CHAPTER - I
INTRODUCTION

1.1 Background

Financial market is a place where the financial instruments are traded. Financial instrument includes share, bond, debentures etc. It is a mean to transfer fund from savers to those in need of funds. Financial experts have mentioned it as a brain of entire economy system. Share or stock market is a major component of the securities market. Stock market is a medium through which corporate sector mobilizes funds to finance productive projects by issuing shares in the market. Financial markets serve some basic functions, which are borrowing and lending, price determination, information aggregation and coordination, risk Sharing, liquidity and efficiency. Financial markets permit the transfer of funds (purchasing power) from one agent to another for either investment or consumption purposes. It provides vehicles by which prices are set both for newly issued financial assets and for the existing stock of financial assets. It also acts as collectors and aggregators of information about financial asset values and the flow of funds from lenders to borrowers. It allows a transfer of risk from those who undertake investments to those who provide funds for those investments. It provides the holders of financial assets with a chance to resell or liquidate these assets. Financial markets reduce transaction costs and information costs (Mishkin, 2002:12).

The financial market plays an important role in mobilizing savings and channeling them into productive investment for the development of commerce and industry of the country. It assists in capital formation and economic growth of the country.

1.1.1 Financial market in Nepal

The history of the financial market in Nepal is not so old and it is in the growth stage. However, the pace of development of said market is not completely satisfactory compared to the development and emergence of various financial and non-financial institutions. The history of financial market in Nepal dates back to 1936 in which year the shares of Biratnagar Jute Mills Ltd. were floated. In 1937, Tejarath was set up to facilitate loans to the government employees and was converted into Nepal Bank Ltd.

HMG 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 (Shrestha, 1981:24).

HMG 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 (Gurung, 1999:32).

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 (Gurung, 1999:35). 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 (SEBO-N) 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. SEBO-N 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 (SEBO, 2001:12). It is an apex regulator of the securities market in Nepal. It registers the securities and approves the public issues. Moreover, SEBO 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.

NEPSE 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 the 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. The trading floor is restricted to listed corporate securities and government bonds with the market intermediaries in buying and selling of such securities (Gurung, 2004: 86).

At mid July 2011, the country has 32 commercial banks including joint venture banks, 87 developments banks and 79 finance companies operating in the financial market. In addition to the above, there were 21 Micro credit Development Banks and 16 Saving and Co-operatives doing limited banking operations. Besides, there were 38 NGOs licensed by NRB and other non-depositary institutions like Employees Provident Fund and Citizen Investment Trust collecting huge amount of fund from the public in different forms and nature, providing long term funds to the people for various purposes (www.nrb.org.np).

The banking regulation is closely linked to the capital market regulation. Nepal Rastra Bank (NRB), the banking regulator, has been an important player in promoting the growth of capital market institutions at the early stage of market development. It has representation in the SEBON to ensure coordination of the regulatory policies. But the bank's involvement extends to the management and ownership of stock exchange and few listed companies. Recently, it has started withdrawing from ownership and management in order to alleviate potential conflict of interest and ensure regulatory effectiveness. As an authority of monetary policy, financial market stability is one of

the prime goals of the central bank. It is also relevant to note that the efficiency of equity, bonds and government securities markets also affects the successful transmission of monetary policy (Kafle, 2007:5).

Secondary market for the government securities has been arranged through stock exchange under the rules and regulations under the National Debt Act and Securities Act (SEBON, 2006:7).

1.2 Constituents of Capital Market in Nepal

Introduction of SEBON

Securities Board of Nepal was established on June 7, 1993 as an apex regulator of securities markets in Nepal. It was established with the objective of promoting and protecting the interest of investors by regulating the securities market. Besides the regulatory role, it is also responsible for the development of securities market in the country (SEBON, 2009-10:10).

As a part of its continuous effort to build a sound system to the securities exchange, the private sector has also equally participated. In private sectors, Investors, Listed Companies, Financial & Market intermediaries and similarly in government sectors; Ministry of Finance, Registrar of the companies (Ministry of Industry, Commerce and Supply), Nepal Rastra Bank, Nepal Stock Exchange Ltd., Federation of Nepalese Chambers of Commerce and Industries (FNCCI), Institute of Figureered Accounts of Nepal (ICAN) and Association of Figureered Accounts of Nepal have vita support in promoting the capital market in the country. The major objective of SEBON is to regulate the securities market and protect investor's interests. As per the Securities related Act, 2007, the major functions of SEBON are as follows.

- Register securities of public limited companies.
- Approve prospectus for issuing securities.
- Provide license to operate stock exchanges.
- Permit the operation of collective investment schemes and investment fund programme.
- Draft regulations, and issue directives and guidelines.
- Supervise and monitor stock exchanges and securities business activities.

- Take legal action against the non-compliance companies as per the legal provisions.
- Advise the Government of Nepal to formulate policies and programmes relating to securities market as and when required (SEBON, 2009-10:10).

Introduction of NEPSE

Nepal Stock Exchange, in short NEPSE, is established under the company act, 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.

The history of securities market began with the floatation of shares by Biratnagar Jute Mills Ltd. and Nepal Bank Ltd. in 1937. Introduction of the Company Act in 1964, the first issuance of Government Bond in 1964 and the establishment of Securities Exchange Center Ltd. in 1976 were other significant development relating to capital markets.

Securities Exchange Center was established with an objective of facilitating and promoting the growth of capital markets. Before conversion into stock exchange it was the only capital markets institution undertaking the job of brokering, underwriting, managing public issue, market making for government bonds and other financial services. Nepal Government, under a program initiated to reform capital markets converted Securities Exchange Center into Nepal Stock Exchange in 1993. NEPSE opened its trading floor on 13th January 1994 through licensed members (www.nepalstock.com).

Board of Directors of NEPSE

The Board of Directors (BOD), which governs NEPSE, constitutes of members representing different sectors as per Securities Act 2006. The board of directors of

NEPSE consists 9 members but the SEBON (Nepal Securities Board) has not nominated their representative since its establishment. At Present, the BOD constitutes 2 Members including a chairman from Nepal Government, 2 Members from Nepal Rastra Bank, 1 from NIDC. Moreover, one member is nominated by BOD as an expert in capital market. General Manager of NEPSE serves as a director on the BOD.

Table 1.1

Board of Directors of NEPSE

S. No.	Name of Organization	No. of Director	Designation
1.	Nepal Government	1	Chairman
2.	Securities Board	2	Director
3.	Nepal Rastra Bank	2	Director
4.	Nepal Industrial Dev. Corporation	1	Director
5.	Licensed Members	2	Director
6.	General Manger of NEPSE	1	Director

(Source: Annual Report of NEPSE; 2005-2006)

Members of NEPSE

Members of NEPSE are permitted to act as intermediaries in buying and selling of government bonds and listed corporate securities. At present, there are 23 member brokers and 2 market makers, who operate on the trading floor as per the Securities Exchange Act, 1983, rules and bye-laws.

Besides this, NEPSE has also granted membership to issue and sales manager securities trader (Dealer). Issue and sales manager works as manager to the issue and underwriter for public issue of securities whereas securities trader (Dealer) works as individual portfolio manager.

At present there are 11 sales and issue manager and 2 dealers (Secondary market). The tenure of the membership is one year. The license should be renewed within 3 months after the closure of the fiscal year. If not, it can be done within another three months by paying 25% penalty (www.nepalstock.com).

