bank to collect the developmental expenditures. It carried 6 percent rate of interest and had the maturity period of five years. Government of Nepal announced the Industrial Policy in 1974 and under this policy an institution named Securities Marketing Center (SMC) was established to deal in government securities-development bonds and national savings bonds, and corporate securities of few companies. The government has the virtual monopoly over the security market. Then, Securities Exchange Center (SEC) was established in 1976 with an objective of facilitating and promoting the growth of capital market. It was the only capital market institution in Nepal. Securities Exchange Act came into force in 1984. Since then, SEC started to operate under this act. The purpose of this act was to provide systematic and favorable market environment for securities ensuring and protecting the interest of individuals and institutional investors as well as to increase the public participation in various firms and companies. SEC had provided facilities to trade the government securities and few of corporate Securities like shares and debentures. Only the shares of 10 companies were listed in SEC and there was involvement of no broker and dealer in the securities market. So, SEC itself was undertaking the job of brokering, underwriting, managing public issue, market making for government bonds and other financial services (NEPSE 1998). Apart from this, there was the absence of effective secondary market to ensure liquidity to the securities.

The interim government (1990/91) initiated financial reform program and two indirect investment vehicles-Citizen's Investment Fund and NIDC Capital Markets Ltd.-were established with the collective investment schemes in the corporate sector. Then, due to the world whim of privatization and economic liberalization, the operation of SEC was felt to change to make it compatible with the changing economic system. As a result, HMG Nepal brought about change in the structure of SEC by dividing it into two distinct entities-Securities Board, Nepal (SEBON) and Nepal Stock Exchange Ltd. (NEPSE) at the policy level in 1993. Since then they are operating as the main constituents of securities market in Nepal.

SEBON was established on June 7, 1993 with its mission to facilitate the orderly development of a dynamic and competitive capital market and maintain its credibility, fairness, efficiency, transparency and responsiveness under the Securities Exchange Act 1983 (SEBON, 2001). It is an apex regulator of the securities market in Nepal. It registers the securities and approves the public issues. Moreover, SEBON frames the policies and programs required to monitor the securities market, provides license to operate stock exchange business and stock brokers and supervises and monitors the stock exchange operations and securities businesspersons.

Nepal Stock Exchange Ltd. is a non-profit organization, operating under Securities Exchange Act, 1983. The basic objective of NEPSE is to impart free marketability and liquidity to them government and corporate securities by facilitating transactions in its trading floor through market intermediaries such as brokers and market makers, etc. NEPSE opened its trading floor on January 13, 1994 through its newly appointed licensed members and has adopted an "Open Out-Cry" system for the transaction of securities and from August 24, 2007 NEPSE replaced the "Open Out-Cry" trading system with a fully automated screen based trading system (ATS). In order to adopt the ATS, NEPSE made an agreement with the British Company Compaq Limited in November 2006 under the Asian Development Bank (ADB) loan assistance project--Corporate and Financial Governance (CFG)--at the cost of 300 thousand US dollars. The system has helped to eliminate all possible human errors as seen in the open out-cry trading procedures. The trading floor is restricted to listed corporate securities and government bonds with the market intermediaries in buying and selling of securities.

2.2 Review of Related Studies:

In this section we basically review the previous research works done by different scholars in the field of capital markets more specially. This includes the review of foreign research and the review of Nepalese research as well.

2.2.1 Review of Foreign research:

Research on the stock market and security price did not begin with the development of a theory of price formation, which was ten subjected to empirical test. It impetus for the development of the theory came from the accumulation of evidence in the middle 1950 that the behavior of common stock and other speculation of prices could be well approximated by a random walk. Much of the theory on the random walk can be traced to French mathematician Louis Bachelor whose Ph. D dissertation titled "The Theory of Speculation". He tested the model in commodity speculation I France was a "Fair game". He also concluded that the current price of a commodity was an unbiased estimate of its future price. After the first discovery of the random walk model by Louis Bachelor, empirical testing of the model in the stock market prices almost remained stagnate until 1960s. There are large number of studies most of which are briefly reviewed below.

Kendall (1953), Roberts (1959) and Osbern (1959) also tested the model that gave rises to the theory. Then after in 1960s and onwards numerous studies were carried out in this area validated the hypothesis while some other studies refuted this theory as a true description of the market. These researches apply various analyzing tools and mechanical rules, details of that have been presented in the following paragraphs.

Kendall (1953, page 61)[4] made significant contribution to advance in the study of the random walk model. He tested the model on the weekly price changes of the 19 indices of British industrial shares and in the spot price series of cotton (New York) and wheat (Chicago). He analyzed the data by serial correlation coefficient and concluded that the subsequent stock price movement follows random walk. He showed that the successive price changes are statistically independent to its past price changes.

Roberts (1959) he conducted simulation tests by comparing the cumulating of random numbers and the Dow-Jones Industrial Average Index (DJIAI) for about one year. He observed the first difference of two series produce the same pattern. He gave a number of methodological suggestions for testing what he calls the chance model. He suggested run analysis for testing independence of price changes. Similarly Osbern (1959) analyzed stock price from New York stock exchange (NYSE) using daily log price changes, which called Borwain

[4] Kendall (1953), Roberts (1959) and Osbern (1959) "Financial Markets and Institutions", Southwestern College Publishing 5th

Motion. He found the consistency between the Borwain Motion and share prices movements rise to support on random walk hypothesis.

Cootner (1962 page 19)[5] analyzed weekly and 14 week interval data on 45 stocks from New York stock exchange (NYSE). He found that one-week interval stock price move as a random walk. However, he also found some dependencies in the data at 14-week interval. The average serial correlation coefficient for one week was -0.047 and for 14 was 0.131. He focused the importance of "differencing interval" while testing for randomness in stock price behavior.

Fama study (1965) on the "Random Walk Model". He observed the daily proportionate prices of 30 individual stocks the Dow Jones Industrial Average. He employed the statistical tools such as serial correlation and run test to draw inference about dependence of the price series. He calculated auto-correlation coefficient for daily changes in log prices for log from 1 to 30 and found that the coefficient were almost close to zero in overall.

Dryden (1970, page 21)[6] studied daily London all-market indices for four year, and found the serial correlation coefficient 3.30 to 0.16 that is significantly differs from zero. He suggests "sufficient divergence from the random walk hypothesis to justify a more extensive analysis of the behavior of individual share quote on the London stock exchange".

Solnik (1973) investigated the daily price of 234 common stocks of eight European countries namely, France, Italy, UK, Germany, Netherlands, Belgium, Switzerland, Sweden for the time period from March 1966 to April 1971. He calculated the returns for various interval of the each stock and studied the distribution of serial correlation coefficient. He pointed out random

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edition.

[5] Collected from the thesis "Role of Nepal Stock Exchange in Development of Capital Market", 2009.

[6] Collected from the thesis "Role of Nepal Stock Exchange in Development of Capital Market", 2009.

walk is more apparent in the European stock price behavior than in the American price behavior.

Sharma and Kennedy (1977) tested the random walk model, by run test and spectral analysis against representative stock market indices of Bombay, Network and London stock exchange during 1963-73. They found that the stocks on Bombay stock exchange obey random walk and are equivalent in sense to the behavior of share price in the market of developed countries.

Gupta (1985) found out comprehensive test of the random walk hypothesis by employing serial correlation and run analysis in two sets of time series data. The two sets of time series data are the first was the economic time index, number of daily share prices and financial express index number of equity prices on a daily and other weekly series and another was a weekend closing price. He concluded on the basis of these test the random walk model share price behavior suggesting in the Indian stock exchange were efficient in the weak sense in pricing share.

Mahapatra (1995, page 23)[7] tested the weakly efficient market hypothesis using rank correlation analysis bases on relative strength. The sample was end of month closing price of 26 stocks from Bombay stock exchange during the period January 1989 to December 1992. He argued that the Indian stock market is less efficient in the short run but more efficient in the long run.

Mobarek and Keasey (2000, page 23) The study seek evidence supporting the weak form efficient of the market using daily market return series of the listed securities on the Dhaka Stock Exchange for the period of 1988 to 1997. Empirical analyses suggest that the Dhaka Stock Market of Bangladesh is not

weak form efficient. The result of individual share returns also evidence that they are not following random walk model.

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[7][7]Collected from the thesis "Role of Nepal Stock Exchange in Development of Capital Market", 2009.

Majnoni and Massa (2001, page 23) measurement of market efficiency of the Italian Stock Market. The data used two deferent's data set on prices and returns, first on daily data then on intraday data. The analysis based on daily data that shows the strong positive correlation between price changes and trading volume is due to significant causal relationship between trading volumes and price formation. The increasing concentration of trading should not be interpreted as an indication of poor market efficiency since the component of price volatility due to the market imperfections has declined as a proportion of total volatility even for infrequently traded stocks.

Abraham, Seyyed and Alsakran (2002, page 23) Method on the basis of the data consist of weekly index value for the three major Gulf Sock Markets of Kuwait, Saudi Arabia and Bahrain for the period (October 1992 to December 1998). Random walk hypothesis and market efficiency hypothesis are assessed using the variance ratio and the nonparametric (run test) consistent with results in the literature for similar emerging markets both RWH and weak form efficiency are rejected for the Gulf Markets when the observed index levels are used. The corrected indices show that successive price changes are independent for all three markets implying weak form efficiency. Random Walk Hypothesis for the Saudi Arabia and Bahrain markets cannot reject. Kuwaiti market falls to follow a random walk even after the correlation.

Pena and Alana (2003, page 24)[8] tested it stock index price follow random walk in the Spanish Stock Market by means of variance ratios. By using daily, weekly and monthly prices return auto correlation in the Spanish Stock Market for the two indexes (IGBM and IBEX35) and for individual securities but means of variance ratio tests. They found that positive string auto correlation for both IGMB and IBEX35 index daily returns cannot reject the random walk hypothesis for the period March 31, 1997 to 2000, significant position of auto

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[8] Collected from the thesis "Role of Nepal Stock Exchange in Development of Capital Market", 2009.
6 Collected from the thesis of Security Board Nepal 3.43 "Behavior of Nepal Stock Exchange in Capital Market", 2006.

correlation especially in daily and weekly period. The positive index auto correlation monthly returns are not significance at 5% level in any period. On the other hand, Spanish Stock Market security daily returns show weekly positive auto correlation. Even though index monthly return cross-correlation at one lag (a month) between portfolios based on size. In particular, large stock portfolios lead to the small stock ones.

Islam and Khalid (2005, page 24) carried out a test of weak-form efficiency of the Dhaka Stock Exchange use of monthly versus daily data or week. The study uses daily, weekly, and monthly market prices and returns of the stock exchange during the year 1990 to 2001. Starting from the January 1990, the daily market price data cover the period up to 23 November 2001, while the weekly and monthly price data cover the period up to 21 November 2001 and October 2001 respectively. Data for the period 1990 to 1991 were taken from the daily price quotations. Test of weak from efficiency of the Dhaka Stock Exchange by using the autocorrelation test. Test separately for the period before July 1996 and for the period after March 1997. They concluded on the basis of these test weak-efficiency is rejected by using autocorrelation test but on the basis of hypothesis at 5% significance level in the case of monthly data. But for Weekly data and daily data the market efficiency was rejected for the pre boom period (1996) but not for the post crash.

2.2.2 Review of Nepalese Research:

Shrestha (1982, page 31)[9] conducted a study on the role of securities marketing center in the economic development of Nepal. The study was conducted with the objectives to examine the role played by securities marketing center in promoting Nepalese security. This study covered the period of 4 years (2034/35 to 2037/38). He has concluded that the securities marketing center is very poor in term of the primary market and facing the problem in the demand

[9] Collected from the SEBON Journal, Vol.2 II, October 2005

and supply. Investors are influenced by the value to share and dividend policy of the company while buying or selling the securities.

Bhattarai (1985, page 26)[10] carried out a study of impact of securities exchange center on capital mobilization with special reference to the government securities and share market in Nepal. The objective of this study was to evaluate the significant features of government securities market to find out the contribution of Securities Exchange Center. He concluded that Securities Exchange Center has mobilized long-term capital required to the new companies launch the development activities in the country to provided the investment opportunities to investor through the primary market.

Bhattarai (1990) carried out a study on share market in Nepal. The sample for he study comprised of 12 companies. This study was based on secondary data. Differential statistical tools and financial tools were applied. She concluded that the investors in capital market through brokers' network raised the transaction volume. Market starts to walk randomly reflecting providing alternatives to make diversified portfolio facilitates true value of share and investors.

Bhatta (1995, page 26)[11] carried out a study on assessment of the performance of listed companies in Nepal. The basic objective of this study was performance of listed companies. He has taken 10 listed companies as sample based on secondary data. By using different statistical tools like ratio analysis, beta coefficient and portfolio to analyze the dividend yield, liquidity, leverage, risk and return etc. He concluded that capital market to run efficiently requires continues flow of information and there is serious deficiency of such information in market. Investors are depressed in the market by rules and regulations and bureaucratic set up mind of the companies.

[10] Collected from the thesis of security board 3.43 "Behavior of Nepal Stock exchange in capital market", 2008.
[12]Collected from the The Journal of SEBON Special Vol. I No. 1 Dec. 2008

Bhatta (1997) carried out a study on dynamic of stock market in Nepal. The primary objective of the study was to anal use trend research study and to analyze the market share price of secondary market. By using differential statistical tools like mean, standard deviation and other essential tools for the study purpose of 14 companies listed in stock market could be regarded as the heart of the capital market. There is a high volatility of share price.

Gurung (1999) conducted a study on the basis of share price behavior of listed companies in Nepal. The study was conducted with the objectives to test the monthly movement of share price behavior of listed companies in Nepal. The sample for the study comprised of 15 companies representing form commercial bank, insurance and finance, manufacturing and processing and trading. Using different statistical tools like mean, coefficient correlation and financial parameters. He mentioned that the number of listed companies has been increased during the study period. The study was to analyze the relation between traded and listed companies, to evaluate the trading turnover, to analyze the share price behavior of listed companies whose stocks are listed in stock exchange center and trade in the stock market. The performance of commercial banks is better than that of trading concerns and the investment in this group is more attractive so, banking group is higher than compare to the other group. Market was bluish during the initial period of the study. The higher fluctuations in prices in decreasing trend and higher variations in prices showed the performances of listed companies have been deteriorating. More over this implies the uncertainty and instability in stock market.

Timilsina (2001, page 26)[12] conducted a study on capital market development and stock price behavior in Nepal. The main objectives of the study was to find out the fair market prices of equalities and observe the variation of actual prices from the computed fair prices to test whether the present behavior of prices will remain stable. The study covered a period of 8 months (2002/2003). By using different statistical, mathematical and financial tools including the

[12] Collected from the The Journal of Nepalese Business Studies Vol. I No. 1 Dec. 2004

formulation of hypothesis was done in the study. He concluded that the market price of share depends on earning per share (EPS) as well as dividend per share (DPS), direct and immediate response in the market.

Pradhan (2003, page 31)[13] conducted a study on stock market behavior in a small capital market. Different financial tools were used in the study period of 1986 to 1990. The sample for study was taken from 7 listed companies. The main objective of the study was the stock market behavior in a small capital market in the context of Nepal. He concluded that the larger stocks have larger price earning ratios, larger ratio of market value to book value of equity, lower liquidity, lower profitability and smaller dividend. Larger stocks also have higher leverage, lower assets turnover and lower interest coverage but these are more variable for smaller stocks than for larger stocks. Stocks with higher price earning ratios have lower liquidity, higher leverage, lower turnover, lower profitability and lower interest coverage's.

Pradhan and Upadhya (2004, page 45)[14] conducted a study on the efficient market hypothesis and the behavior of share prices in Nepal. The objective of the study was to make a comprehensive investigation of weak and other form of efficient market hypothesis. Different statistical tools were used in the study serial correlation, the run test, weighted mean, median, chi-square test and spearman's rank correlation. Twenty-three equity shares listed and actively traded in the Nepal Stock Exchange LTD. He concluded that Nepalese Stock Market might not be termed as "weakly efficient" in Pricing shares where market efficiency is defined as all historical information is reflected in security price. The main factors affecting share prices perceived by the respondents are dividends, retained earnings, bonds share and right issue. The study also found that the shareholders in high tax brackets did not prefer relined earning instead of dividends.