Securities Available for Trading

NEPSE facilitates trading in the following instruments

- Shares (Equity shares and preference shares)

- Debentures
- Government Bonds
- Mutual funds (www.nepalstock.com)

Trading System of NEPSE

NEPSE the only Stock Exchange in Nepal introduced fully automated screen based trading since 24th August, 2007.The NEPSE trading system is called 'NEPSE Automated Trading System '(NATS) is a fully automated screen based trading system, which adopts the principle of an order driven market. The best buy order is matched with the best sell order. An order may match partially with another order producing multiple trades. For order matching the best buy order is the one with the highest price and the best sell order is the one with the lowest price. This is because the system views all buy orders available from the point of view of the sellers and all sell orders from the point of view of the buyers in the market. So, of all buy orders available in the market at any point of time, a seller would obviously like to sell at the highest possible buy price that is offered. Hence, the best buy order is the order with the highest price and the best sell order is the order with the lowest price.

Trading Days and Hours of NEPSE

NEPSE has fixed the trading days and hours during which the members are allowed to enter the floor to make the transactions.

Table 1.2

Trading Days and Hours of NEPSE

Types of Trading	Days	Trading Time
Regular Trading	Sunday to Thursday	12:00 AM to 3:00 PM
Odd lot Trading	Friday	12:00 AM to 1:00 PM

(Source: www.nepalstock.com)

Listing Information of NEPSE

Trading on the floor of the NEPSE is restricted to listed corporate securities and government bonds. At present, 137 companies have listed their securities to make them eligible for trading. Besides this, NCM Mutual Fund enlisted its units to make them eligible to trade in the floor.

Corporate bodies wishing to be member shall have to submit application in prescribed

format within specified time along with certificate of incorporation, tax certificate, Memorandum of Association , Articles of Association and concerned Act, rules and regulations in the case of corporate body other than company after the incorporation and the projected B-S and PL A-C for the next three years, last three years audited financial statement, if the year of incorporation is less than three years, the B-S and A-C of investment in shares of subsidiary company or investment made in its parent company's share capital, details of share investment in any other company other than subsidiary, the name, address, number of shares subscribed and the amount invested by shareholders having more than 5% of the share capital need to be submitted. The capital range and respective fees for listing and annual charges are as follows;

The rates currently applicable are as follows:

Table 1.3

Listing Fee of NEPSE

Paid up Capital	Fee	
	Listing (Rs.)	**Annual (Rs.)**
Up to Rs. 10 millions	0.20% or minimum Rs. 15000	Rs. 15,000
Above Rs. 10 millions to Rs. 50 millions	0.15% or minimum Rs. 45,000	Rs. 25,000
Above Rs. 50 millions to Rs. 100 millions	0.10% or minimum Rs. 75,000	Rs. 35,000
Above Rs. 100 millions	0.075% or minimum Rs. 1,00,000	Rs. 50,000

(Source: Dhitopatra Suchikaran Samandhi Janakari Pustika)

Listed Companies under NEPSE

At present 312 companies including government bonds, corporate debentures, preferred stock, NCM mutual fund and promoters shares are listed under NEPSE for trading. Among them there are 24 commercial banks, 73 finance companies, 4 Hotels, 18 manufacturing and processing, 2 others, 4 hydropower, 4 Trading, 21 Insurance, 64 development banks, 16 government bond, 13 corporate debentures, 1 preferred stock, 1 mutual fund and 67 promoters share totaling to 312 companies with total listed no of shares of 1,503,704,959 , paid up value of Rs 42,080 and total paid up value of Rs 150,783,662,680. Among these 117 companies have been added under list 'A' group company for the FY 2067-68 (www.nepalstock.com).

Brokerage Rate

The rate of brokerage on equity, government bond and others are:

Brokerage for Equity

S. No	Trading Amount	Brokerage %
A	Up to 50,000	1
B	>50,000 &< 5,00,000	0.9
C	>5,00,000 & < 10,00,000	0.8
D	>10,00,000	0.7

Brokerage for Government bond

S. No	Trading Amount	Brokerage %
A	up to 5,00,000	0.2
B	>5,00,000 & < 50,00,000	0.1
C	>50,00,000	0.05

Brokerage for all other stocks which is not lised in 1 and 2

S. No	Trading Amount	Brokerage %
A	up to 50,000	0.75
B	>50,000 &< 50,00,000	0.6
C	>50,00,000	0.4

(Source: www.nepalstock.com)

1.3 Focus of the Study

Market price of the stock moves daily in the securities markets. The vision and mission of this study is to analyze the different causes leading to movement of price of securities. Some of the major reason to cause price fluctuation of stocks are return from the stock, risk involved in it, lack of knowledge, income of the investors, book close for different purposes, overall political and government stability, decisions of market makers and regulators, credit availability for investment, cost of credit, size of capital market and investors, demand and supply of stock in the market, decision making capacity of the investors and pricing method of the stock.

There is a close relationship between the price to volume of the stock, i.e. high price, low volume and low price high volume. Similarly, Price of stock is determined by the demand and supply. The centralization of this study is to analyze price trend of stock, volume of the stock traded and listing rate of companies in Nepal Stock Exchange, investor's reaction to price trend, volume of trend and other views while making investment decision. These are the burning issues regarding stock price determination of secondary market in Nepal. Hence, the centralization of this study is to seek and analyze the different aspects due to which stock price fluctuation is caused (Gurung, 1999:32).

1.4 Statement of the Problem

An equity or ordinary share comprises the largest category of securities in corporate firm of Nepal listed with the stock exchange. So this study will analyze the price determination of common stock of secondary market in Nepal.

Common stock represents the ultimate ownership of firm in regard to the claim on assets and income. Common stocks are firstly marketed by the capital raising companies through primary capital market and later on these stocks are negotiable in secondary capital market. Capital market provides investors good investment opportunity with fair return and instant liquidity with minimum risk of loss it helps to mobilize financial resources for the investment in development project and thereby helps economic development of the country. The stock market also imparts liquidity to the securities holder. This offers an opportunity for investors to invest in long term venture, while market also enables to convert their securities into liquid cash before the maturity of the project. The liquid market also promotes the primary issuances of share because investors participated in the issuance of share markets can get back the fund easily. The primary market is positively and highly elastic with the stock price and liquidity in the secondary markets.

Usually the price of common stock in primary market is par value but in secondary market may be any price i.e. more than par value, less than par value and equal to par value. Stock price in secondary market is the main issue of this study. What could be the reasonable price paid for a stock in secondary market? What is the impact of the price trend, volume of stock traded and, Do the investors see the price trend, volume of stock traded and, others views while making investment decision? These are the burning issues regarding stock price determination of secondary market in Nepal. Capital market provides investors good investment opportunities with fair return and instant liquidity with minimum risk of loss. The stock market also imports liquidity to the security holders. The study is directed towards impact of price trend, volume of stock traded, reasonable price for the stock in secondary market, major factors leading to change the price of stock.

In the secondary market, we will find those brokers placing buying and selling orders of different listed companies. The buying broker looks to buy shares at low prices while the selling broker looks to sell shares at high prices. Thus the equilibrium of

demand orders and supply orders determines the price of securities in the secondary market. An investor has to pay the brokers' commission on equity transactions ranging from 0.7 percent to 1.0 percent in secondary market depending on the traded amount. But investors will not be charged any commission while buying shares from the primary market.

- What is the present state and status of NEPSE index?
- What are the causative elements that the stock price influences or affects?
- Whether the price changes are the random phenomenon or not?
- What is the condition of market price and market capitalization in relation to banking?
- What are the realized rate, expected rate and coefficient of variation commercial banks occupy against the stock market?
- Are the stock price changes highly correlated with its past price movements or not?