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[13] Pradhan and Upadhaya (2003), "Financial management", 5th edition.

Poudel (2005, page 83)[15] conducted study on share price behavior of listed companies in Nepal. The study was conducted with the objectives to test the daily share price behavior of listed companies in Nepal. The sample for the study comprised of 21 companies representing from each sector listed in Nepal Stock Exchange. This, study is based on the secondary data. Different statistical tools like serial correlation and run test were used. He concluded that NEPSE index showed a steady increase in the later month of the study period, which also shows the better performance of NEPSE. Stock market performance is more or less in a stable position in the capital market overall in the study period. The stock market performance is steady increasing with the increase in the number of listed companies. The badly affected sectors were hotels, trading, manufacturing and processing sectors due to different reasons. The NEPSE index showed a better performance during the study period.

2.7 Research Gap

Some studies related to the topic had been conducted as a thesis for partial fulfillment of masters level, some relevant research has been found to be conducted about listing and delisting of shares and about only single sectorial analysis as Commercial bank , A class companies shares etc are useful to this study. Overall previous studies related to position and behavior of Nepal Stock Exchange is found to be incomplete. Most of the research works were found to not addressing the role of Security Board of Nepal as a regulator of capital in Nepal and the research works is limited within single sectorial analysis. This study in true sense fills the gap of ignorance with knowledge for seekers. Hence the research covers what actually the position and behavior of NEPSE in the development of capital market by using the data collected through secondary sources from Nepal Stock Exchange as well as Security Board of

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[14]Pradhana and Upadhaya (2004), "Financial Management", 7th edition.

[15] Shrestha, Manohar K., Poudel, Rajan P., and Bhandari, Dipak B. (2005). "Fundamentals of investments", 9th edition Poudel (2005), "Financial management", 7th edition.

Nepal and data analysis by using different statistical tools which is new to the previous research.

CHAPTER III

RESEARCH METHODOLOGY

The research methodology is systematic way of solving research problem. Research methodology refers to the overall research process, which a researcher conducts during their study. Research can be conducted on the basis of primary and secondary data. Here in the study all the data used for the analysis are secondary data and were analyzed with using appropriate financial and statistical tools.

3.1 Research Design

Research design is the plan structure and strategy of investigations conceived so as to obtain answer of research question and control variance. This research study is based on certain research designs. Selection of appropriate research design is necessary to meet the objective of the study. This study emphasizes on descriptive and analytical study of collective data over a period of time and it gives suggestion on the improvement of capital structure. So this study is based on descriptive and analytical research designs.

A quantitative research design has been adopted to plan the activities required to be followed for carrying out the various tasks of research work such as choosing the methodology to be adopted, gathering data, analyzing data and finally writing the report. Using a quantitative approach provides richer detail for exploring viewpoints in early stages of research, allowing the researcher to gain a better initial understanding of the problem and to identify phenomena, attitudes and influences. (Reilly, Frank K. (1990, page 192)[16].

3.2 Description of Data & Sample

Nepal stock exchange has classified the all companies into nine sectors and these sectors are i) Commercial bank ii) Financial companies iii) Insurance

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[16] Reilly, Frank K. (1990), "Investment analysis and portfolio management", 9th edition New York: The Dryden Press.

companies iv) Hotel companies v) Manufacturing and processing companies vi) Trading companies vii) Development companies viii) Hydro and ix) Others. The overall sector has been taken for the study period of 2006 to 2011 as population and among them.

3.3 Techniques and Sources of Data Collection

This study is mainly based on historical data. The data required for this research study are particularly collected from secondary sources. It contains mostly the annual reports, profit and loss account and balance sheet of concerned companies .The data are collected from various annual reports, trading reports, and financial statements, various articles and journals available in Central Library, library of Central Department of Management and library of the SEBON. Besides the libraries, the information available in the official website of NEPSE and SEBON are also used as the major source to collect relevant data.

3.4 Data Analysis Tools

Various financial and statistical tools have been used to meet the objective of the research. Financial tools used for the measurement of returns (holding period return, dividend yield, capital gain yield) and risks for the individual securities and the portfolios. The statistical tools used are: measures of dispersion (variance, standard deviation and co-variance), correlation and regression techniques and hypothesis testing.

3.5 Measurement of Rate of Return

While analyzing the performance of common stock, the holding period return on the common stock needs to be correctly calculated over the period of the evaluation. The single period rate of return is the basic random variable in investments analysis. This rate of return concept is important because it measures the speed at which the investor's wealth increases or decreases. The rate of return formula can be stated in a form appropriate for almost any investment.

$$R_t = \frac{P_t - P_{t-1} + C_t}{P_{t-1}} \quad \ldots \; \ldots \quad \ldots \quad \ldots \quad \ldots \qquad (3.1)$$

Where,

R_t = An investment's single period rate of return

P_t = Market price at the end of period t

P_{t-1} = Price at the end of period t-1

C_t =Cash flow income received during the t^{th} period

For common stocks, it can be simply stated as:

$$R_t = \frac{EP - BP + D_t}{BP} \quad \ldots\ldots \quad \ldots \quad \ldots \quad \ldots \qquad (3.2)$$

Where,

EP = Ending price of stock;

BP= Beginning market price of stock; and

D_t= Dividend received during the period of the evaluation.

Average return or arithmetic average is the simple time-weighted average. So

$$\bar{R}_t = \frac{\sum_{t=1}^{T} R_t}{T}$$

$$= \frac{R_1 + R_2 + \ldots\ldots + R_T}{T} \quad \ldots \quad \ldots \quad \ldots \quad \ldots \qquad (3.3)$$

Where,

$R_1 \ldots R_T$ = Returns for assets from 1 to T time periods and

T= Numbers of time periods.

3.6 Computation of Dividend

Dividend is an important cash inflow for the common stock holder. So in order to calculate holding period rate of return calculation of dividend is an important task. In this research paper stock dividend is converted into cash dividend. The model used to convert stock dividend into cash dividend is as follows:

$$Stock\ dividend = \left[\%\,of\ \ stock\,dividend\right] \times \left[MPS\ after\ stock\ dividend\right]$$

Here if the stock dividend is declared before 35 days of ending holding period, the ending price (EP) of the same year is taken as MPS after stock dividend otherwise next year's EP is taken as the MPS after stock dividend. For example if a company declares stock dividend on 20th March 2011 then EP for 2010/2011 is used to convert stock dividend into cash dividend. But if a company declares stock dividend after 10th June 2011 then EP for 2011/2012 is used as MPS to convert stock dividend into cash dividend. Therefore total cash dividend is calculated as follows:

$$Total\ cash\ dividend = \begin{bmatrix} \%\,of\ \ cash\ dividend \times \\ Paid\ up\ value \end{bmatrix} \times \begin{bmatrix} \%\,of\ \ stock\ dividend \times \\ MPS\ after\ stock\ dividend \end{bmatrix}$$

3.7 Measurement of Risk

When analyzing investments, analysts define risk as *variability of return*. Financial analysts and statisticians prefer to use a quantitative risk surrogate called the variance of returns, denoted Var(r). The variance of an asset's rates of return for historical data is given by:

$$Var\left(r_i\right)=\frac{\sum_{i=1}^{T}\left(r_{i,t}-\bar{r}_i\right)^2}{T-1} \quad \cdots \quad \cdots \quad \cdots \quad \cdots \qquad (3.5)$$

Where,

$Var(r_i)$ = Variance or returns of asset i;

$r_{i,t}$= Rate of return of asset i in period t; and

$\bar{r}_i$ = Average rate of return of asset i.

Variance as well as standard deviation measure total risk of an asset. So standard deviation δ, of the rates of return is given by:

$$\text{¢} = \sqrt{Var(r_i)} = \left[\frac{\sum_{t=1}^{T}\left(r_{i,t}-\bar{r}_i\right)}{T-1}\right]^{1/2} \quad \cdots \quad \cdots \quad \cdots \qquad (3.6)$$

The total risk of an asset can be divided into two parts: diversifiable risk and undiversifiable risk. Therefore,

Total risk = Undiversifiable risk+ Diversifiable risk

Undiversifiable risk is that portion of total variability in return caused by market factors that simultaneously affect the prices of all securities. It is also called *systematic risk*. Changes in the economic, political, and sociological environment that affect securities markets are sources of systematic risk. The beta (β) is an index of systematic (or undiversifiable) risk that gauges how much the i^{th} asset's return typically reacts to a change in the market portfolio's return. Beta coefficients may be used for ranking the systematic risk of different assets. The beta coefficient also measures the slope of the characteristic line. The beta coefficient is defined as:

$$ {}_{i} = \frac{Cov(r_i, r_m)}{Var(r_m)} \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad (3.7) $$

Where,

β_i = Beta coefficient of asset I

$Var(r_m)$ = Variance of returns for the market portfolio.

$Cov(r_i, r_m)$ = the covariance of returns of i^{th} asset with the market.

$$ Cov(r_i, r_m) = \left[\frac{\sum_{t=1}^{T} \left(r_i - \bar{r}_i\right)\left(r_{m,t} - \bar{r}_m\right)}{T-1} \right] \ldots \quad \ldots \quad \ldots \quad \ldots $$

(3.8)

Systematic risk is given by,

Systematic risk $=\beta_i^2$ Var (r_m)

The percentage of total risk that is systematic risk can be measured by the coefficient of determination ρ^2.

$$ \circ 2 = \frac{systematic risk}{unsystematic risk} = \frac{{}_i^2 Var(r_m)}{Var(r_i)} \quad \ldots \quad \ldots \quad \ldots \quad (3.9) $$

Diversifiable risk is that portion of total risk, which is unique to the firm that issued the securities. It is also called unsystematic risk. It is given by:

Diversifiable risk = Var (e)

Var(e) is called residual variance or standard error squared. The percentage of unsystematic risk equals $(1-\rho^2)$.

The characteristic line and CAPM provide a foundation for risk-adjusted performance analysis. The equilibrium rate of return for individual assets is given by the CAPM. The relationship between covariance and expected return is known as security market line [Sharpe, 2004:235, page no 109][17].

For our purpose, the ex post SML is simply the equation of the line going through the points (0,$\bar{r}_f$) and (1,$\bar{r}_m$). The return given by the ex post SML for an asset with a beta of β_i can be used as a benchmark return, $\bar{r}_{bi}$, for that asset. That is:

$$\bar{r}_{bi} = \bar{r}_f + (\bar{r}_m - \bar{r}_f)\ {}_i \cdots \quad \cdots \quad \cdots \quad \cdots \quad \cdots \qquad (3.10)$$

One measure of an asset's risk-adjusted performance is the difference between its average return ($\bar{r}_i$) and the return on its corresponding benchmark return, denoted ($\bar{r}_{bi}$). This difference is generally referred to as the asset's ex post alpha (or differential return), and is denoted α_I :

$$\sim_i = \bar{r}_i - \bar{r}_{bi} \cdots \quad \cdots \quad \cdots \quad \cdots \quad \cdots \quad .... \qquad (3.11)$$

$$\therefore \sim_i = \bar{r}_i - [\bar{r}_f + (\bar{r}_m - \bar{r}_f)\ {}_i] \cdots \cdots \quad \cdots \quad \cdots \quad \cdots \qquad (3.12)$$

Characteristic line is a simple linear regression model expressing the relationship between the excess return on the market portfolio. [Sharpe 2004:909] The simple equation of characteristic line is given by:

$$r_{i,t} = \sim_i + \ {}_i \times r_{m,t} + £_{i,t} \cdots \quad \cdots \quad \cdots \quad \cdots \quad \cdots \quad \cdots \qquad (3.13)$$

Where,

$r_{i,t}$= Total rate of return in period t.

$r_{m,t}$= Rate of return for market in period t.

α_I = Regression intercept

β_I = Slope of characteristic line

$\varepsilon_{I,t}$ = Unexplained residual return that occurs in period t.

[17] Sharp, William (2004), "Investment analysis", 7th edition.

The characteristic line is used to measure statistically the undiversifiable risk and diversifiable risk of individual assets and portfolios. [Francis, 1997: 267 page no 153][18]. The ex-post characteristic line for performance evaluation is given by:

$$r_i - r_f = \sim_i + \;_i\left(r_m - r_f\right) \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \qquad (3.14)$$

3.8 Various indexes used in Performance Evaluation

1) Rate of Return
2) Standard Deviation (SD)
3) Coefficient of Variance (CV)
4) Coefficient of Correlation

3.8.1 Rate of Return

In analyzing a common stock's performance, the holding period return on the common stock needs to be correctly calculated over the period of the evaluation. The single period rate of return is the basic random variable in investments analysis. This rate of return concept is important because it measures the speed at which the investor's wealth increases or decreases. The rate of return formula can be stated in a form appropriate for almost any investment.

$$R_t = \frac{P_t - P_{t-1} + C_t}{P_{t-1}} \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \qquad (3.8.1.1)$$

Where,

R_t = An investment's single period rate of return

P_t = Market price at the end of period t

P_{t-1} = Price at the end of period t-1

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[18] **Francis (2003), "Investment analysis management", 5th edition.**

C_t =Cash flow income received during the t^{th} period

For common stocks, it can be simply stated as:

$$R_t = \frac{EP - BP + D_t}{BP} \quad \ldots\ldots \quad \ldots \quad \ldots \quad \ldots \quad (3..8.1.2)$$

Where,

EP = end price of stock;

BP= beginning market price of stock; and

D_t= dividend received during the period of the evaluation.

Average return or arithmetic average is the simple time-weighted average. So

$$\bar{R}_t = \frac{\sum_{t=1}^{T} R_t}{T}$$

$$= \frac{R_1 + R_2 + \ldots\ldots + R_T}{T} \quad \ldots\ldots \quad \ldots \quad \ldots \quad (3..8.1.3)$$

Where,

R_1...R_T = Returns for assets from 1 to T time periods and

T= Numbers of time periods.

3.8.2 Standard Deviation

It is quantitative measure of the total risk of assets. It provides more information about the risk of the asset. It is a measure of the total risk of the asset. It measures the dispersion of returns around the mean. Its advantage is that the uncertainty of returns can be summarized into a single easily calculated number. In general, if different values of data are reasonably close to mean then there is very little variability of dispersion of data. On the other hand if values are at a considerable distance from the center of mean, the variability is said to be small. Standard deviation measures such variability and it can be computed by using following formula:

$$\pm = \left[\frac{\sum_{t=1}^{T} \left(r_{i,t} - \bar{r}_i \right)}{T-1} \right]^{1/2} \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \textit{(3..8.2.1)}$$

Where,

$r_{i,t}$ = Rate of return of asset i in period t; and

$\bar{r}_i$ = Average rate of return of asset i.

σ = Standard deviation

3.8.3 Coefficient of Variation (CV)

Coefficient of variations is the qualitative measure of the dispersion. To compare more than two assets co-efficient of frequency variation is used. It is relative measurement of dispersion based on standard decimation. Co-efficient is given by following formula,

$$CV_i = \frac{\pm_i}{\bar{R}_i} \text{ x } 100 \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \ldots \quad \textit{(3..8.3.1)}$$

Where,

σ_i = Standard deviation of asset i

Ri= Average expected return of assets i

CV_i = Coefficient of variation of asset i

It is percentage of variation mean, standard deviation being considered as the total variation in average. Smaller CV represents more homogeneous or uniformly of the data about the average line. While greater CV has been employed to compute and analyze the vitality of the data over the study period.