1.5 Objectives of the Study

The objectives of the study are as follows:

- To analyze major elements resulting the change in stock price and their relationship with it.
- To examine group wise overall behavior of NEPSE index.
- To analyze and examine the signaling factor's impact on stock price with the help of NEPSE index.
- To assess the randomness of share price.

1.6 Significance of the Study

The main significance of this study is to provide various information about stock price behavior and its impact on Nepalese stock market. Other significance of the study are presented below:

- This study will help future researchers and other university students to find stock price behavior in the context of Nepalese market.
- The research will also be useful for financial manager and analyst to make business decisions with regard to stock price.
- Government of Nepal will also benefit from this study as this includes stock market behavior analysis in context to Nepalese stock market, which will help them make decisions, implement policies, government sector involvement in different sectors.
- NGO's and INGO's can benefit from this research for their investment decision and analysis of their respective sector.
- The research will be very useful for all other interested individuals and parties to understand stock price market and make their investment decisions.
- Investors and the listed companies can also benefit from this research regarding their current market position analysis and decision making process.

1.7 Limitations of the Study

The limitations of this study can be basically summarized into following:

- Time and budget limitations.
- The study is limited only to the stock market of Nepal.
- Research is based on the data of NEPSE office file, website and some of its publications only.
- The study is only of particular time period.
- The reality of the study fully depends on secondary sources of data and questionnaires filled by respondents.
- This report covers the stock market behavior of listed companies in NEPSE only.

1.8 Organization of the Study

The study has been divided into five chapters as follows;

Chapter-I: Introduction

The first chapter consists of general background study of Nepalese stock Market with major focus on Nepalese financial market. It also includes existing economic and political scenario of Nepal, introduction of capital market and Nepal Stock Exchange. Beyond these, this chapter comprises of focus, significance, and objectives of the study, statement of problems, a research hypothesis and the limitation of the study.

Chapter - II: Review of Literature

The second chapter reviews the relevant previous studies made on the stock price behavior analysis, determinants of stock price and the principle set on stock market. This chapter includes the conceptual framework on common stock, stock certificates, securities as well as security markets, stock price etc. This chapter also reviews the published books, journals, and unpublished thesis reports separately.

Chapter-III: Research Methodology

The third chapter explains the research methodology used in the study, which includes research design, source of data, population and samples, methods of data analysis etc. This chapter includes the detailed framework of study such as data collection and analysis techniques.

Chapter- IV: Presentation and Analysis of Data

The fourth chapter of the study deals with presentation and analysis of data. In this chapter, the primary and secondary data collected from different sources are presented in systematic formats (like: tables, figures) and analyzed using different analytical tools for instance; average, standard deviation, coefficient of variation, correlation, regression. In addition to that, the major findings of the study are drawn out.

Chapter V- Summary, Conclusion and Recommendation

The fifth chapter presents the summary, conclusion and recommendation of the study. It concludes the reports with the major recommendations-suggestions to the investors, listed companies and government about the stock price fluctuation.

CHAPTER - II
REVIEW OF LITERATURE

Review of literature comprises a vital part in the thesis writing. The study has been done effectively by studying the various old thesis, dissertation, newspaper, magazine and suggestion from the experts of the related field. For studying the "Movement of stock price in NEPSE securities market" various available books in investment, capital structure and other financial areas gave some idea about the study. The available literature relating to the field of this study and conceptual thoughts are presented below:

2.1 Conceptual Review

2.1.1 Concept of Stock Market

The stock market is one of the forms of secondary market. It is a medium through which corporate sector mobilizes funds to financial productive projects by issuing shares in the market. Similarly, stock market provides the best investment opportunities to the investors. Thus, the effective collection of small amounts of savings and transferring funds into the competitive and efficient uses requires a well functioning capital market to facilitate the process. In the absence of an efficient capital market, which attracts the funds the savers and channels them for the individual development, the savings which would otherwise have been available through capital markets are prone to remain dormant or leave the country or be deflected to unefficient uses (Mishkin, 2002:32).

The stock market also imparts liquidity to the security holders. This offers an opportunity for investors to invest in the long-term ventures, while market also enables them to convert their securities into liquid cash before the maturity of the projects. Further, stock market liquidity may influence economic development. Many profitable projects require a long-term venture capital to finance. Most investors tend to avoid the risk and are often reluctant to tie their savings into the long-term commitments. Liquid stock market makes the investment less risky and more attractive. It encourages savers to invest in the long-term projects because they can sell the security quickly and easily if they want to get back their investments before

the project matures. While at the same time, companies receive easy access to capital through new issuance of shares (Farlex, 2012:82).

Among the many review, experts are the clue parts itself because the study is focused and centralized over their views till its final step. The growth of stock market and its regulation is not so old in context of Nepal. The investment sector is flourishing in recent years as other economic sector. Today, most of the developed countries are boosting their economic activities by the help of their investment sectors. In the present context of the work any type of global activities undertaken in any part of the world has influenced most of the investment sectors. The incidents in one corner of the world bring the changes in whole world's stock market. As for example, due to the September 11 terror attack in USA and USA attacked upon Iraq most of the investment sector's indexes were affected. Similarly, in Nepal due to the political disequilibrium, there is always fluctuation in stock prices resulting to large fluctuation in overall market situation (Shakya, 2012:22).

2.1.2 Common Stock

Common stock refers the ownership stock from company point of view. It is one of the important sources of capital of the company. Common stock is also known as equity share representing ownership interest in the organization. There are mainly two parties that trade the stock i.e.

- Vendor or Company.
- Buyer or Stockholder.

Vendor Companies issues the equity share in the security market and purchasing companies purchase theirs' stock to be an owner of the company. These kinds of issue may be in lump sum basis or installment basis.

"There are shares which don't carry any special or preferential rights in the payment of annual dividend or repayment of capital. The rate of dividend on such shares is not fixed. Dividend on equity shares is paid out of the residual profits left after paying interest on debentures and preference shares dividend. Similarly, equity shareholders are paid at the time of winding up to receive what is left after all the prior claims have

satisfied. Therefore, equity shareholders are the real risk bearers. They also enjoy voting right in the management and control of the company". While issuing the equity share, company can achieve great advantages i.e.

a) Permanent Capital

Equity shareholders provide the permanent capital to the company. There is no any obligation to return the money except at the time of liquidation of the company.

b) No Obligation for Dividend

Equity shares do not impose an obligation to pay a fixed dividend but are payable only if the company has adequate profit.

c) Sources of Prestige

A company with substantial equity capital has a high credit standing. Creditors readily lend money to it because they regard equity capital as a safety shield.

d) Small Denomination

The face value of an equity share is generally quite low i.e. Rs. 100. The company can mobilize huge funds from investors belonging to different income groups.

e) No Charge on Assets

Company is not required to mortgage or pledge it's assets for issuing common stock. The assets remain free of charge for borrowing money in future (Harvey, 2012:60).

"Common stockholders of a corporation are its residual owners, their claim to income and assets come after creditors and preferred stockholders have been paid in full. As a result, a stockholder's return on investment is less certain than the return to a lender or to a preferred stockholder. On the other hand, the return to a common stockholder is not bounded on the upside, as are returns to the others. A company should not issue stock at a price less than par value, because stockholders who bought stock for less than par value would be liable for the difference between below the par price they paid and the par value" (Van Horne, 1997:85).