3.8.4 Coefficient of Correlation (r)

Correlation analysis is statistical tool for measuring the intensity or magnitude of linear relationship between the two variables series. It is the statistical tool that can be used to describe the degree to which one variable is linearly related to another. (Richard I. Levin and David S. Rubin). The coefficient of correlation measures the direction of relationship between two sets of figures. It is the square root of coefficient of determination. Correlation can either be positive of it can be negative. If variables are changing in the same direction, then correlation is said to be positively correlated but when the variation of two variables take place in opposite direction, the correlation is termed as positive. Thus, correlation coefficient lies in between +1 or -1. While interpreting correlation coefficient, due care should be provided as it misleads the results and decision. The coefficient of correlation is denoted by r_{xy} and given by

$$rxy=\frac{N\sum XY-\sum X.\sum Y}{\sqrt{N.\sum X^2-\left(\sum X\right)^2}.\sqrt{N.\sum Y^2-\left(\sum Y\right)^2}}$$

Where,

N= No of pair of observation

X= Dependent Variable

Y= Independent Variable

The value of 'r' lies between -1 to +1 and if r=1, there is perfect positive relationship. If r=-1, there is perfect negative relationship. If r=0, there is no correlation at all.

CHAPTER - IV
DATA PRESENTATION AND ANALYSIS

Data Presentation and Analysis

This chapter deals with the graphical presentation and analysis of the collected data on the basis of major objectives of the study so it is an important part of the study. In this chapter the first part begins with the historical development of capital market in Nepal. The second and third part deals with the sector wise listed companies, annual turnover, market capitalization, traded share quantity, number of transaction and the remaining part deals with behavior of NEPSE index of these sectors listed in NEPSE and the findings of the study.

4.1 Historical Development of Capital Market

The history of capital market in Nepal dates back to 1936 in which year the shares of Biratnagar Jute Mill Ltd. were floated. In 1937, Tejarath was set up to facilitate loans to the government employees and was converted into Nepal Bank Ltd. Government of Nepal introduced the Company Act in 1964 and the first issue of government bonds made in the same year through Nepal Rastra Bank to collect the developmental expenditures. It carried 6 percent rate of interest and had the maturity period of five years.

Government of Nepal announced the Industrial Policy in 1974 and under this policy an institution named Securities Marketing Center (SMC) was established to deal in government securities-development bonds and national savings bonds, and corporate securities of few companies. The government has the virtual monopoly over the security market. Then, Securities Exchange Center (SEC) was established in 1976 with an objective of facilitating and promoting the growth of capital market. SEC had provided facilities to trade the government securities and few of corporate securities like shares and debentures. Only the shares of 10 companies were listed in SEC and there was involvement of no broker and dealer in the securities market. So, SEC itself was undertaking the job of brokering, underwriting, managing public issue, market making for government bonds and other financial services (NEPSE 1998). Apart from this, there was the absence of effective secondary market to ensure liquidity to the securities. The remarkable changes came only after the initiation to reform the market in 1993, when the SEC was converted into Nepal Stock Exchange.

Nepal Stock Exchange Centre (NEPSE) is a non-profit organization and new market mechanism was introduced. NEPSE is the only stock exchange in the country. It is owned by the Government, Nepal Rastra Bank (the central bank) and Nepal Industrial Development Corporation. It has an ownership holding of its member also. Securities businesspersons such as stockbrokers, market makers and securities dealers, registered by Securities Exchange Board (SEBON) have to get membership from the stock for conducting securities business. The Securities Exchange Board (SEBON) is operating since 1993.

Securities market is a place where buying and selling of securities takes place in an organized way. The parties involved in securities market are investors, intermediaries and specialists. Securities markets provide options to all categories of investors and make the financial market most competitive in the developing countries. Securities Exchange Act has empowered NEPSE with the capacity of promulgating various Byelaws in order to ensure orderly and fair transactions of securities. Accordingly, the NEPSE has made and adopted the securities listing Byelaws 1996 and membership of stock exchange and transactions Byelaws 1998.

Securities markets bring together buyers and sellers of securities, they are mechanisms created to facilitate the exchange of financial assets. A market mechanism is the trading procedures of an organized market through which the listed securities are traded. So, under this mechanism the trading procedures will be determined by the stock exchange. Some countries have adopted automation and some are still managing and running open-out-cry system.

NEPSE had also adopted the open-out-cry system licensing two types of members. They were market makers and member brokers. Market makers were the institutional members. They, being well-organized institutions, are considered an expert in the analyzing financial statements and controlling and regulating the market through market mechanism. So these organizations are allowed making buy and sale in and form their own account. NEPSE has licensed six organizational market makers. The number goes on decreasing. Market makers quite the job of market making of corporate securities when NRB puts investment ceilings by publishing directives. Now a day there is no market maker operating in the market.

Member brokers are the license holders who are empowered to accept the buy and sale orders from their individual and institutional clients and make transactions in trading floor organized, managed and operated by stock exchange. The rate or brokerage commission ranges from 0.05 to 1 percent. These intermediaries are not allowed to buy and sale in and from their own account.

NEPSE has also licensed to dealer primary market and dealer secondary market. Dealer (primary market) operates as a manager to the issue and underwriter whereas dealer (secondary market) operates as a portfolio manager. Presently, NEPSE licensed to 11 dealers (primary market) and 2 dealers (secondary market).

4.2 Sector-Wise Listed Companies

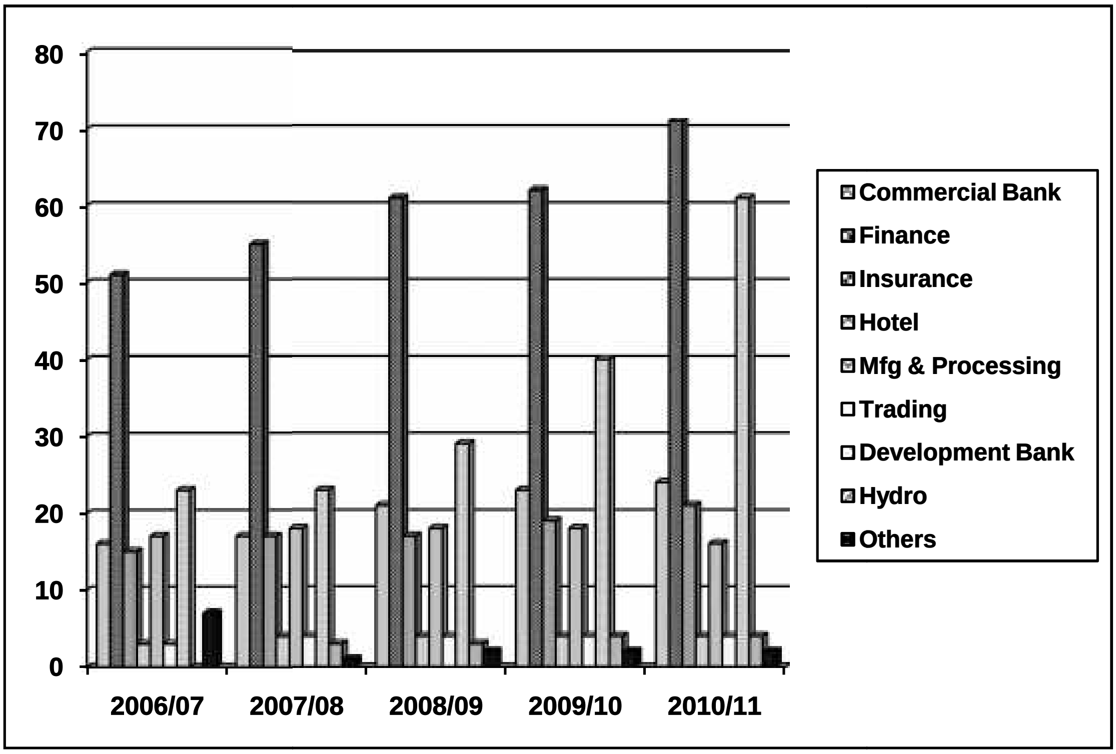
Trading on the floor of the NEPSE is restricted to listed corporate securities and government bonds. Companies established under company act 1964, must be listed in Stock Exchange Ltd. Number of listed companies was 62 in the initial month of floor trading on NEPSE. Then this number increased by listing of additional companies. The number of listed companies is in increasing trend. The number of listed companies in finance group has increased at higher rate, than that of other sectors. The higher number of listed companies in finance group implies the well management, facilities provided to investors, effective securities to the investors.

Table 4.1: Distribution of Listed Companies

Sector	2006/07	2007/08	2008/09	2009/10	2010/11
Commercial Bank	16	17	21	23	24
Finance	51	55	61	62	71
Insurance	15	17	17	19	21
Hotel	3	4	4	4	4
Mfg & Processing	17	18	18	18	16
Trading	3	4	4	4	4
Development Bank	23	23	29	40	61
Hydro	-	3	3	4	4
Others	7	1	2	2	2
Total	135	142	159	176	207

Source: Nepal Stock Exchange Ltd.

Figure 4.1: Distribution of Listed Companies



The total number of listed companies was 135 in the initial year of the study period. In 2007/08 the number of listed companies reached to 142, and then again continued to increase in each year. The trend of group wise listing companies is increasing. At the end of study period, 207 companies were listed in NEPSE. The number of listed companies in Finance, Commercial Bank, Development Bank and Insurance group has increased at higher rate than that of Hotel, Hydro, Manufacturing and processing, and Other groups. Finance group have been dominating other listed companies in terms of total number of listed companies. At the end of the observed period, the total number of listed companies was 71 in Finance companies where as it is a few in Hotel group. The year wise total number of companies explicitly shows the increasing trend i.e. 135 companies in 2006/07 142 companies in 2007/08, 159 companies in 2008/09, 176 companies in 2009/10 and 207 companies in 2010/11. However, the aggregate numbers of companies listed in NEPSE are in increasing trend that represents the significant expansion of capital market in Nepal.

4.3 Annual Turnover

The most successful year on the history of Nepal Stock Exchange was 2007/08. On that year NEPSE recorded a highest annual turnover of Rs 21986.43 million. This trend did not appear in the succeeding year due to various factors and started to fall gradually and reached to the minimum level of Rs 6260.53 at the end of 5 year study period.

Table 4.2: Annual Turnover (In Millions Rs)

Year	**2006/07**		**2007/08**		**2008/09**		**2009/10**		**2010/11**		**Mean**
Sector	**Value**	**%**	**Value**	**%**	**Value**	**%**	**Value**	**%**	**Value**	**%**	
Com. Bank	5563.49	66.55	13822.2	62.87	12406.5	63.83	7196.25	61.18	3431.82	54.82	4272.95
Finance	713.57	8.54	2307.53	10.5	2615.4	13.45	1263.94	10.74	630.7	10.07	841.59
Insurance	204.97	2.45	264.86	1.2	212.8	1.1	183.46	1.56	377.15	6.02	2557.27
Hotel	24.27	0.29	27.67	0.13	18.69	0.1	752.45	6.4	151.52	2.42	1699.43
Mfg. & Pro.	7.04	0.084	343.44	1.56	26.08	0.13	37.74	0.32	363.06	5.8	2128.35
Trading	10.42	0.12	33.65	0.15	33.49	0.17	35.43	0.3	27.53	0.44	1913.89
Dev. Bank	577.55	6.91	1981.05	9.01	2740.36	14.1	1323.54	11.25	813.24	12.99	2021.12
Hydro	0	0	3199.94	14.55	890.3	4.58	752.45	6.4	343	5.48	1967.51

Others	1258.76	15.06	6.09	0.028	493.64	2.54	217.83	1.85	122.51	1.96	1994.32
Total	8360.07		21986.4		19437.2		11763.1		6260.53		1980.91

Source: Nepal Stock Exchange Ltd.

Figure 4.2: Annual Turnover

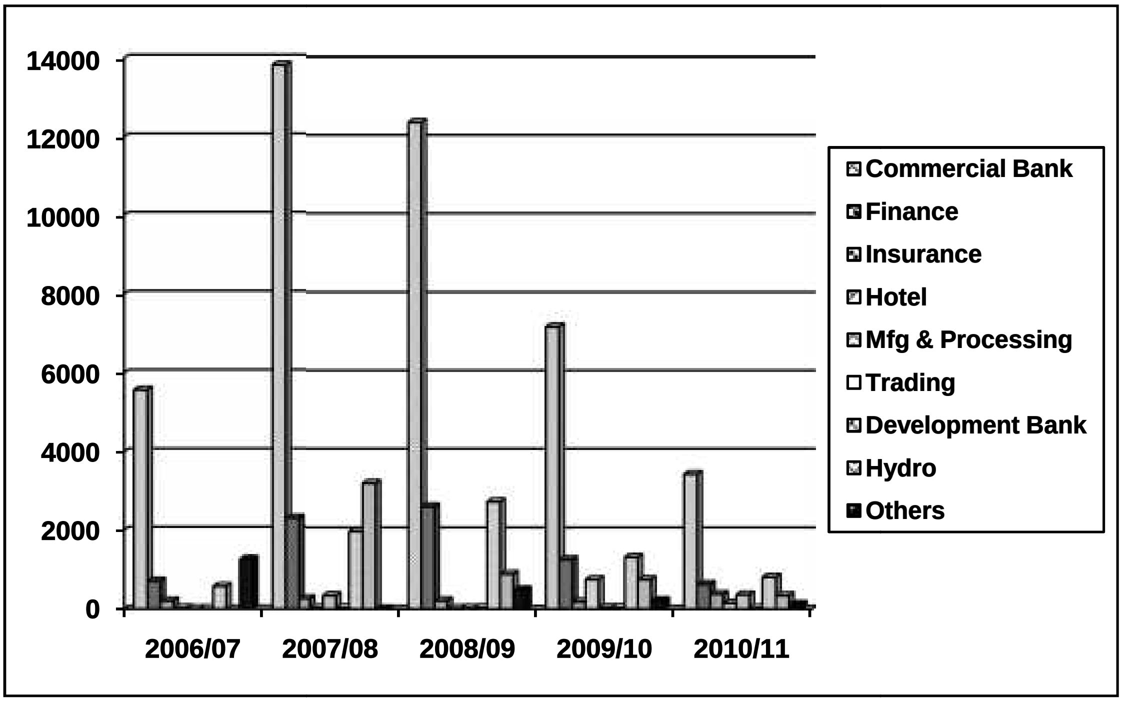


Table and figure 4.3 explains about the annual turnover volume of NEPSE over the five year study period till 2010/2011. From the figure we can conclude that there is fluctuating movement in the turnover. Initially annual turnover was Rs 8360.07 million in 2006/07. But in 2007/08 there was drastic increase in turnover volume and recorded the highest value of Rs 21986.43 million. In addition there was 62.87% contribution of Commercial bank on total turnover on that year. Similarly, Hydro 14.55%, Finance 10.5%, Development bank 9.01%, Mfg & Processing 1.56%, Insurance 1.20%, Trading 0.15% and Others have 0.028% contribution on total volume. The overall trend of contribution of individual sector on total turnover volume was almost constant every year during the study period but in the year 2010/11 there was least contribution of all sectors beside Finance, Insurance, Development bank and Other sectors so that the annual turnover reached at minimum level among the five year

4.4 Market Capitalization

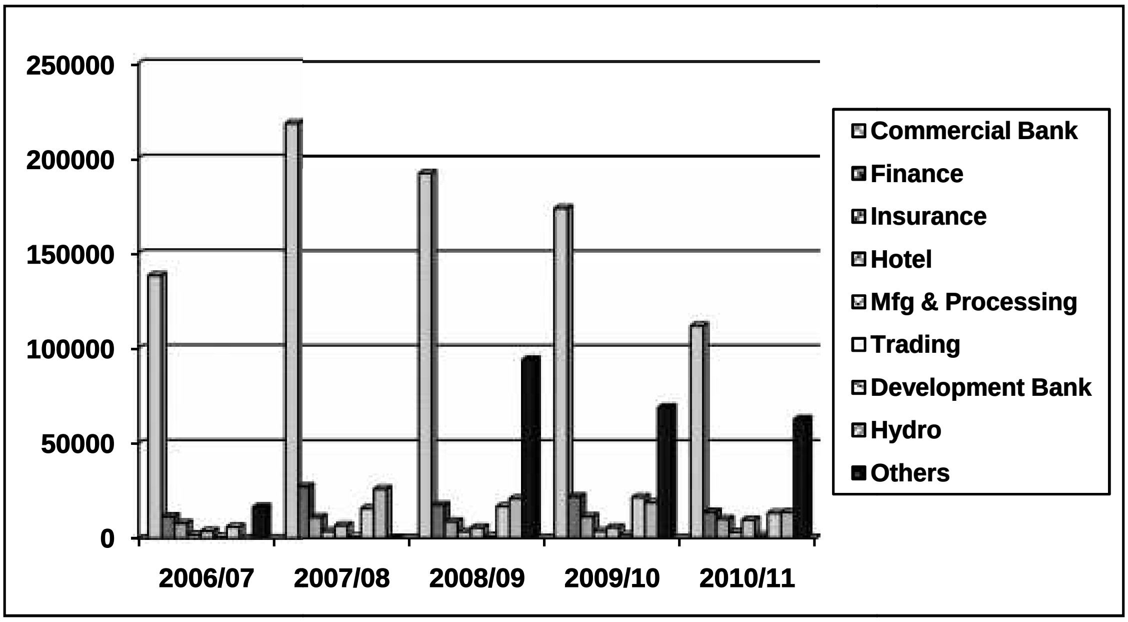
Market capitalization measures of a company's total market value. It can be estimated by determining the cost of purchasing an entire business in its current state. Market capitalization is obtained by multiplying the number of shares outstanding by the current market price per share. It is considered as an important secondary market indicator as it is compared with the indicators of the economy. Market capitalization of the listed companies at secondary market is increased continuously at the beginning of the three years and starts to fall gradually in the remaining two years of the study period. The increased market value suggests the better performance of the company and the rational investors are highly interested to invest in such companies. Total market capitalization of listed companies between 2006/07 to 2010/11 is given below.

Table 4.3: Market Capitalization (In Millions Rs)

Year	**2006/07**		**2007/08**		**2008/09**		**2009/10**		**2010/11**		**Mean**
Sector	**Value**	**%**	**Value**	**%**	**Value**	**%**	**Value**	**%**	**Value**	**%**	
Com Bank	138086	74.1	218264	70.7	192611.2	53.5	174097.5	53.2	111938.1	46.8	167049.7
Finance	11491.4	6.16	27113.6	8.79	17342.23	4.82	21834.13	6.68	13756.06	5.75	18312.77
Insurance	7959.78	4.27	10897.2	3.53	8640.23	2.4	11285.39	3.45	9937.18	4.15	9746.69
Hotel	1935.59	1.04	3484.13	1.13	3346.41	0.93	3521.89	1.08	3040.64	1.27	3066.57
Mfg & Pro	3760	2.02	6576.18	2.13	5424.58	1.51	5491.21	1.68	9577.84	4	6167.43
Trading	787.4	0.42	686.73	0.22	980.7	0.27	1599.41	0.49	1380.74	0.58	1087.28
Dev Bank	5980.8	3.21	15619.4	5.06	16648.4	4.62	21458.39	6.56	13210.54	5.52	14587.40
Hydro	0	-	25863.3	8.38	20769.65	5.77	18729.38	5.73	13550.98	5.66	15786.64
Others	16503.1	8.85	18.67	0.03	94350	26.2	69000	21.1	62850	26.3	48555.57
Total	186504		308523		360113.4		327017.3		239242		284279.94

Source: Nepal Stock Exchange Ltd

Fig. 4.3: Market Capitalization



Above figure and table explain about the total market capitalization of listed companies during the last five year. Initially it was observed that there was increasing trend in the market capitalization and in 2007/08 total market capitalization reached to maximum volume of Rs 360113.4 million and after the year it started to fall gradually and reached to Rs 239242 million in 2010/11. Similarly, it was seen that the Commercial bank sector have highest stake in the total market capitalization as well. Proportion of this sector in total capitalization is 74.04% in 2006/07, 70.74% in 2007/08, 53.49% in 2008/09, 53.24% in 2009/10 and 46.79% in 2010/11. So the Commercial bank group commands a lion's share in total trading on NEPSE. On the other hand Trading sector has least contribution i.e. less than 1% each year on total capitalization. The proportion of market capitalization of Hotel and Trading as well as Development bank is also lower but Insurance, Finance, Manufacturing and Processing and Other sectors are also attractive to encourage the investor to invest in these sectors as shown in the figure above.

4.5 Traded Share Quantity

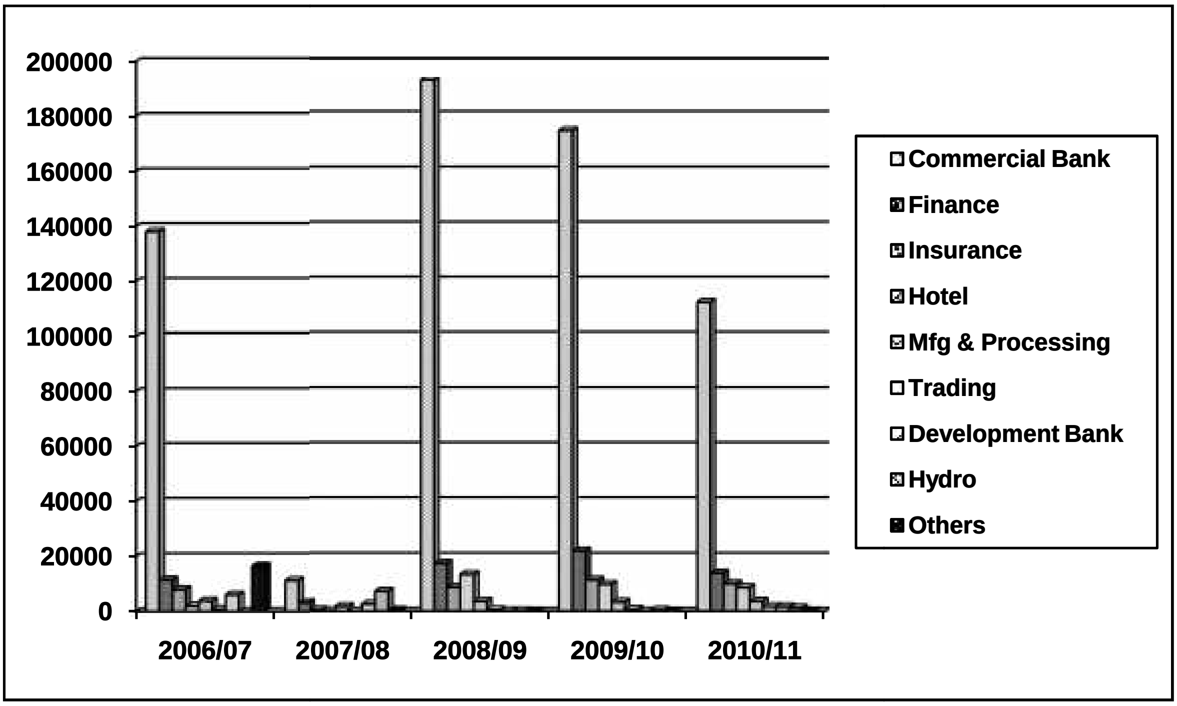
Traded shares quantity refers to the total number shares purchased and sold in the whole transaction during a year. Total number of traded share increases with the increasing number of companies and transaction. During the study period it seems that there is fluctuating movement of traded share quantity as presented below.

Table 4.4: Traded Share Quantity (In "000")

Year	2006/07		2007/08		2008/09		2009/10		2010/11		Mean
Sector	**Value**	**%**	**Value**	**%**	**Value**	**%**	**Value**	**%**	**Value**	**%**	
Com. Bank	8700	47.9	11241.4	42.1	13301.4	52.5	9680.63	42.6	8534.28	36.9	10291.5
Finance	2534.2	14	3094.3	11.6	3552	14	3265.97	14.4	3591.19	15.5	3207.53
Insurance	627.64	3.46	433.27	1.62	418.51	1.7	629.9	2.8	1590.59	6.88	739.98
Hotel	81.7	0.45	158.07	0.59	95.89	0.4	50.28	0.22	1584.59	6.85	394.11
Mfg & Pro	82.92	0.46	1655.09	6.2	95.12	0.38	360.68	1.59	1128.52	4.88	664.47
Trading	11.47	0.06	14.97	0.06	14.66	0.06	12.01	0.05	37.77	0.16	18.18
Dev. Bank	1360.5	7.49	2534.9	9.49	3631.82	14.3	3535.1	15.5	5158.69	22.3	3244.2
Hydro	-	-	7251.22	27.1	3612.12	14.2	4776.7	21	1210.69	5.24	4212.68
Others	4748.7	26.2	326.8	1.22	611.08	2.41	423.12	1.86	281.13	1.22	1278.16
Total	18147		26710		25332.2		22734.4		23117.5		

Source: Nepal Stock Exchange Ltd

Figure 4.4: Traded Share Quantity (In Thousands)



Above table and figure show the total number of share traded on NEPSE floor during the five years study period. Initially traded share quantity of listed companies was 18147 thousands and then after a year the quantity increased to 26710 thousands. After 2007/08 there was slight fall in the number of share traded and reached to 22734.4 thousands in 2009/10. That was the minimum level of no of share traded during the five year period. However in 2010/11 the quantity increased to 23117.5 thousands that indicate the fluctuating dynamics of traded share quantity during the five year study period as shown in the figure above. The maximum number of share traded on NEPSE floor was 26710 thousand in 2007/08, during that year there was 42.1% of Commercial banks share were traded which indicates that the Commercial bank have been dominating the trading floor since it captured the largest chunk of the total share trading. Hydro sector is the second largest sector as it occupied 27.1% of total trading. Similarly Finance, Development bank, Manufacturing and processing are also the major sectors that have played significant role to meet that largest volume during the year. The average value of traded shares quantity for Commercial bank sector is 10291.5 which is highest among all other sector during the study period. On the other hand the average value of traded shares quantity of Trading sector is only 18.18 and this is the lowest value when compare to others.

4.6 Number of Transactions

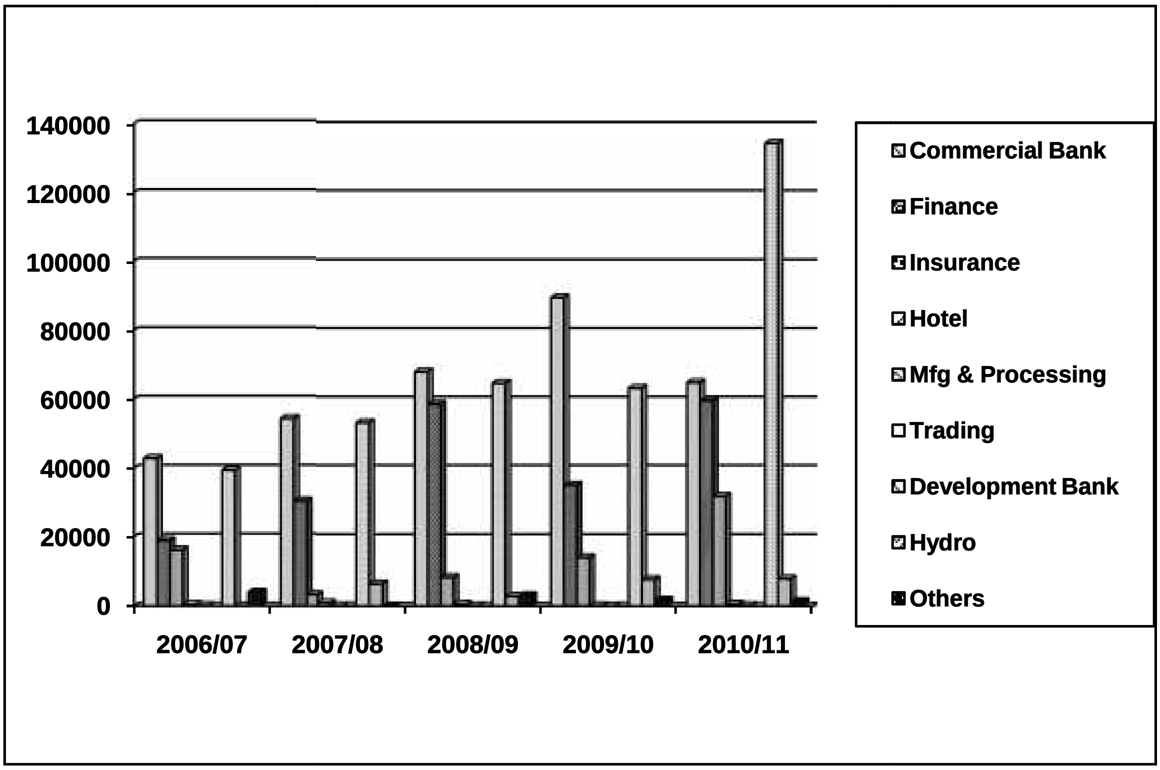
There are fixed trading days and hours that the NEPSE allows to enter its members and brokers on the trading floor to make the transactions. NEPSE has fixed the board lot of 10 shares if the face value is Rs. 100 or the face value is Rs. 10. The transactions on regular trading should be done one board lot. The transactions of less than 10 shares are permitted only on odd lot trading hours. Thus, these shares transactions occurred during a certain period only. The trend of number of transaction occurred during the five year study periods and their average are described below.

Table 4.5: Number of Transactions

Year	2006/07		2007/08		2008/09		2009/10		2010/11		Mean
Sector	**Value**	**%**	**Value**	**%**	**Value**	**%**	**Value**	**%**	**Value**	**%**	
Com. Bank	42848	35.2	54314	36.5	68171	33	89826	42	65031	21.6	64038
Finance	18879	15.5	30462	20.4	58742	28.4	35100	16.4	59756	19.8	40588
Insurance	16203	13.3	3332	2.24	8337	4.04	14090	6.59	31982	10.6	14789
Hotel	393	0.32	911	0.61	505	0.24	113	0.05	534	0.18	491
Mfg & Pro	135	0.11	96	0.06	75	0.04	49	0.02	163	0.05	104
Trading	42	0.03	108	0.07	83	0.04	77	0.04	64	0.02	75
Dev. Bank	39413	32.4	53317	35.8	64831	31.4	63394	29.6	134689	44.7	71129
Hydro	-	-	6436	4.3	2811	1.36	7748	3.62	7944	2.63	6235
Others	3998	3.2	32	0.02	3027	1.47	1718	0.8	1342	0.45	2023
Total	121811		149008		206582		213833		301505		

Source: Nepal Stock Exchange Ltd.

Figure 4.5: Number of Transactions



The above table and figure show the sector wise total number of transaction during the trading hour on the NEPSE floor from 2006/07 to 2010/11. The number of transaction are increasing each year that, initially there are 121811 number of transaction which increased to 301505 at the end of the study period (2010/11). The Commercial bank sector has highest value of 89826 in terms of number of transaction in 2009/10. Similarly Finance, Insurance, Mfg & Pro, Development bank and Hydro sectors have highest value of 59756, 31982, 163, 134689 & 7944 in terms of number of transaction in 2010/11. On the other hand, Hotel sector has highest number of transaction of 911 in 2007/08. In contrast Other sectors has decreasing trend of number of transaction that the total number of transaction are 3998 in 2006/07 and has decreased to 1342 in 2010/11. The Trading sector has lowest number of transaction that took place on NEPSE floor. From the figure it can also be concluded that Commercial bank, Development bank, Finance and Insurance sectors are highly attractive sectors because they have largest number of transactions when compared with other sectors.