Usually common stock is issued with a perpetual life. These stocks are subjected to issue and trading in primary market where it is generally issued with its face value and once the stock gets listed in the stock exchange the trading starts to take place and this particular market is called secondary market. Each share of stock is a fraction of the rights that belongs to the owners of a business. A stock certificate is evidence of that fractional ownership; it is tangible evidence, a certificate of title, to be a part of the company (Shakya, 2012:30).

2.1.2.1 Value of the Common Stock

There are mainly three kinds of value of the common stock:

- Face Value
- Book Value
- Market Value

a) Face Value

The face value is mentioned in article of association and memorandum book of the company. The face value does not change until there is a stock split or other such initiative by the board of directors. The par value of new issue is Rs. 100, as directed by company act 1993.

b) Book Value

It represents the assets value per share after entire obligation of the corporation is met and is calculated by dividing the total shareholder equity on the B-S by number of equity shared outstanding.

c) Market Value

This value is based on the market demand and supply. Market value is determined by the demand and supply factors and reflects the negotiation between investor and seller for the transaction. The market value is influenced by many factors like economic and industry condition, expected earnings and dividends, speculations and other signaling effects like governments' stability and major political changes (Shrestha, 2011:36).

2.1.2.2 Features of Common Stocks

Study of the key features of common stocks would be the important to find out the causes of stock price movement. Common stockholders are the true owner of the business firm. Common stockholders are the residual owner in the same that they received what is left after all other claims on the firm's income have been satisfied. The main positive consideration involve in equity ownership are income and control. Common stockholder has the right of.

a) Involvement in Controlling the Firm

As they are real investors they can directly involve in controlling the firm to progress it. They must be invited in the annual general meeting of the company, and they are provided the voting right to choose the best management team i.e. board of directors, which in turn, elects the Management Committee. The stockholders also have other voting rights on issues, which have substantial effects on the corporations, on issues, which bring about change in their ownership percentage, any contract or financial arrangement.

b) Preemptive Rights

The Preemptive right provides the first option to purchase the additional number of share to the equity shareholder. Preemptive right allows stockholders to maintain their proportionate ownership in the firm when new issues are made. Preemptive right permit existing shareholder to maintain their voting control and protect against the dilution of their ownership and earnings. In the right, the stockholders are the first subjected to purchase of any new additional issues so that they do not lose their voting right control and there is protection in the value of the shares being diluted. These rights sustained by the use of rights offerings.

c) Other Right of Common Stockholder

The right of stockholder to common stock in a business firm is established by the law of the state in which the corporation is Figured and major rights of common stockholder are as follows:

(i) Specific Right of Common Stockholder

- The right to sell and purchase the stock.

- The right to inspect the corporate documents.
- The right to vote in the manner prescribed by the corporate Figureer.
- The right to share residual assets of the corporation on dissolution.

(ii) Collective Right of Common Stockholders

- The right to adopt and amend bylaws of the company. The right to elect the directors of the corporation.
- The right to authorize the sales of fixed assets.
- The right to enter into merger.
- The right to change the amount of authorized common stock.
- The right to issue preferred stock, common stock, debenture and other securities.

d) Right to Income and Distribution of Other Shares

As a matter of fact, shareholders have no right to receive income distribution from the corporation. As practice prevails, BOD declares cash dividends if enough financial resources are available. The dividends can be cash dividends, stock dividends, property dividends, etc.

Do accounting numbers such as net income explain changes in a company's stock prices? The answer is yes. Evidence from research shows definite link between the "new" conveyed in net income and the price changes in a company's stock (returns). "Good news" net income is accompanied by positive price changes. Also, the more good or bad is net income, the greater is the accompanying stock prices reaction. Similar evidence exists for other summary financial statement numbers such as book value.

Research also shows that many factors influence the relation between accounting numbers and stock prices. These include company factors, such as risk, size, leverage, and variability, which decrease the influence of numbers like net income on prices, and factors, such as earnings growth and persistence, which increase their impact. Analysis must recognize those influences impacting the relevance of accounting numbers for security analysis.

Fundamental analysis research offers guidance in use of financial statement information for predicting future stock price changes. Evidence indicates financial statements help reveal the permanent and transitory portion of net income. Permeation portions are much more long-lasting in their impact on stock prices and are commensurately of greater magnitude in their influencing on price (Shakya, 2012: 29).

2.1.3 Recent Stock Market Development in Global Context

The newer stock markets, known as the third and fourth market have reshaped the organized exchange and the OTC market. The market is part of the OTC market; it trades listed securities at discounted commission rates and thus completes with the organized exchanges for trades. The Traditional OTC market trades securities issued by local firms and municipalities and U.S. treasury securities. Some OTC deals trades these traditional OTC securities while also participating in the third market (Scott, 2003:31).

The fourth market is the communications network between block traders. The development of the third and fourth markets has strengthened stock markets in the USA and enabled investors to get better service. In efficient markets, securities prices equal their values. When prices are unrelated to values and thus don't reflect relevant economic information, Investors resources are misallocated. A securities market should be efficient in two respects. External efficiency requires that security price fully reflects all available information. Internal efficiency requires that all securities be immediately marketable at a reasonable cost. Third market firms and more recently discount brokers have done much to increase the internal efficiency of security market. These market makers compete with NYSE member brokerage firms in making market for listed securities by offering the same securities at the same market price but at lower commission rates. This economic competition and new computer technology have done much to move the US closer to having a national securities market that is geographically dispersed but centrally reported (Harvey, 2012: 64).

Market Index Calculation

An aggregate value produced by combining several stocks or other investment vehicles together and expressing their total values against a base value from a specific

date. Market indexes are intended to represent an entire stock market and thus track the market's changes over time (www.investopedia.com). Therefore, an index is developed to give a quick answer to the question: What is the market doing? And what is the market performance as compared to that of yesterday? Market indexes have always been of great importance in the world of securities analysis and portfolio management. Index can be constructed in various ways. There are three weighting methods of construction of market index, which are most often used.

1. Price weight
2. Value weight
3. Equal weight

1. Price Weight

A market index in which, the contribution of a security to the value of the index is a function of the securities current market price. It is calculated by summing the price of stocks that are included in the index, and dividing this sum by a constant (the divisor).

$$I_t = \sum_{i=1}^{n} P_{i,t} - d$$

Where,

I_t = Index

N = no. of stocks

$P_{i,t}$ = Price of i^{th} stocks

d = Divisor

2. Value Weight

It is a market index in which the contribution of a security to the value of the index is a function of the securities market capitalization. It is calculated by multiplying the price of the stocks in the index and their respective number of share outstanding and then dividing the corresponding figure for the day the index was started (i.e. base period). The resulting number is multiplied by any base that may be 10, 100, 1000 etc.

$$I_t = \frac{\sum_{i=1}^{n} p_{it} N_{it}}{\sum_{i=1}^{n} p_{ib} N_{ib}} \times I_b$$

Where,

I_t = Index

P_{it} = Price of i^{th} stock at time t

N_{it} = No. of shares outstanding for i^{th} stock at the time t

P_{ib} = Price of j^{th} stocks in the base period

N_{ib} = No. of shares outstanding of j^{th} stock in the base period.

I_b = Index on Base Period

NEPSE Index: Nepse index is calculated by considering all listed shares including the promoter shares of all the listed companies in NEPSE.

$$\text{NEPSE Index} = \frac{\text{Current MV of All Shares Listed in NEPSE}}{\text{Market Value of all Shares Listed in NEPSE}} \times 100$$

Where,

Base Year is Feb 12th 1994 or Magh 30th 2050.