4.7 Behavior of NEPSE Index

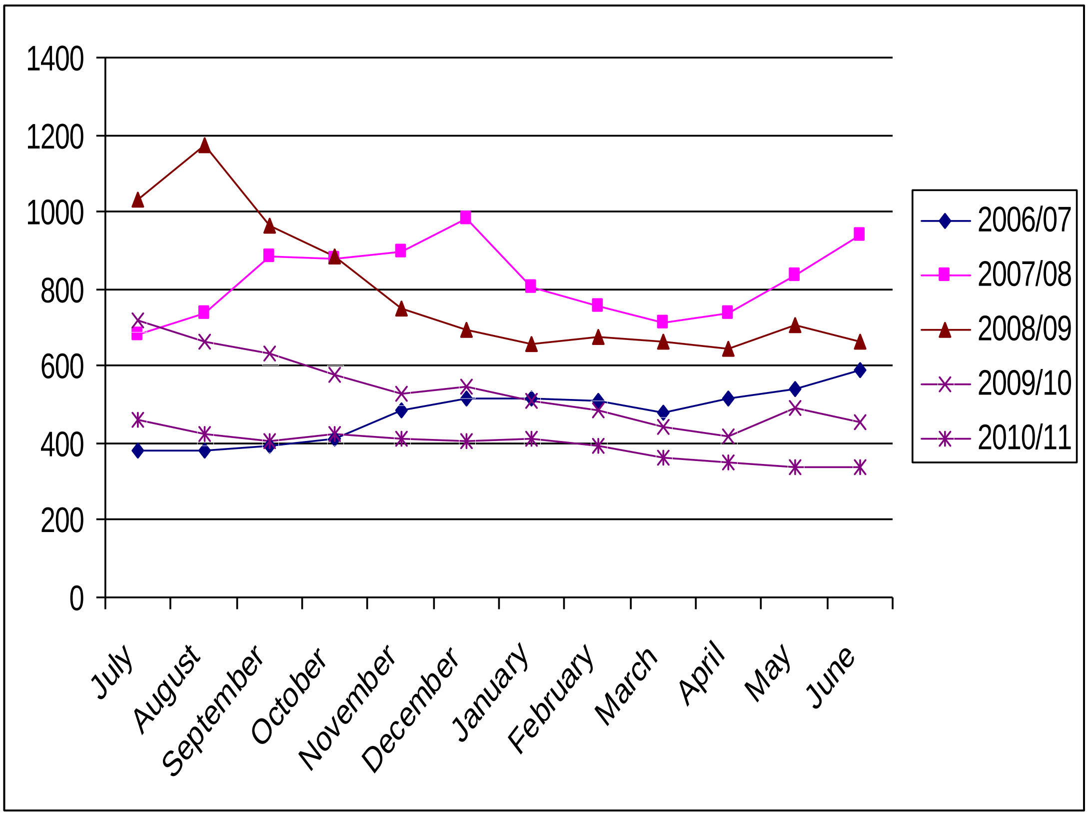
Index is a device designed to measure the change in a group of related variable over a period of time. Indexes are used to determine the relationship between historical price and movements and economic variables and to determine the systematic risk for individual securities and portfolios. The NEPSE index is based on value weighted method and index value depends upon the market value of the stocks with circuit breaker system applies at 3 stages of the NEPSE index movement of 3%, 4% and 5%. These circuit breakers when triggered bring about a trading halt in all securities trading there. In case of 3% movement either way, there would be a market halt for 15 minutes only. In case of 4% movement either way, there would be a market halt for half an hour but in case of 5% index movement in either way, trading shall be halted for the remainder of the day.

Table 4.6: NEPSE Index during 5 Years (2006/07-2010/11)

Month	2006/07	2007/08	2008/09	2009/10	2010/11
July	378.76	678.97	1034.02	716.01	461.63
August	382.24	739.53	1175.4	661.03	421.16
September	394.25	885.5	962.55	630.55	403.15
October	408.38	878.86	881.86	578.19	423.87
November	486.19	897.29	750.71	528.89	413.85
December	514.42	984.53	695.50	548.11	404.06
January	513.34	803.69	658.83	512.34	410.57
February	511.81	756.76	677.52	485.14	391.66
March	480.99	709.40	664.13	443.17	365.25
April	513.69	736.46	647.78	419.28	347.72
May	541.38	833.18	707.89	490.08	336.73
June	591.65	937.46	662.63	455.75	336.68
Mean	476.43	820.14	793.23	539.05	393.03
Standard Deviation	66.36	93.37	169.69	87.93	37.18

Source: Nepal Stock Exchange Ltd

Figure 4.6: Monthly Movement of NEPSE Index



Above table and chart 4.7 show the behavior of NEPSE index in each month over five year period. During the period NEPSE index hit the peak in August at 1175.38 points in the year 2008/09. In the beginning NEPSE was at 378.76 points in 2006/07 and after a year there was significant rise in the index by increase in the trading due to high demand and reached to 678.97 points in July 2007/08. This trend was continued in the year 2008/09 and reached to 1175.38 points so the most remarkable year for index in the history was 2008/09 as 1175.38 in August. After that in 2009/10 NEPSE index started to fall gradually and reached to the point 716.03 and again the trend was continued till June 2010/11 by reaching the minimum point of 336.68 over the five years of the study period.

From the chart it has also been seen that this trend of decreasing will continue in upcoming years and no any sign of improvement in NEPSE index. As we know that the NEPSE index reflects the aggregate price volatility of the shares of the listed companies. Hence higher the price volatility higher will be the risk and vice versa. The mean value of NEPSE index from 2006/07 to 2010/11 is 476.43, 820.14, 793.23, 539.05 and 393.03 respectively. The standard deviation of the NEPSE index is 66.36 in 2006/07, 93.37 in 2007/08, 169.69 in 2008/09, 87.93 in 2009/10 and 37.18 in 2010/11. In conclusion the calculated standard deviation is least in the year 2010/11, so this year was less risky than others.

4.7.1 NEPSE Index of Commercial Bank

As we know that Commercial bank group is the largest group at the NEPSE floor and this group hold large portion on the total market. This sector has dominated all other sectors for having highest stake in terms of annual turnover, market capitalization, number of transaction and traded share quantity over five years. So the behavior of index of this group acts almost same as an aggregate market index as it holds nearly 50% of the total market. The overall behavior of NEPSE index of commercial bank during the five year period is shown below.

Table 4.7: NEPSE Index of Commercial Bank

Month	2006/2007	2007/2008	2008/09	2009/10	2010/11
July	322.47	759.67	1081.05	752.33	437.33
August	311.05	824.91	1079.38	679.40	385.27
September	316.67	995.22	1019.15	631.21	369.35
October	333.16	951.46	899.06	552.19	393.27
November	325.48	952.23	745.06	495.92	380.02
December	328.31	979.7	657.10	530.09	366.22
January	334.9	785.9	617.46	490.62	377.65
February	380.62	730.56	668.61	457.54	350.13
March	374.9	690.48	660.39	411.88	314.11
April	410.17	732.07	649.56	375.84	296.87
May	423.04	834.76	722.72	468.56	298.22
June	422.81	960.78	679.64	429.25	289.94
Mean	356.97	849.81	789.93	522.90	354.87
Standard Deviation	41.03	107.11	170.85	108.58	43.93

Source: Nepal Stock Exchange Ltd.

Figure 4.7: Monthly Movement of Commercial Bank

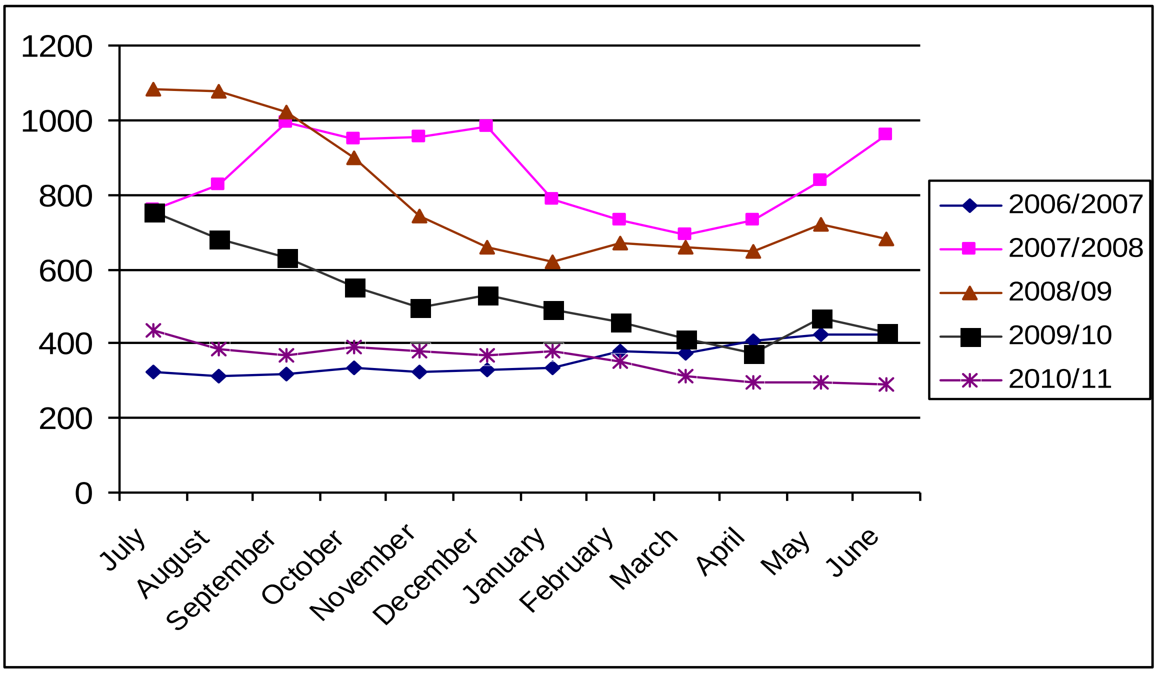


Table and chart 4.8 shows the behavior of NEPSE index of commercial bank was under each month during 2006/07 to 2010/11. Initially the index at 322.47 point and started to fluctuate in each month and reached to 422.81 in the month of June at the end of 2006/07. The value of NEPSE index for commercial bank was 759.67 in the beginning of the fiscal year 2007/08 and then the value started to increase and decrease in each month and reached to 960.78 point at the end. The maximum value of index was 1081.05 point as on July 2008/09 after that time NEPSE started to fall continuously and reached to 679.64 at the end of that fiscal year. The decreasing trend continued in the year 2009/10 as well. Initially, the index was at 752.33 point and fell to 429.25 at the end as on July 2009/10. This falling trend was continued again in 2010/11 and finally NEPSE index for commercial bank reached to its minimum point of 289.94 at the end of the study period.

The figure also indicates that there was fluctuating trend in the index till 2008/09 after that time there was the appearance of decreasing trend till the end of the study period. The standard deviation for the index is 41.03 in 2006/07, 107.11 in 2007/08, 170.85 in 2008/09, 108.58 in 2009/10 and 43.93 in 2010/11. The more risky year was 2008/09 and less risky year was 2006/07 due to highest and lowest value of standard deviation but the investor investment decision mainly depends on the investor's attitude towards the risk.

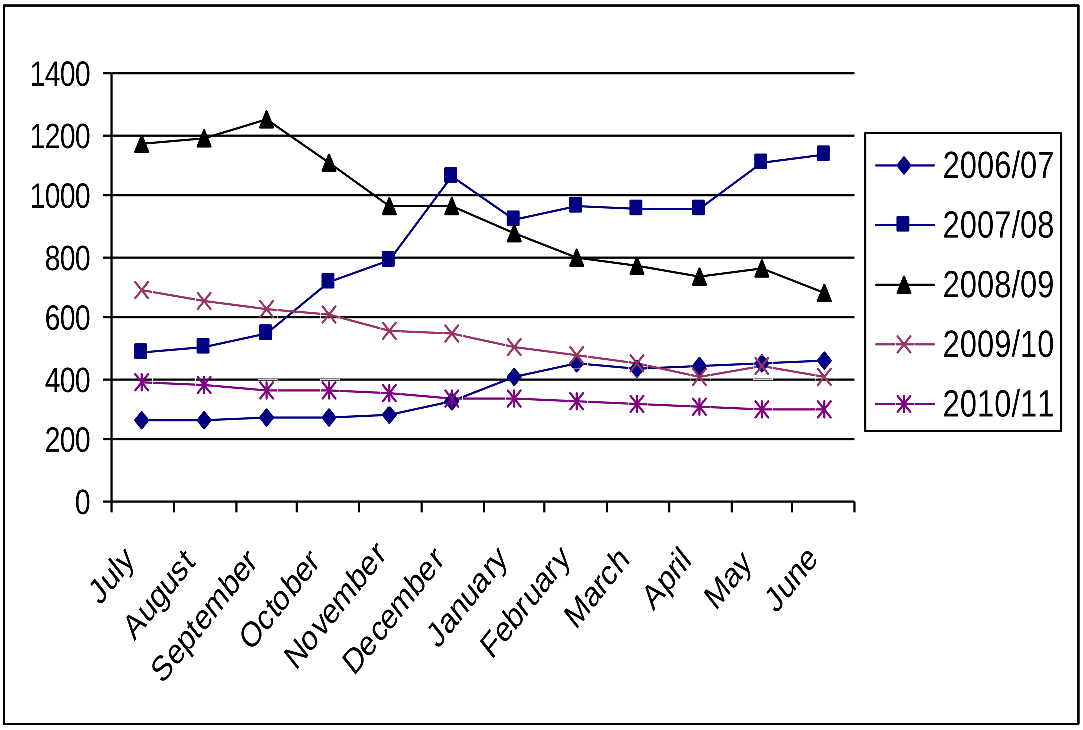
4.7.2 NEPSE Index of Finance Companies

According to the Nepal Stock Exchange Ltd Finance sector is the third largest sector on the basis of total market capitalization and first among all sectors as number of listed companies. This sector is in increasing process due to highly attractive investment alternative to the investor due to high demand on the stock market. The overall monthly behavior of Finance sector companies stock are described in the table and trend line chart below.

Table 4.8: NEPSE Index of Finance Companies

Month	2006/07	2007/08	2008/09	2009/10	2010/11
July	263.80	483.01	1173.09	692.57	390.65
August	263.75	503.88	1183.91	658.32	380.99
September	271.62	550.06	1249.66	633.39	363.88
October	274.45	714.01	1104.01	614.20	360.53
November	283.82	791.44	968.17	560.55	354.71
December	329.65	1064.87	962.40	546.56	340.41
January	404.18	921.39	873.78	506.12	335.64
February	450.44	966.44	795.81	479.38	332.03
March	430.68	960.67	772.04	448.37	315.50
April	440.44	954.93	732.75	412.00	308.93
May	448.91	1103.40	762.99	443.75	303.28
June	464.05	1136.76	679.61	407.55	301.24
Mean	360.48	845.91	679.64	555.15	348.32
Standard Deviation	82.01	223.74	190.03	94.03	28.79

Figure 4.8: Monthly Movement of Finance



Above table and figure explain about the monthly index of Finance companies during 2006/07 to 2010/11. Initially the index was at 263.80 on July 2006/07, then after a year there was an increase in the index value and reached to 483.01 point. The NEPSE index for Finance companies went to maximum at point 1249.66 on September 2008/09, during that year the overall market index is also operated in bullish trend. From September there was the start of bearish trend and index started to fall gradually and reached to the minimum point at 301.24 on June 2010/11. From the chart it’s been seen that the bearish trend will last longer in upcoming years in comparison to the previous years. The lowest value of standard deviation is 28.79 in 2010/11. So the less risky year for finance companies stock was 2010/11.

4.7.3 NEPSE Index of Insurance Companies

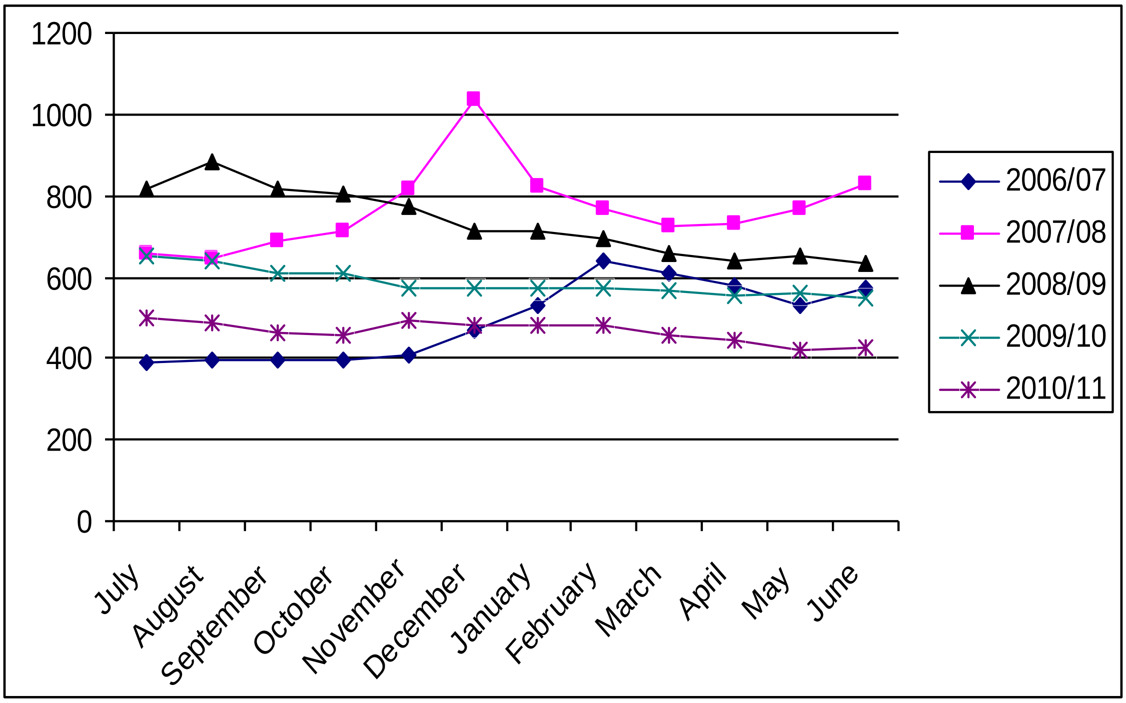
The Insurance sector is also a major sector to contribute in the economic development of Nepal. According to the report provided by NEPSE, there are altogether 21 Insurance companies stocks listed for trading on NEPSE.

Table 4.9: NEPSE Index of Insurance Companies

Month	**2006/07**	**2007/08**	**2008/09**	**2009/10**	**2010/11**
July	387.84	657.65	813.58	651.31	500.86
August	394.80	648.31	881.46	640.92	485.18
September	396.10	690.65	818.65	606.65	459.97
October	394.66	715.68	802.44	606.30	457.49
November	408.73	813.85	771.72	575.60	491.28
December	469.93	1035.06	710.47	575.34	480.68
January	529.14	820.26	715.16	575.44	484.03
February	638.83	769.80	693.72	575.51	480.37
March	607.45	725.83	657.22	564.03	459.01
April	576.08	733.54	636.88	556.13	442.52
May	530.59	769.21	651.97	557.86	419.55
June	573.55	827.23	630.79	547.69	426.32
Mean	492.31	767.26	732.01	586.07	465.61
Standard Deviation	90.31	99.09	79.86	31.88	24.85

Source: Nepal Stock Exchange Ltd

Figure 4.10: Monthly Movement of Insurance



The given table and chart show that the highest index value of Insurance companies stock is 881.46 point on August 2008/09. It was observed that there is fluctuation in the index value of the insurance company exactly same as overall index. Increasing and decreasing trend appeared simultaneously as compared to overall index. On May 2010/11 the index value reached to the minimum point of 419.55 and after a month there was a slight improvement in the index and reached to 426.32 points. The mean value and the standard deviation of index are 492.31 & 90.31 in 2006/07, 767.26 & 99.09 in 2007/08, 732.01 & 79.86 in 2008/09, 586.07 & 465.61 & 31.88 in 2009/10 and 24.85 in 2010/11. The most risky year for Insurance companies stock was 2006/07 due to the highest value of standard deviation.

4.7.4 NEPSE index of Hotel Sectors

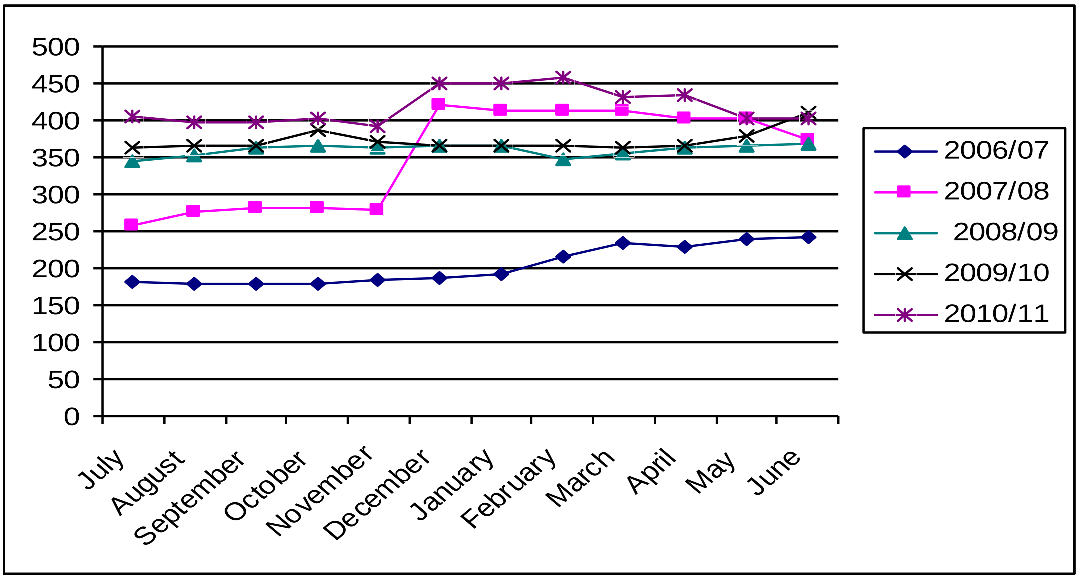
As we know that Hotel sector has least contribution in the capital market due to least amount of stocks that have been listed in the NEPSE for trading. Due to this reason it was observed that Hotel sector has least price index due to least demand and least number of traded shares as described in the table and chart below.

Table 4.10: NEPSE Index of Hotel Sectors

Month	2006/07	2007/08	2008/09	2009/10	2010/11
July	180.77	257.64	343.57	363.95	404.99
August	179.62	276.45	353.11	366.85	398.26
September	179.42	281.72	361.99	366.85	397.04
October	179.03	281.14	364.69	386.61	402.48
November	185.07	279.60	364.30	369.75	392.87
December	187.47	420.59	365.07	366.49	448.99
January	193.42	412.79	364.48	366.49	449.14
February	215.49	412.02	346.59	366.49	459.14
March	235.00	412.01	355.05	362.52	432.57
April	229.60	402.87	363.11	365.46	434.83
May	238.71	401.93	366.45	378.5	402.06
June	242.55	373.95	367.42	409.94	402.42
Mean	203.85	351.06	359.65	372.49	418.73
Standard Deviation	25.07	65.17	7.73	13.03	23.24

Source: Nepal Stock Exchange Ltd.

Figure 4.10: Monthly Movement of Hotel



From the given table and chart it was observed that there is less volatility in NEPSE index for Hotel sector as compared to other sector. Initially the NEPSE index was at 180.77 points on July 2006/07. From July the index started to increase and reached to the maximum point of 420.59 as on December 2007/08. After that time index started to fall gradually till it reached to the point 343.57 at the beginning of the fiscal year 2008/09. It was also seen that there was slight increase and decrease trend repeating again and again even within a single fiscal year. Finally the NEPSE index reached to the point 402.42 at the ending of the fiscal year 2010/11 and increasing trend will continue in upcoming years as well. The standard deviation for the index of Hotel sector is 25.07 in 2006/07, 65.172 in 2007/08, 7.73 in 2008/09, 13.03 in 2009/10 and 23.24 in 2010/11. The less risky year for the investor was 2008/09 because of the lowest standard deviation of 7.73.

4.7.5 NEPSE Index of Manufacturing and Processing

NEPSE index for manufacturing and processing sector was the best as compared to other sector for the study period because of the consistency in the NEPSE index over five years. The range of index is limited between 300 to 500 points during that period as shown below.

Table 4.11: NEPSE Index of Mfg and Processing

Month	2006/07	2007/08	2008/09	2009/10	2010/11
July	303.65	348.63	423.66	434.32	427.89
August	316.82	347.74	441.92	433.94	445.54
September	314.69	350.19	441.92	438.35	450.16
October	313.68	350.19	432.79	438.82	471.69
November	314.69	350.19	432.79	438.82	471.69
December	319.82	350.19	431.44	438.82	521.87
January	322.36	360.96	416.08	434.61	517.72
February	335.09	392.75	404.10	437.47	526.13
March	334.95	413.23	428.28	437.47	512.81
April	329.42	411.15	438.21	433.00	509.88
May	331.06	418.82	434.32	424.39	498.46
June	342.29	418.82	434.32	427.89	570.95
Mean	323.21	376.07	429.96	434.83	493.73
Standard Deviation	10.86	30.29	10.47	4.43	39.32

Source: Nepal Stock Exchange Ltd.

Figure 4.11: Monthly Movement of Manufacturing and processing

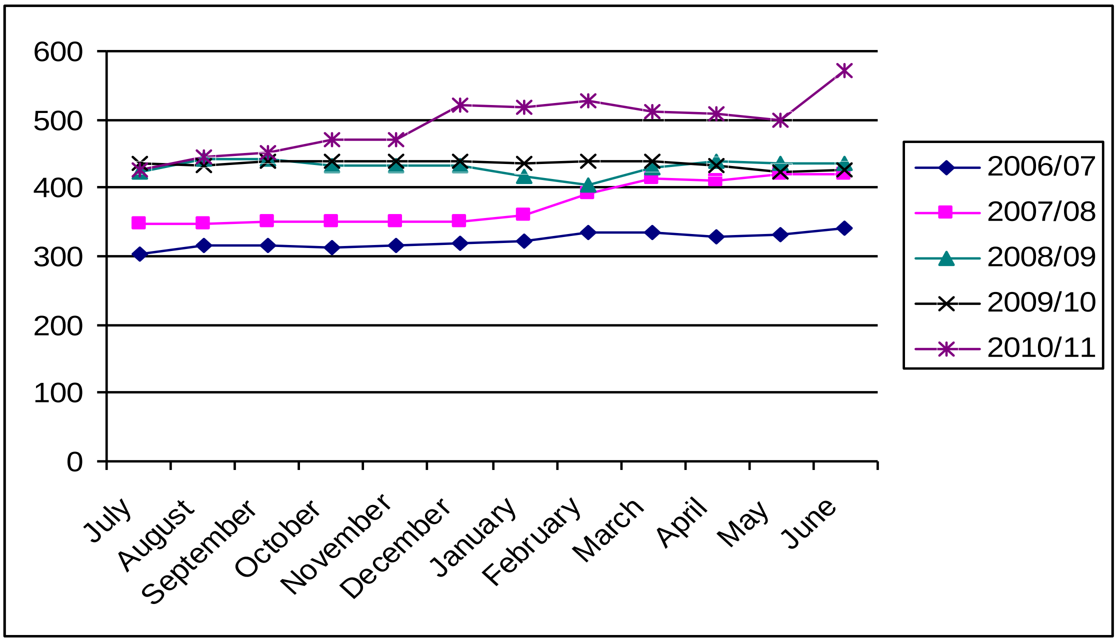


Table and figure 4.12 shows that overall index over the five years period for the manufacturing and processing sector is less volatile than other sectors. In 2006/07 the highest index point was 342.29 at the end and the lowest index point was 303.65 at the beginning. It was observed that there is continuous increase in the index each month over 2 and half year till it reached to the highest point on September 2008/09. At the end of the period NEPSE was at 570.95 point and the increasing symptoms have been observed from the trend line also. The standard deviations of index for manufacturing and processing sectors are 10.86 in 2006/07, 30.29 in 2007/08, 10.47 in 2008/09, 4.43 in 2009/10 and 39.32 in 2010/11. Risk for the manufacturing sector is least as compare to other, which indicates the good signal for the investor. The risky year was 2009/10.

4.7.6 NEPSE Index of Trading Companies

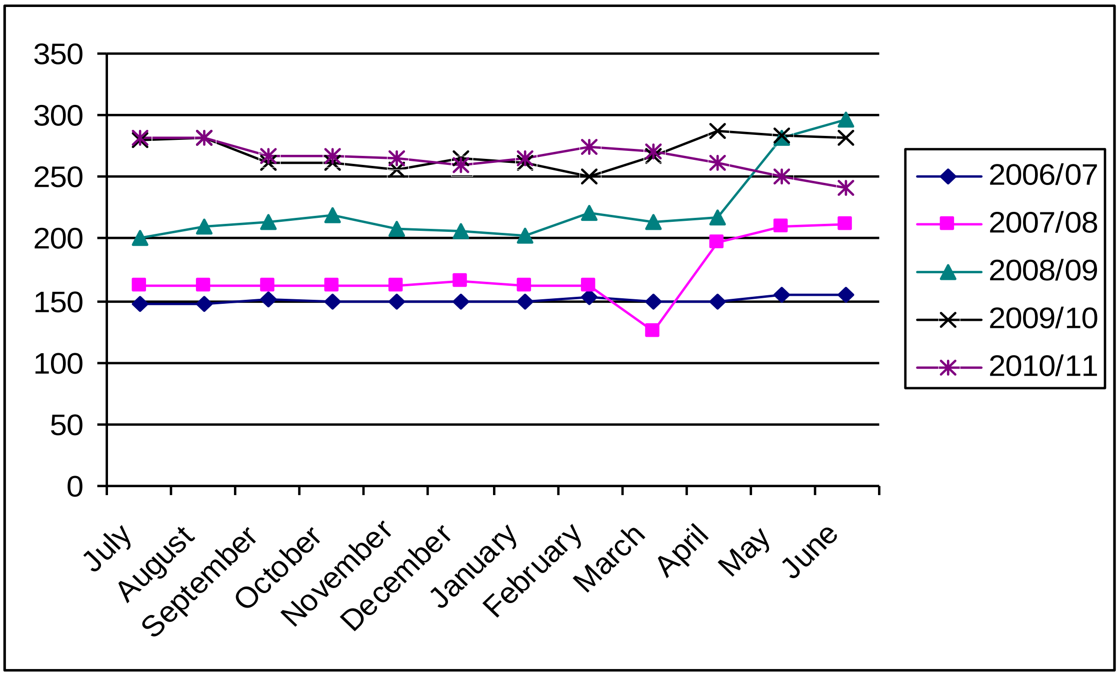
NEPSE index of trading companies share price is limited between the ranges of 100 to 300 points because few companies shares are listed and had least number of transactions occurred on the NEPSE floor. According to the report provided by NEPSE, there are only two companies shares are listed this year for trading. The overall behaviors of the index are given below.

Table 4.12: NEPSE Index of Trading Companies

Month	2006/07	2007/08	2008/09	2009/10	2010/11
July	148.11	162.03	200.31	279.55	282.08
August	148.11	162.08	210.59	281.78	282.08
September	150.72	162.08	214.46	261.30	266.87
October	149.71	162.08	218.31	261.21	266.57
November	149.71	162.32	208.72	256.07	264.77
December	150.09	165.20	206.45	265.75	259.89
January	148.51	162.32	202.68	260.78	264.60
February	152.79	162.32	221.96	251.35	274.54
March	148.71	125.83	214.08	266.36	271.10
April	148.71	196.71	218.02	287.10	261.08
May	155.21	210.83	281.78	284.22	251.31
June	155.37	212.55	295.83	282.08	241.97
Mean	150.48	170.53	224.43	269.80	265.57
Standard Deviation	2.49	23.43	29.57	11.84	11.08

Source: Nepal Stock Exchange Ltd.

Figure 4.12: Monthly Movement of Trading



The table and figure shows that on June 2008/09 the index hit the peak points as 295.83 and till that period the NEPSE index was in increasing trend from the beginning of the study period. From the beginning of the fiscal year 2009/10 there was slight fluctuation in the index that it went to 282.08 points at the end.