Float Index: NEPSE started calculating float index from Bhadra 26, 2065 (Base Date). This index represents the market capitalization of securities which are floated to public. Float index excludes promoter's holding, government holding, strategic holding and other locked in shares like employees share- that will not come to the market for trading in the normal course. It takes into account the securities held by general public that are readily available for trading in the market.

$$\text{Float Index} = \frac{\text{Current MV of all Shares Listed in NEPSE Floated to General Public}}{\text{MV of Shares in Base Year}}$$

Where,

Base year is 26th Bhadra, 2065 or 11th September 2008

(Source: www.scribd.com)

NEPSE has adopted value weighted index method till the date; 12th Feb 1994 is the base period for construction on the index NEPSE multiples index by 100 as base where as India and USA multiplies the same figure by 1000 and 10 respectively.

3. Equal Weight

The third method of constructing market index is equal weighted. This is computed daily by multiplying the level of the index on the previous day to the arithmetic mean of the daily price relative (today's price divided by yesterday price) of the different individual stocks which are included in the construction of index.

2.1.4 Theories of Stock Price Movement

Simply, stock price movement refers the fluctuation of the stock price in the secondary capital market, i.e. market value is more than book value and market value is less than book value due to the different internal and external causes. It is necessary to study the other external factors of foreign country. Due to the globalization, liberalization and modernization, the entire world has become within a boundary so effect of one areas' movement automatically lies upon others. Theory is code of conduct of explanation process is pushed further, from where a concrete theme can be derived.

In broad sense, there are three theories concerning stock price movement. The theories explain share price fluctuation in the stock market. Market efficiency is the premise for all of the theories. The theories are:

2.1.4.1 Efficient Market Theories

Efficient market theories refer the optimum price of the stock in the competition market. Stock price is neither over-valued nor under-valued in the market like monopoly market.

The term efficiency may be defined in various ways like allocate efficiency, operational efficiency and information's efficiency. When the finance literature speaks of market efficiency it is generally speaking exclusively about informational efficiency in pricing the stocks. A market is said to be informational efficient if the current market price instantaneously and fully reflects all relevant available information and adjust instantaneously every influx of new information. In an efficient market, only price changes that would occur are those, which result from new information. An initial and very important premise of an efficient market is that there are large numbers of knowledgeable and profit maximizing independent buyers

and sellers, new information is generated randomly and the investors adjust the information rapidly. Therefore, if market is efficient, it uses all available information to it in setting price. The measure of efficiency evolved from the notion of perfect competition, which assumes free and instantly available information, rational investors with no taxes or transaction cost. The requirements for a securities market to be an efficient market are:

- Prices must be efficient so that new inventions and better products will cause a firm's securities price to rise and cause investors to want to supply capital to the firm (i.e., buy its stock).
- Information must be discussed freely and quickly across the nation so all investors can react to new information.
- Transactions cost such as sales commissions on securities are ignored.
- Taxes are assumed to have no noticeable effect on investment policy.
- Every investor is allowed to borrow or lend at the same rate.
- Investors must be rational and able to recognize efficient assets so that they will want to invest money where it is needed most. (i.e., in the assets with relatively high returns) (Fischer and Jordan, 2000:520).

This constitutes the world of the efficient market theory or more popularly the capital assets pricing model. As efficient market is concerned with the pricing mechanism of securities market, it has two dimensions of price adjustment. One is the type of information reacting to and another is the speed and quality of adjustment of security to the information. As any random infusion of information instantaneously and correctly adjusted in prices, there will be no subsequent dependencies or lags that are profitable. Pricing not only should be instantaneously, but also should discount accuracy of information so that the prices fluctuate closely around its intrinsic value. So, it would be clearly an add interpretation of efficiency if a doubling in price of a share were regarded as an efficient reaction to new information, simply because the movement was instantaneously, if the information in fact warranted a substantial reduction in price. Agreeing with this, Francis and Taylor noted, Market efficiency refers to the ability of financial assets to quickly adjust and reflect all information that is relevant to value in its price. Therefore, it assumes, that any given time, the market correctly prices all securities. The result, or so the theory advocates, is that securities

cannot be overpriced or under priced for a long enough period to profit there from (Francis and Taylor, 1983: 296).

(i) Levels of Market Efficiency

There are three levels of market efficiency depending upon types of information set impounded into the price. In other words, the forms of markets are determined on the basis of how publicly available information is reflected in the market price of shares. The statements that price reflect all available information represents the highest order of market efficiency. As Fame suggested, it is useful to distinguish three level of market efficiency.

- **Weak-form Efficiency**

If the pricing into the stock market has reflected all information found in the record of past prices and volume it is considered as weak form efficiency and participation of technical analysis approach in the market become futile.

- **Semi-strong-form Efficiency**

If current prices of stocks reflect not only all information found in the record of past prices and volume but also other publicly available information the market is semi strongly efficient. In that the market even fundamental analysis of published accounting information has no value, because participants would have discounted it accurately and instantaneously when they are disclosed.

- **Strong-form Efficiency**

The market where stock prices fully reflect all the available relevant information public as well as private, it is considered that the market held strong form of efficiency. In this market insider information cannot beat the market because no single participant has monopolistic access to that kind of information (Fischer and Jordan, 2000:525).

These three levels of efficiency described above are not indifferent to each other but they are serially higher order in degrees of market efficiency. If the market is semi-strongly efficient, it must be efficient in weak sense also because the past price data is one form of published information, which must have been impounded in the price. If the market is not efficient in a weak sense, the past price information could be contained in past prices has not been reflected fully into the current prices. Similarly, for the market to be strongly efficient it must also be efficient at the semi-strong and weak levels, otherwise prices are not reflecting all relevant information.

(ii) Theory of Weakly Efficient Market or Random Walk Hypothesis

The weak form of efficient market hypothesis stipulates that historical price and volume data for securities contain no information which can be used to earn a trading profit above what could be attained with a native buy-and-hold investment strategy. Sense if share prices fully reflect the information implied by all prior price movements. Price movements in effects are totally independent of previous movements, implying the absence of any price patterns with prophetic significance. The weak form of Efficient Market Hypothesis (EMH) is popularly known as the random walk theory. Random walk theory describes whether past price can predict future price. Fama argued, "random walk theory implies the future path of price level of a security is no more predictable than the path of series of cumulated random numbers. The series of price changes has no memory, that is, the past cannot be used to predict the future in any meaningful way," (Fama, 1965:34). It means, that the current size and direction of price change are independent and unbiased outcome of previous price changes. Put it differently, prices appeared to follow a random walk, implying that successive price changed is independent of one another.

Random walk model says that previous price changes or changes in return are useless in predicting future price or return changes. It means if we attempt to predict future price in absolute term using only historical price change information, we will not be successful i.e., successive price changes are independent. This independence implies that prices at any time will on the average reflect the intrinsic value of the security. If a stock's price deviates from its intrinsic value because among other things, different investors evaluate the available information differently or have different insights into future prospects of firm, professional investors and astute non professional will seize

upon the short-term of random deviations from the intrinsic value and through their active buying and selling of the stock in question will force the price back to its equilibrium position. Finally, the efficient market theory holds that since price reflects all available information and since information arrives in a random fashion, there is little to be gained by any type of analysis whether fundamental or technical. It assumes that every piece of information has been collected and processed by thousands of investor and this information (both old and new) is correctly reflected in the price. Returns cannot be increased by studying historical data, either fundamental or technical, since data will have no effect on future prices" (Fischer and Jordan, 2000:553).