In the ending year of 2010/11 the index started with 282.08 points on July and ended with 241.97 points on June. The standard deviations are 2.49 in 2006/07, 23.43 in 2007/08, 29.57 in 2008/09, 11.84 in 2009/10 and 11.08 in 2010/11. This shows that the year of 2008/09 was the most risky year among the five year for the NEPSE index of trading sector.

4.7.7 NEPSE Index of Development Bank

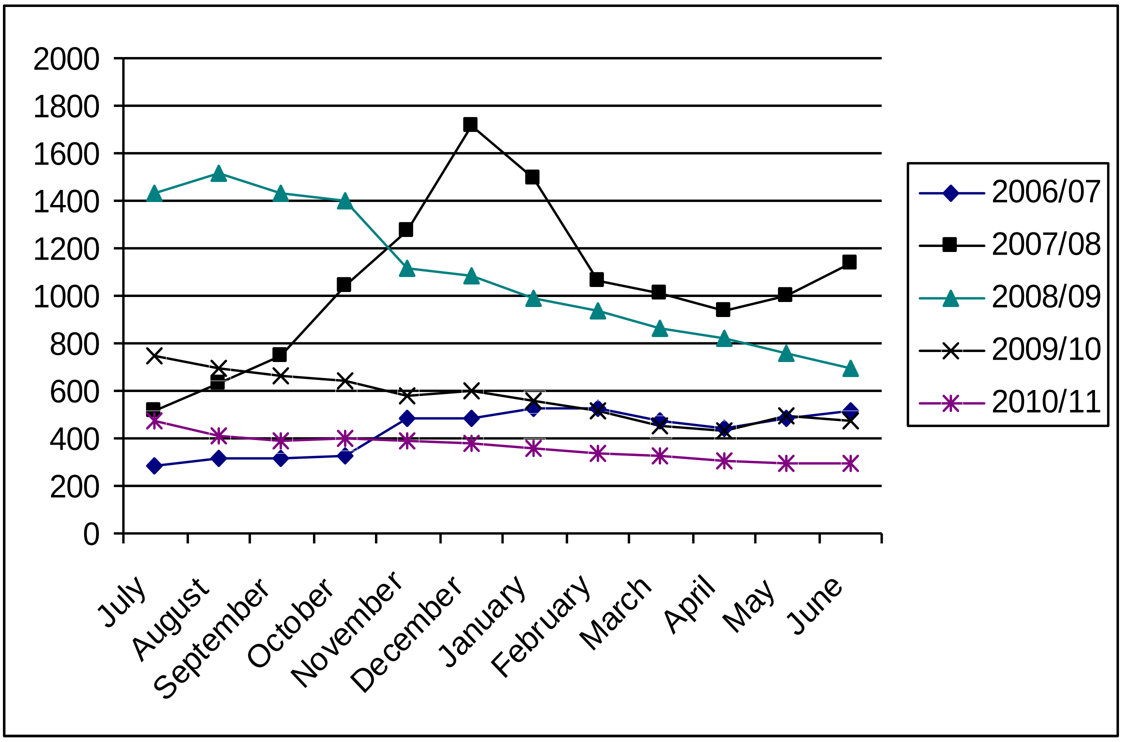
Development bank sector is the largest sector after Commercial bank and had a largest portion on the basis of traded shares quantity, market capitalization and annual turnover. The behavior of index of this sector behaves similar as the overall index of NEPSE due to having highest stake on the market capitalization. The monthly behavior of NEPSE index for Development bank during 2006/07 to 2010/11 is given below.

Table 4.13: NEPSE Index of Development Bank

Month	2006/07	2007/08	2008/09	2009/10	2010/11
July	287.08	513.44	1434.39	748.48	473.53
August	313.86	631.01	1518.74	695.44	412.11
September	317.27	752.23	1430.85	662.04	388.62
October	322.69	1046.18	1397.78	646.81	396.17
November	479.08	1278.63	1118.74	580.65	390.38
December	484.93	1720.76	1087.02	597.53	380.03
January	529.79	1497.91	987.90	558.26	356.77
February	526.62	1062.17	931.65	518.56	340.59
March	477.58	1008.19	866.02	455.35	323.51
April	442.95	938.15	821.93	428.40	306.88
May	483.90	996.37	756.91	498.94	298.88
June	511.42	1136.76	692.31	473.54	291.16
Mean	431.41	1048.48	1087.02	572	363.22
Standard Deviation	88.88	326.56	279.38	97.09	51.60

Source: Nepal Stock Exchange Ltd.

Figure 4.13: Monthly Movement of Development Bank



From the above table and figure NEPSE index for Development bank started with 287.08 point on July 2006/07. During this year there was slight fluctuation in the index and remained at the level of 511.42 point at the end of the fiscal year. During 2007/08 initially NEPSE was at 513.44 point and went to 1136.76 points on June 2007/08. NEPSE index value for Development bank was highest on December 2007/08 at 1720.76 point. After that period NEPSE started to fall gradually and went to 692.31 points on the ending of that fiscal year. In 2009/10 there was decreasing trend on the index and the index value went to 473.54 point at the end of the fiscal year on the other hand there was totally fluctuating trend appeared during 2010/11 and index reached to the point 291.16 at the end. And there is no possibility of the improvement in the index in upcoming years because the trend line also proves that the index is in decreasing trend. The standard deviation of the NEPSE index of Development bank was 88.88 in 2006/07, 326.56 in 2007/08, 279.38 in 2008/09, 97.09 in 2009/10 and 51.60 in 2010/11. The maximum value of standard deviation is 326.56 in 2007/08. So, this year was the most risky year for the investor.

4.7.8 NEPSE Index of Hydro Sector

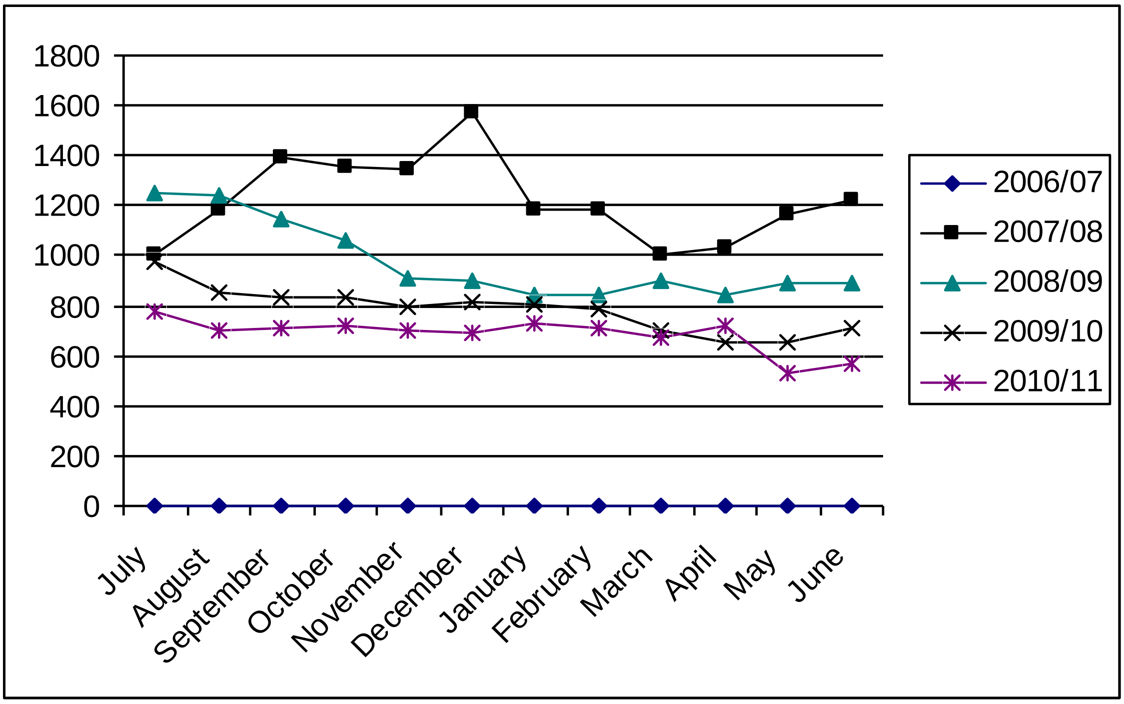
Before 2007/08 the listed companies in NEPSE had been distributed in only eight sectors. Initially the listed hydropower companies (National hydropower and Chilime hydropower) share are also traded and these shares are included in the others sector but later there is another new sector called Hydro sector is also included in the group and now these days all the companies shares listed in the NEPSE are classified into nine sectors. The overall behavior of the index for Hydro sector during four years period is explained below.

Table 4.14: NEPSE Index of Hydro Sector

Month	2006/07	2007/08	2008/09	2009/10	2010/11
July	-	1005.94	1249.45	977.19	780.79
August	-	1187.91	1236.62	854.62	702.54
September	-	1390.33	1145.59	831.89	707.98
October	-	1359.14	1062.51	829.09	716.13
November	-	1341.94	912.74	797.22	703.59
December	-	1569.86	897.49	812.64	693.32
January	-	1184.95	840.01	802.41	733.73
February	-	1182.56	838.78	789.70	713.58
March	-	1005.27	898.54	696.50	674.03
April	-	1035.03	843.63	651.10	717.32
May	-	1161.64	887.48	657.23	528.89
June	-	1218.48	894.55	706.32	564.80
Mean	-	1220.25	975.62	783.83	686.39
Standard Deviation	-	163.01	148.44	89.17	67.42

Source: Nepal Stock Exchange Ltd.

Figure 4.14: NEPSE Index of Hydro Sector



Above table and chart describe the behavior of NEPSE index of Hydro sector during 2007/08 to 2010/11. Initially NEPSE was at 1005.94 points because the hydro sectors shares were already listed and traded as others companies' shares. There was increasing trend during 2007/08 and continued till July 2008/09. After July the index started to fall gradually and reached to 894.55 point at the end. During 2009/10 and 2010/11 there was too much fluctuation in the index and reached to maximum at 1569.86 point on December 2007/08 but later decreased to 564.80 point at the ending of study period on June 2010/11. The standard deviation of the index is 163.01 in 2007/08, 148.44 in 2008/09, 89.17 in 2009/10 and in 67.42 2010/11. The most risky year was 2007/08 due to higher standard deviation of 163.01.

4.7.9.1 NEPSE Index of Other Sectors

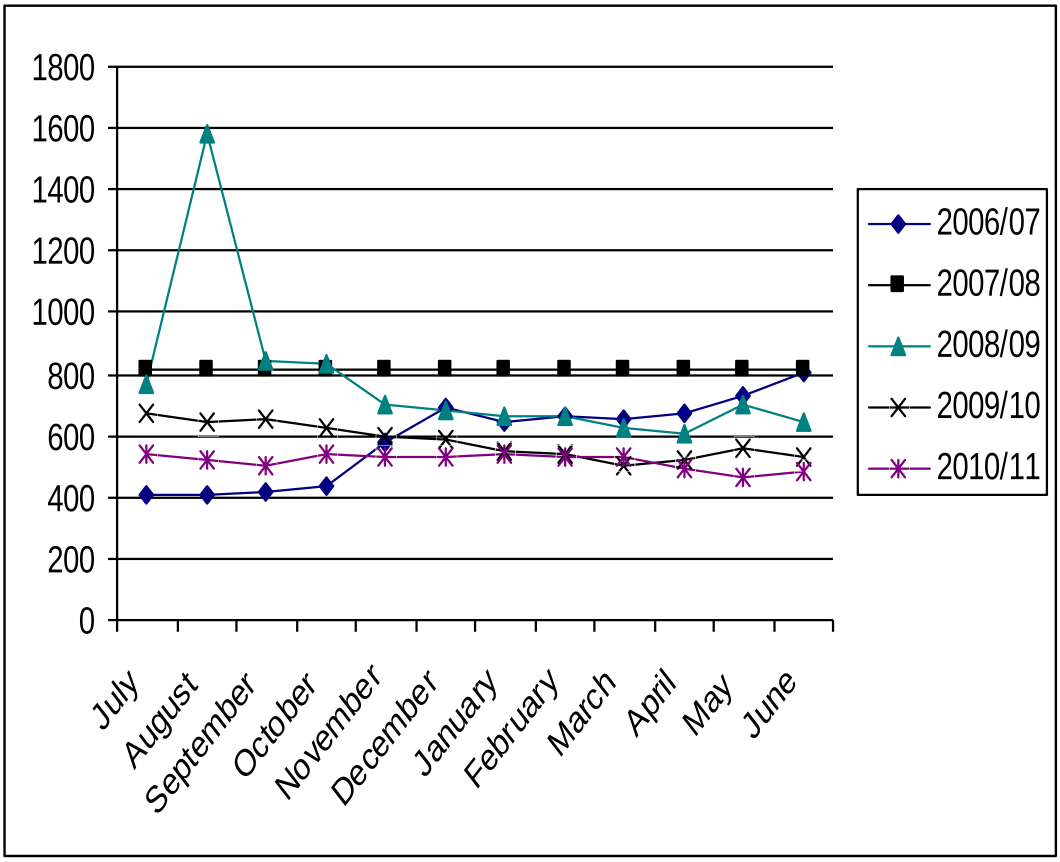
There was variation in the NEPSE index of other sector so it had also fluctuating trend during five years study period. According to the report provided by NEPSE there are only two companies listed as other sector companies in the NEPSE till 2010/11. The overall behavior over five year is shown below.

Table 4.15: NEPSE Index of Other Sectors

Month	2006/07	2007/08	2008/09	2009/10	2010/11
July	406.47	817.47	769.21	669.69	540.48
August	411.27	818.12	1582.37	646.19	522.86
September	416.2	818.12	845.88	657.94	500.54
October	440.1	818.12	832.96	628.57	540.48
November	578.56	818.12	704.93	592.16	529.91
December	690.4	818.12	677.91	589.81	528.73
January	647.4	818.12	667.34	552.22	540.47
February	663.8	818.12	659.11	535.78	534.60
March	651.59	817.47	626.23	501.72	534.60
April	668.59	817.47	605.08	522.86	493.49
May	731.19	817.47	699.05	562.80	464.12
June	807.52	817.47	640.32	528.73	486.44
Mean	592.76	817.88	775.87	582.37	518.06
Standard Deviation	133.66	0.32	254.05	54.83	24.41

Source: Nepal Stock Exchange Ltd.

Figure 4.15: Monthly Movement of Other



Above Table and Figure 4.15 elaborate the monthly movement of NEPSE index of other sector during 2006/07 to 2010/11. Initially the index was at 406.47 on July 2006/07 and after that month there was fluctuation in the index and remained at 807.52 points at the end of that year. On August 2007/08 the index was at 818.12 point and remained constant till February and increased slightly to 817.47 on March and again remained constant to that level till the end i.e. June. The index value was maximum i.e. 1582.37 points on August 2008/09 and after that time there index started to decrease and reached to 640.32 points at the end of the fiscal year 2008/09. At last the index reached to 486.44 the standard deviation for the index is 133.66 in 2006/07, 0.32 in 2007/08, 254.05 in 2008/09, 54.83 in 2009/10 and 24.41 in 2010/11. Comparatively 2007/08 was the least risky year for investors among all years and all sectors.

4.8 Major Findings of the Study

The major findings of this study are as follows:

- ❖ There are altogether 207 companies listed in stock exchange. Out of these 24 are Commercial Bank, 71 Finance, 21 Insurance, 4 Hotels, 16 Manufacturing and Processing, 4 Trading, 61 Development Bank, 4 Hydro and 2 others. The NEPSE licensed to 11 sales and issue managers, 2 dealers (market makers) and 23 member brokers who operate on the trading floor as per the Securities Exchange Act, 1983, rules and bye-laws.
- ❖ The number of listed companies is in increasing trend. The number of the companies in the initial year were 135 in 2006/07 and 142 in 2007/08 went up to 159 in 2008/09, 176 in 2009/10 and 207 in 2010/11.
- ❖ An erratic trend was observed in annual turnover that the value was Rs 8360.07 million in 2006/07. It became more than double in 2007/08 and the trading volume reached to Rs 21986.43 million. Then after it started to decrease slightly and reached to Rs 19437.2 million in 2008/09. The decreasing trend continued in subsequent years as well and the turnover reached to the lowest level at Rs 6260.03 million in 2010/11 among the five years.