Though the subject of market efficiency has been much concerned area of the study for the academicians and researchers in recent times, "the advocates of the efficient market theory are matched by an equally eloquent opposing camp which argues that the stock market is neither competitive nor efficient. The critics contend that one or more of the following factors cast their shadow over the efficiency and competitiveness of the stock market" (Chandra, 1994:589).

- **Information Inadequacy**

Information is neither freely available nor rapidly transmitted to all the participants in the stock market. In addition, there is a calculated attempt by many companies to circulate "misinformation".

- **Limited Information Processing Capabilities**

Human information processing capabilities are sharply limited. As Nobel Laureate Herbert Simon observed: "Every human organism lives in an environment which generates millions of new bits of information every second, but the bottleneck of perceptual apparatus certainly does not admit more than a thousand bits per second and possible much less."

- **Irrational Behaviors**

In theory, it is generally assumed that investor rationality will ensure a close correspondence between market prices and intrinsic value. In practice, this may not be

true. As J.M. Keynes argued: In point of fact all sorts of consideration enter into the market valuations which are in no way relevant to the prospective yield. L.C. Gupta made a similar observation: "our findings suggest that the markets evaluation process work haphazardly almost like a blind man firing a gun. The market seems to function largely on a 'hit –or – miss' basis rather than on the basis of informed beliefs about the long-term prospects of individual enterprises".

- **Monopolistic Influence**

In theory, the market is regarded as highly competitive. No single buyer or seller is supposed to have undue influence over price. In practice, powerful institutions and big operators wield great influence over the market. The monopolistic power enjoyed by them diminishes the competitiveness of the market (Gupta, 1981:20).

Finally, due to these challenges posed by the critics of efficient market theory, there are many factors to point the finger at its reality validity and authenticity. This appears to be truer like relatively less developed capital market of Nepal. Nepalese capital market is yet to be efficient in terms of information as well as operations.

2.1.4.2 Fundamental Analysis Theory

Generally Fundamental analysis theories refer the formula and principle. According to the technical analyst, fundamental analysis is idealist part of analysis. So it is not perfect and market principle of analysis of stock price movement.

Fundamental analysis approach involves working to analyze different factors such as economic influences, industry factors, governmental actions, firm's financial statement, its competitor and pertinent company information like product demand, earnings, dividends and management in order to calculate an intrinsic value for firm's securities. The analyst who believes on fundamental facts to determine the intrinsic value of stock is popularly known as fundamental analyst or fundamentalist.

"The value of common stock is simply the present value of all the future income which the owner of the share will receive" (Francis, 1986:398). And the actual price

should reflect intrinsic value of the stock i.e., good anticipation of cash flows and capitalization rate corresponding to future time period. But in practice, first, it is not known in advance what the appropriate discount rate should be for a particular stock. Therefore fundamentalists estimate their intrinsic value by studying in details all matters that are relevant to company. "The study would involve examining its sales earnings, profit margins, dividends, management proficiency, industrial and business outlook, labour competence any factor that would have a bearing on its performance in the future" (Raghu, 1991:167).

Fundamentalists forecast stock price on the basis of economic industry and company statistic. The principal decision variable ultimately takes form of earning and value with a risk-returns framework based upon earning power and the economic environment. "Fundamental analysts delve into companies' earnings, their management, economic outlook, firm's competitor's market conditions and many other factors" (Francis, 1986:398).

The objective of fundamental security analysis is to appraise the intrinsic value of a security. The intrinsic value is the true economic work of financial asset. "The fundamentalists maintain that any points of time every stock has an intrinsic value which should in principle be equal to the present value of the future stream of income from the stock discounted at an appropriate risk related rate of interest" (Bhalla, 1983:283).

Therefore the actual price of security is considered to be a function of a set of anticipation. Price changes as anticipation changes which in turn change, as a result of new information. In other words, a new piece of news is released, securities' intrinsic values will change, and the securities' market prices will adjust towards the new values.

On the basis of such a study fundamentalists project a company ought future profits and earning capacity with reasonable accuracy what the price of a company's share to be. This estimated price is termed as intrinsic value. The intrinsic value of the stock is generally away from its present market value. Thus there is difference or gap between them. Fundamentalist reaches and investment decision by comparing this value with current market value, it is believed that price will rise. In this situation,

fundamentalists will acquire shares as this difference presents them with an opportunity to make a profit. Alternatively, if the intrinsic value is lower than the market value, the share is overpriced and is an indication to the fundamentalists to sell. Following this rule, they believe, above average return can be attained, and given that market is inefficient in pricing the shares.

Therefore "The fundamental analysts work to find new information before other investors so they can get into a position to profit from price changes they anticipate" (Francis, 1986:603).

"Fundamental analysis uses different models like Top-Down versus Bottom-up forecasting, probabilistic forecasting, econometric models, financial statement analysis etc. to estimate the value of security" (Sharpe, Alexander and Bailey, 2001:850-853). Therefore the fundamental analyst reaches and investment decision on the basis of these analytical tools. Though fundamental analysis approach is used by many security analysts or prospective investors to make a judgment of the stock's value with a risk-return framework based upon earning power and the economic environment, it is hard and time consuming work. As stated by Raghu Palat, some of the limitations of fundamental analysis approach are as follows;

- The approach though sound and based on basic financial figures does suffer from drawbacks and to make this approach work effectively on must be aware of them.
- It tends to ignore market behavior and assumes that the market will act rationally. The market seldom does. Prices flares or drop on the filmiest of reasons.
- The entire fundamental approach is based on a rational scientific analysis of data. The market is rarely rational.
- The information and analysis itself may be incorrect.
- Many companies, with the help of creative-innovative accounting and accounting cosmetics disguise real earnings.
- The fundamentalists' estimate of intrinsic value may be incorrect. This is not only possible but also more probable than not as he has to often forecast growth, profit and other factors without having in his grasp all the facts.

- The fundamentalists may not fully understand the economy or the industries, as there are several external factors.
- There is also the possibility always that the market may not move in the manner a fundamentalist expects and conversely towards the intrinsic value.
- It is also difficult to determine corporate action (Raghu, 1991:168).

In short, the fundamental approach works exceedingly well in determining the intrinsic value of a company. It is not such an effective tool in determining future price movements and hence it is not very dependable for short-term profits. "By nature the fundamentalist is conservative in approach and is generally unwilling to take a quick loss he would rather adopt a buy and hold policy" (Yahasway, 1992:155). Therefore fundamental analysis allows the analyst to forecast holding-period yield and riskiness of achieving that yield, but these figures alone do not necessarily prompt a buy or sell action.

2.1.4.3 Technical Analysis

Technical analysis is one of the important theory of price determination and interpretation of the stock. This is the modern and practical method to analyze the price fluctuation in the security market. Technical analysis is based on the widely accepted premise that securities price are determined by the supply and demand of securities.

Among many tools, technical analysis is one tool is designed to measure demand and supply. Typically, technical analysis record historical financial data on Figures, study these Figures in an effort to find meaningful pattern and use these patterns to predict future prices. Some Figuring techniques are used to predict the movements of single security. Some are used to predict the movements of a market index and some are used to predict both the action of individual securities and market action.

"The technician believes the forces of supply and demand are reflected in patterns of price and volume of trading. By examination of these patterns, he predicts whether prices are moving higher or lower, and even by how much" (Fischer and Jordan, 2000:510). Therefore, the patterns or trend in prices is the basis of technical analysis.

Various Figures are prepared to determine trends and to determine whether prices are likely to rise or fall. Technicians tend to look backward. “The technician usually attempts to predict short-term price movements and thus makes recommendations concerning the timing of purchases and sales of either specific stock or groups of stocks (such as industries) or stocks in general. It is sometimes said that fundamental analysis is designed to answer the question “what?” and technical analysis to answer the question “when?” (Sharpe, Alexander and Bailey, 2001:844).

Technical analysts discern past pattern or trends, which they believe to repeat in the future and recommend for the timely holding and disposing mechanism, which is profitable. Or that recommend for short-term speculation based on its forecast of profitable pattern.

Technical analysts use different kinds of tools and technique to determine and forecast the stock price on the basis of past data and information. This technique is based on the fundamental technique. Technical analysis is easier, faster, more result oriented and more market oriented philosophy than fundamental analysis. Some important technique of technical analysis is studied below:

(i) The Dow Theory

It is one of the oldest and famous techniques which were founded by Charles Dow who was editor of ‘The wall street journal’. The Dow Theory is used to predict reversals and trends in the market as a whole or for individual securities. According to Dow, the market is always considered as having three movements, all going at the same time. The first is the narrow movement from day to day; the second is the short swing, running from two weeks; the third is the main movement from at least four years.

(ii) Figures

Technical analysis uses three basic types of Figures- line Figure, bar Figure and point & Figure. Line Figures are used to connect successive day’s closing price. Bar Figures are used to spoon the distance from the day’s highest price to the day’s lowest price. A small cross on the bar makes the closing price. Point and figure Figures are

made on X & Y are more complex than line and bar Figures. PFCS are used not only to detect reversal in trends but also to make price forecasts, called price targets.

(iii) Contrary Opinion

Contrary opinion refers the opposite thinking of others. It assumes that the so called man in the street is usually wrong and that it is therefore advantageous to pursue strategies opposite to his thinking two different theories of contrary opinion are:

- The odd-lot theory
- Short sales

(iv) The Confidence Index

"Confidence index is the ration of high-grade bond yields to low grade bond yields. When bond investors grow more confident about the economy, they shift their holdings from high grade to lower-grade bonds in order to obtain the high yields offered by the risk or bond" (Francis, 1983:447).

(v) Breadth of Market

It is this kind of technique of finding the breadth of market that is used to measure the underlying strength of market advance or decline.

(vi) Moving Average

"Moving average is used by technicians who focus on the moving average of price. The moving average is used to provide a smoothed, stable reference point against which daily fluctuations can be gauged. Moving average analysis is used to for individual securities and market indexes.

"Technical analysts maintain that the price of a share at any time (Present price) is the balance struck by buyers and sellers at a point in time price movements take place on account of changes in buying and selling pressures. This occurs in account of diverse internal and external factors (profits, political environment, predictions and the likes). Prices stabilize when equilibrium between buyers and sellers is achieved. They believe that a record of price movements over a period of time in the past. As the

whole theory is based on the assumptions that history repeats itself, the human nature does not change and that man is likely to repeat his patterns of past movements will repeat themselves in the future" (Raghu, 1991:172).

The technical analysts estimate prices instead of values. They largely ignore the fundamental facts such as the firms' risks and earnings growth rates in favor of concentration on various barometers of supply and demand that they have devised. The premise here is that prices move in trends and that a trend is likely to continue than reverse. It is noteworthy to mention here the quotation of Veteran scientist and inventor, Benjamin Franklin that "Show me the man who does not believe in history and I will show you a fool." Technical analysts believe in the history and that history repeats itself. Consequently all their predictions and Figures are based on history. Past figure and trends are used to predict the future.

According to Edwards and Magee the basic assumptions underlying technical analysis are as under;

- Market value is determined solely by interaction of supply and demand.
- Supply and demand are governed by many rational and irrational factors.
- In disregard of minor fluctuations in the stock market, share price tend to move in trends, which persist for an appreciable length of time.
- Changes in trend are caused by shifts in supply and demand.
- Shifts in supply and demand, no matters why they occur can be detected sooner or later in Figures of market action.
- Some Figure patterns tend to repeat themselves.

In essence, technical analysts believe that past patterns of market action will recur in the future and can therefore be used for predictive purposes (Edward and Magee, 1958:86).

2.1.5 Market Prices of Shares as the Output of the Demand and Supply Interaction

"Stocks and shares mostly traded in the securities market are one of the assets into which money can be invested. The investment further is more attractive to a majority

of individuals because it is also liquid in character. But what is the most influencing factor in determining the price of the stock is interaction of demand and supply" (Doodha, 1962: 10). Ackerman opines that, "the price of a given stock is determined exclusively by the two forces demand and supply, converting one such stock at a given time that the prices and volumes of its past transaction are meaningful indication of profitable relationship of future supply and demand pressure, it is likely to encounter in the market that such relationship is the most important element determining the probable direction of price movement" (Acerman, 1980:10).

"The share price is determined in the floor by the interaction of market forces i.e. demand and supply. The price is determined by the point of equilibrium between supply and demand, the shifting of this balance results in incessant adjusting of price in search of the ever-changing new equilibrium. Then market price moves upward and downward. There are many reasons that causes the stock price fluctuation, major of them are economic, non-economic and market factors. One basis for the determination of stock prices is dividends. Dividends are strongly influenced by the earning power of the enterprises. There is a very close correlation between corporate earnings and dividends. Earning power, in turns, is strongly influenced by interest rates. In this way, the most fundamental factor in stock price fluctuations lies in change in corporate earnings, which together with interest rates and business cycle trends, contribute to making up the economic factors influencing stock price. The next influencing factors are non-economic factors, including changes in political conditions, such as war or administrative changes, changes in the weather and other natural conditions, and changes in cultural conditions, such as technological advance and the like. Market factors, or internal factors of the market, consisting of the tone of the market and supply-demand relations, may be cited as the third category that influences the stock prices. The tone of the market is a form of over-estimating the intrinsic value of stock when stock price is high because of business prosperity while underestimating its value at the time of market decline. The relationship of supply-demand are reflected directly in the volume of transactions, but there is also considerable effect from the actions of institutional investors, margin transactions, etc. although margin transactions increase purchases when stock price is going up, once the price begins to fall they become at selling factor and accelerate price decline. The

practice of margin in finance has not been introduced, so far, in Nepal" (Sharma, 1996:63-64).

"Securities market in Nepal is witnessed a sharp growth during the past couples of years. The volume of trading has increased. The size of the market has been widened. The number of investing population has grown up in aggregate. The tendency of raising capital from general public is rising. Most importantly the market consciousness has been developed so that investors have begun to think about risks, return and availability or timely corporate information regarding the investment. The market seems losing confidence of investors. There is poor liquidity for the stocks. A scarcity of floating stocks prevails in the market. Professionalism is still lacking in the service on investors and investment management. A system of preponderance of speculative trading is guessed to be prevailed, where the primary motive is to derive benefit from short-term price fluctuations. It appears that a very small fraction of transaction represents purchases-sales by genuine investors. The rest are driven mainly by the speculative motive. The corporate sector is still reluctant on disseminating information timely. The kinds of securities trading in the market are confined only to ordinary and preference shares. These are various major problems observed in the market now-a-days" (Sharma, 1996: 65-66).

2.2 Classification of Financial Markets

There are mainly two types of financial market. First one is money market and second one is capital market. Short-term funds of firm are raised from money market and long and middle term funds of firms are raised from secondary market.