- The Commercial bank sector has dominated all other sectors for having highest stake in terms of annual turnover, market capitalization, number of transaction and traded share quantity over five years. Whereas trading sector has lowest (below one percent) contribution in each terms in each year.
- Market capitalization value is in fluctuating trend in each group in each year. Total market capitalization has been increasing from Rs 186504 million to Rs 327017.3 million between the three years interval from 2006/07 to 2009/10. In the fifth year of study period the market capitalization value has decreased to Rs 239242 million. The proportion of market capitalization of commercial bank is highest among nine sectors. Its proportion is 74.04%, 70.74%, 53.49%, 53.24% and 46.79% respectively. Commercial bank commands a lion's share on the trading floor of NEPSE.
- The total number of transactions was in increasing trend during the study period. In the beginning, there were 121811 transactions in 2006/07 and increased by 147.52% at the end and reached to 301505 number of transaction during the five year period. The average number of transactions of commercial bank, Development bank and Finance sector are larger among the nine sectors. Thus, it seems as if the investors are highly attracted to invest in these sectors.
- The fluctuating trend was also appeared in the traded shares quantity as well. Likewise the trend in market capitalization, the volume of traded shares quantity is also increased till 2008/09 and started to decrease gradually and reached to 23117.5 on 2010/11.
- NEPSE index reflects the aggregate price volatility of the shares of the companies listed at Nepal Stock Exchange Ltd.

CHAPTER -V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The chapter presents the summary and the conclusion of this study. Finally, it presents recommendations for the future study.

5.1 Summary

Nepal is one of the least developed countries in the world. It had launched planned economic development process more than four decades ago. Recently it has adopted the path of economic development through liberalization. The capital market institutions are engaged in mobilization of savings into the productive investment activities. So to develop the economy of the country there is vital role of an efficient and effective capital market. The basic objectives of this study are concern with the concept of capital market, analyzing its performance and price behavior of shares of listed companies and the role of NEPSE index in the capital market.

The second chapter presents the theoretical and research review. In theoretical review there are two approaches technical analysis and fundamental analysis of securities. Technical analysis involves the study of the past volume-price fluctuations where as fundamental analysis approach, analyses the factor economic influences, industry factors and pertinent company information such as product and management in order to calculate an intrinsic value of the firms security. In an efficient market, there are three forms (a) Weak form (b) Semi-strong and (c) Strong form. In weak firm, stock price behavior can be tested by using parametric (Serial Correlation) and non-parametric (run tests).

Research Methodology and Presentations of data deals with the methods of analysis. This chapter presents the research design of the study. This study covers five years time from 16 July 2006 through 16 July 2011. In Nepal Stock Exchange there are nine sector companies shares are listed. So, all nine sectors

(1) Commercial Bank, (2) Finance Companies, (3) Insurance Companies, (4) Hotel, (5) Manufacturing and Processing (6) Trading, (7) Development Bank, (8) Hydro and (9) Others have been taken as a sample for the study. Data used for the study purpose are based on the secondary data, and major sources of data are NEPSE and SEBON. For analysis of data, percentage method, bar diagram and trend line has been used. A statistical tool like standard deviation has been used to measure the volatility of behavior of NEPSE index. Calculation of standard deviation is a positive relationship between risks varies from investor to investor. A risk aversion attitude is the attitude where the investor doesn't want to bear additional risk and wants secured and safe return. The level of risk is not so easy to measure.

The number of listed companies is in increasing trend. The numbers of listed companies were 135 in 2006/07 and 142 in 2007/08 went up to 159 in 2008/09,176 in 2009/10 and 207 in 2010/11.

The annual turnover is fluctuating and market capitalization value is increasing trend. The proportion of market capitalization of commercial bank is highest among eight sectors.

Total number of transactions is increasing during the study period and investors are encouraged to invest in commercial bank and finance sectors.

The NEPSE index reflects the aggregate volatility of the share prices of the companies listed. Hence higher the price volatility higher will be the risk and vice versa. The standard deviation of the NEPSE index is 66.36 in 2006/07, 93.37 in 2007/08, 169.69 in 2008/09, 87.93 in 2009/10 and 37.18 in 2010/11. In 2010/11 the value of standard deviation is less among five years so, this year is the less risky year for the NEPSE index.

5.2 Conclusion

The following conclusions have been derived from the major of findings of this study.

- Capital market has vital role that, an efficient and effective stock market can develop the economy of the country through the capital formation. The growth of institutional, primary and secondary market and increase in the number of listed companies implies that the capital market of Nepal is in developing process.
- NEPSE is established to made favorable environment for the investors to encourage them in the formation of capital and the major role are.
  - To provide license to dealers and brokers.
  - To audit the performance of stock market.
  - To make and implement rules and regulation for controlling stock exchange.
  - To stop fraud in the capital market.
- It was found that during 2006/07 to 2007/08 there was impressive growth due to improvement in peace and security situation, the central bank policy to increase banks and financial institutions, market reform, institutional and infrastructural development related to the capital market, has contributed to this growth. On the other hand during 2008/09 to 2010/11 there was bearish trend in the market. Almost all indicators of the have decreased due to unending political transition period , directionless economic policy, liquidity crisis in financial sector and many other factor have contributed such decreasing trend.
- The number of transactions, traded amount and market capitalization suggest that the Banks and Finance companies are in better position as compared to others. They look less affected than the performance of Hotel and Other companies.
- Commercial banks total annual turnover stood at Rs 3431.82 million by the end of year 2010/11, with those shares accounting for 54.82% of the total market capitalization during that fiscal year. These indicators reveal that the share of commercial banks have a dominant role in determining the key indicators of the Nepalese Stock market. It is thus clear that

commercial banks have continuously appeared as the most attractive investment alternatives since the opening.

- Market performance of NEPSE index shows the decreasing trend and no any sign of improvement of NEPSE index. NEPSE index of commercial bank is fluctuating. Volatility of the NEPSE index hit the peak at 169.69 in 2008/09, 66.36 2006/07, 93.37in 2007/08, 87.93 in 2008/09 37.18 in 2010/11. The manufacturing and processing and finance sector is less risky according to standard deviation. Investors are suggested to invest in other sectors too but it depends on the investors' attitude towards the risk. If investors is ready to assume more risk in to obtain a higher expected monetary value. So investors are encouraged to invest in manufacturing and processing and finance sector too.

5.3 Recommendations

- The performance of Commercial bank, Finance companies, Development bank and Manufacturing and processing companies are better than the other sectors so it is highly recommended that the investors should made their investment in these sectors.
- It is also recommended to the concerned regulatory body to carry out or helps to carry out further research about increasing market efficiency to develop an efficient capital market.
- Statistical tools like serial correlation and run test, and filter rules technique are not carried in this study so the up-coming researchers are strongly suggested to apply these tools to carry out the research on this topic.
- The secondary market of Nepal is deeply concentrated on the trading of bank and financial institutions shares only. So it is also recommended that the concern authorities should come up with concrete ideas and plans so that investors will find other ignored sectors productive enough to compete with sectors related to bank and financial institution.

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APPENDIX

Appendix 1

Comparative Summary Sheets of Annual Transactions

Mid Jul 2008/09-Mid Jul 2010/11

Particulars	Mid Jul, 2008-Mid Jul 2009		Mid Jul 2009-Mid Jul 2010		Change	Mid Jul 2010-Mid Jul 2011		Change
	Share units	Amount	Share units	Amount	In	Share units	Amount	in
	('000)	Rs. in million	('000)	Rs. in million	%	('000)	Rs. in million	%
Turnover	30547.2	21681.14	26231.4	11851.11	-45.34	26240.4	6665.33	-43.76
Commercial Bank	13301.4	12406.45	9680.62	7196.24	-42	8,534.3	3,431.82	-52.31
Finance	3552.01	2615.4	3265.92	1263.94	-51.67	3,591.18	630.69	-50.1
Hotel	95.89	18.69	50.28	10.15	-45.69	1,584.59	151.93	1396.85
Manufacturing & Processing	95.12	26.08	360.68	37.74	44.71	1,128.51	363.06	862
Other	630.82	494.39	423.13	217.83	-55.94	285.18	122.67	-43.69
Hydro Power	3612.12	890.3	4776.7	752.45	-15.48	1,210.63	343	-54.42
Trading	14.65	33.49	12.01	35.43	5.79	37.77	27.53	-22.3
Insurance	418.49	212.8	629.9	183.47	-13.78	1,590.58	377.15	105.56
Development Bank	3631.81	2740.36	3535.07	1323.53	-51.7	5,158.66	813.24	-38.56
Mutual Fund	758.5	22.4	187.5	5.21	-76.74	459.05	14.68	181.77
Preffered Stock	74.42	74.05	29.46	26.39	-64.36	20.48	15.99	-39.41
Promotor Share	4361.9	2146.73	3171.55	735	-65.76	1,639.48	270.57	-63.19
Corporate Bond	0	0	58.53	58.53				
Government Bond	0	0	50	5.2		1000	103	
Market Days	234		225			231		2.67
Average Daily Turnover	130.54	92.65	116.58	52.67		113.59	28.85	-45.22
Number of Transactions	209091		213733		2.22	302364		41.47
Number of Scrips Traded	170		198			222		12.12
No of Listed Companies	159		176			207		17.61
Total Paid Up Value of Listed Shares		61140		79786	30.5		100238	25.63
Total Number of Listed Securities	637868		826046		29.5	1033674		25.14
Market Capitalization		512939.07		376871.37	-26.53		323484.34	-14.17

Source: Nepal Stock Exchange.

Appendix 2

Comparative Summary Sheets of Annual Transactions

2006/07-2008/09

Particulars	FY 2006/07		FY 2007/08		Change	FY 2008/09		Change
	Share units	Amount	Share units	Amount	in	Share units	Amount	in
	('000)	Rs. in million	('000)	Rs. in million	%	('000)	Rs. in million	%
Turnover	18147.2	8360.07	28599.7	22820.76	172.97	30547.16	21681.1	-4.99
Commercial Banks	9090.95	5855.77	11241.4	13822.14	136.04	13301.4	12406.4	-10.24
Finance	2343.46	642.64	3094.2	2307.53	259.07	3552.01	2615.40	13.34
Hotel	81.70	7.07	158.07	27.67	291.37	95.89	18.69	-32.45
Manufacturing & Processing	82.92	24.12	1655.08	343.44	1323.88	95.12	26.08	-92.41
Other	14.24	0.54	7.70	0.29	-46	630.82	494.39	170379
Hydro Power	4460.27	1258.01	7251.21	3199.94	154.37	3612.12	890.30	-72.18
Trading	11.47	10.42	14.97	33.65	222.94	14.65	33.49	-0.48
Insurance	627.61	204.97	433.26	264.86	29.22	418.49	212.80	-19.66
Development Banking	1360.53	355.73	2534.88	1981.05	456.90	3631.81	2740.36	38.33
Mutual Fund	74.10	0.80	319.10	6.09	661.25	758.50	22.40	267.82
Preferred Stock	-	-	101.42	81.15		74.43	74.05	-8.75
Promoter Share	-	-	1788.41	752.95		4361.90	2146.73	185.11
Market days	232		235		1.29	234		-0.43
Average daily turnover	78.22	36.03	121.70	97.11	169.49	130.54	92.65	-4.59
Number of transactions	120510		150800		25.13	209091		38.65
Number of Scrips Traded	116		136		17.24	170		25.00
No of Companies Listed	135		142		5.19	149		4.93
No of Delisted Companies	12		5			0		
Total Paid Up Value of Listed Share		21746		29465	35.50		61140	107.50
No of Listed Securities	243504		321131		31.88	637868		98.63
Market Capitalization		186301.2		366247.5	96.59		512939.1	40.05

Source: Nepal Stock Exchange.

Appendix 3

Sector-wise Transaction as on 16th July 2006/07

Name of Sector	Listed Companies	Annual Turnover	Traded Share Quantity	No of Transaction	Market Capitalization
Commercial Bank	16	5563.49	8700	42848	138086
Finance	51	713.57	2534.2	18879	11491.4
Insurance	15	204.97	627.64	16203	7959.78
Hotel	3	24.27	81.7	393	1935.59
Manufacturing & Processing	17	7.04	82.92	135	3760
Trading	3	10.42	11.47	42	787.4
Development Bank	23	577.55	1360.5	39413	5980.8
Hydro	-	-	-	-	-
Others	7	1258.76	4748.7	3998	16503.02
Total	135	8360.07	18147	121811	186504

Source: Nepal Stock Exchange.

Appendix 4

Sector-wise Transaction as on 16th July 2007/08

Name of Sector	Listed Companies	Annual Turnover	Traded Share Quantity	No of Transaction	Market Capitalization
Commercial Bank	17	13822.2	11241.4	54314	218264
Finance	55	2307.53	3094.3	30462	27113.6
Insurance	17	264.86	433.27	3332	10897.2
Hotel	4	27.67	158.07	911	3484.13
Manufacturing & Processing	18	343.44	1655.09	96	6576.18
Trading	4	33.65	14.97	108	686.73
Development Bank	23	1981.05	2534.9	53317	15619.4
Hydro	3	3199.94	7251.22	6436	25863.3
Others	1	6.09	326.8	32	18.67
Total	142	21986.43	26710	149008	308523

Source: Nepal Stock Exchange

Appendix 5

Sector-wise Transaction as on 16th July 2008/09

Name of Sector	Listed Companies	Annual Turnover	Traded Share Quantity	No of Transaction	Market Capitalization
Commercial Bank	21	12406.5	13301.4	68171	192611.2
Finance	61	2615.4	3552.00	58742	17342.23
Insurance	17	212.8	418.51	8337	8640.23
Hotel	4	18.69	95.89	505	3346.41
Manufacturing & Processing	18	26.08	95.12	75	5424.58
Trading	4	33.49	14.66	83	980.7
Development Bank	29	2740.36	3631.82	64831	16648.4
Hydro	3	890.3	3612.12	2811	20769.65
Others	2	493.64	611.08	3027	94350
Total	159	19437.2	25332.2	206582	360113.4

Source: Nepal Stock Exchange.

Appendix 6

Sector-wise Transaction as on 16th July 2009/10

Name of Sector	Listed Companies	Annual Turnover	Traded Share Quantity	No of Transaction	Market Capitalization
Commercial Bank	23	7196.25	9680.63	89826	174097.5
Finance	62	1263.94	3265.97	35100	21834.13
Insurance	19	183.46	629.90	14090	11285.39
Hotel	4	752.45	50.28	113	3521.89
Manufacturing & Processing	18	37.74	360.68	49	5491.21
Trading	4	35.43	12.01	77	1599.41
Development Bank	40	1323.54	3535.10	63394	21458.39
Hydro	4	752.45	4776.70	7748	18729.38
Others	2	217.83	423.12	1718	69000
Total	176	11763.1	22734.4	213833	327017.3

Source: Nepal Stock Exchange.

Appendix 7

Sector-wise Transaction as on 16th July 2010/11

Name of Sector	Listed Companies	Annual Turnover	Traded Share Quantity	No of Transaction	Market Capitalization
Commercial Bank	24	3431.82	8534.28	65031	111938.1
Finance	71	630.7	3591.19	59756	13756.06
Insurance	21	377.15	1590.59	31982	9937.18
Hotel	4	151.52	1584.59	534	3040.64
Manufacturing & Processing	16	363.06	1128.52	163	9577.84
Trading	4	27.53	37.77	64	1380.74
Development Bank	61	813.24	5158.69	134689	13210.54
Hydro	4	343	1210.69	7944	13550.98
Others	2	122.51	281.13	1342	62850
Total	207	6260.53	23117.5	301505	239242

Source: Nepal Stock Exchange.