2.2.1 Money Market

Money market is also known as short term financial market. The financial market in which funds are borrowed for short-period is money market. Market for short-term debt securities, such as banker's acceptances, commercial paper repos, negotiable certificates of deposit, and treasury bills with a maturity of one year or less and often 30 days or less. Money market securities are generally very safe investments which return a relatively low interest rate that is most appropriate for temporary cash storage or short-term time horizons. Bid and ask spreads are relatively small due to the large size and high liquidity of the market. Examples include U.S.

Treasury bills and commercial paper. The money market is often, though not always, included in counts of the money supply. One may trade on the money market either on an exchange or over-the-counter *(Farlex; 2012:52)*.

Generally money market trades Commercial papers, Certificates of deposit, Short-term bonds and Government Treasury bill. Nepalese money market can be divided as the organized and un-organized sector. Under the organized sector Commercial banks, Co-operative Ltd., Agriculture bank and Central bank are working and under the Un-organized sector, creditors, local merchants, landlords, friends and relatives are working.

2.2.2 Capital Market

Capital market is also known as long-term financial market. Capital Market is referred to the market for trading long-term debt instruments (those that mature in more than one year). That is, the market where capital is raised. More recently, capital markets is used in a more general context to refer to the market for stocks, bonds, derivatives and other investments *(Harvey; 2012:52)*.

The market for long-term funds where securities such as common stock, preferred stock, and bonds are traded is capital market. Both the primary market for new issues and the secondary market for existing securities are part of the capital market *(Scott; 2003:27)*.

In broad sense, Capital market can be classified into two markets. First one is securities market and second one is non-securities market. Under the securities market shares, debentures and bonds are traded by the government and reputed organization where as under the non-securities market financial institutions period the long-term loan to the industries and business. Under the securities market these are mainly six types of markets. They are Stock market, Bond market, Business securities market, Government securities market, Primary market and secondary market. *(Farlex; 2012:58)*.

The market where securities are traded is known as capital market. The capital market is broadly categorized into two markets. They are primary capital market and secondary capital market.

Primary Capital Market

The new securities are issued by the company to trade in the capital market. Here the securities of large business firms are issued for the first time are bought and sold. The issuer of such securities may directly sell through private placement without underwriting to the investors. Besides, the securities may be sold after being made underwriting by the institution like investment bankers. The issuer (Company) collects amount and invest in the productive sector to earn the profit.

Secondary Capital Market

Secondary market provides the liquidity and marketability opportunity to the stock market. Stocks are traded second time in the agreement of buyer and seller in the stock market. Stock market may be either OTC marketer registered. Usually, those buying the securities for the first time went to see the securities within a short period. Secondary market can be subdivided into two parts.

OTC Market

Full form of the OTC Market is 'Over-the Counter Market'. The market where the securities of the companies not listed in the stock exchange or delisted from there are traded is called 'Over-The-Counter Market'. Intermediates and authorized dealers head such kinds of securities transaction. This market is also known as the proceeds from sale of securities in the secondary markets don't go to the organizational issuer instead to the initial owners of the securities different factors in secondary market.

2.3 Review of Journals and Articles

Majid (2007), in his journal entitled "*Re-Examining the Finance-Growth Nexus: Empirical Evidence from Indonesia*" examined that stock markets play a key role in allocating capital to the corporate sector, which will have a real effect on the economy on aggregate. A well functioning financial sector channels limited resources from surplus units to deficit units and in so doing providing an efficient allocation of resources, thereby resulting in economic growth.

Seetanah (2009), in his article entitled "*Financial Development and Economic Growth: ARDL Approach for the Case of the Small Island of Mauritius"* examined the complex linkages between stock market development, bank development and economic growth for the case of 27 developing countries studies over a period of 15 years (1991-2007). The analysis demonstrated that stock market development is an important ingredient of growth, but with a relative lower magnitude as compared to the other determinants of growth, particularly with banking development.

Nowbutsing and Odit, (2009), in their journal entitled "*Stock Market Development and Economic Growth: The Case of Mauritius"* examined the impact of stock market development on growth in Mauritius utilizing a time series econometric investigation over the period 1989 -20067. They analyzed both the short run and long run relationship by constructing an Error Correction Model. They found that stock market development positively affected economic growth in Mauritius both in the short run and long run.

Vazakidis and Adamopoulos (2009), in their journal entitled *"Stock Market Development and Economic Growth"* explored the causal relationship between stock market development and economic growth of France for the period 1965-2007, using a VECM. The estimated coefficient of error correction term found statistically significant with a negative sign, which confirmed that the economic growth caused stock market development in France. Therefore, the inference of this study was that economic growth has a positive effect on stock market development while interest rate has a negative effect on stock market development.

Adamopoulos (2010), in his journal entitled "*Financial Development and Economic Growth: A Comparative Study between 15 European Union Member-States*" examines the long-run relationship between stock market development and economic growth for Germany for the period 1965-2007, applying the Johansen co-integration analysis and a Vector Error Correction Model based on the classical unit roots tests. The results of Granger causality tests indicated that there is a unidirectional causality between stock market development and economic growth with direction from stock market development to economic growth.

Baral and Shrestha (2006), in their journal entitled "*Daily Stock Price Behaviour of Commercial Banks in Nepal*" they have concluded that in Nepalese capital market context, most of the studies show that random walk hypothesis does not hold true. The review of past empirical studies shows the evidences for and against the proposition of random walk hypothesis. On the whole, studies carried out in the growing capital markets show that the proposition of random walk hypothesis does not hold true in developing capital markets and studies conducted in the developed capital markets show that it holds true especially in developed capital markets. Observations of daily stock prices of sampled banks indicate that there is a large variation in their stock prices in the fiscal year 2005/06. They are not doing well in Nepalese stock market. Most of the serial coefficients are significantly deviated from zero and statistically insignificant. It signifies that the successive price changes are dependent. Therefore, the Nepalese stock market is inefficient in pricing the shares. Runs test results also show that the percentage of deviation between the observed and actual number of runs in the series of price changes is significant. It is obvious that the successive price changes are not random. Thus, random walk hypothesis does not hold true in the context of Nepalese stock market.

G.C.(2008), in his article entitled "*Volatility Analysis of Nepalese Stock Market*" he concluded that out of few studies on stock market volatility using ARCH family models have been carried out on emerging markets, there have been quite a few studies focusing on small capital markets. The focus of the study is to model conditional volatility in an effort to capture the salient features of stock market volatility and investigate whether there is any leverage effect in the Nepalese capital market. The study found the distribution of the daily return series for the Nepalese stock market to be leptokurtic, non-normal and exhibiting significant time dependencies. The study found that the NEPSE Index return series exhibits stylized characteristics as supported by empirical evidence in different studies such as volatility clustering, time-varying conditional heteroskedasticity, and leptokurtosis. However, the asymmetric leverage effect as evidenced on various studies in advanced stock markets was not detected in NEPSE index return series. It indicates a high degree of persistence in conditional volatility of stock returns. The study revealed strong evidence of time varying volatility, a tendency of the periods of high and low

volatility to cluster and a high persistence and predictability of volatility in the Nepalese stock market.

KC. (2010), in his journal entitled "*Development of Stock Market and Economic Growth in Nepal*" concluded that the stock market in Nepal is undeveloped and has failed to show significant impact on the overall national economy of the country. Small market size has made it vulnerable to manipulation and price rigging. Low turnover ratio and value-traded ratio to volatility, and high concentration ratio indicate that stock market in Nepal is highly illiquid and risky. Investors tend to avoid stock market because they cannot invest in securities according to their risk-return preference.

Joshi (2010), in his journal entitled *"Stock Market Development and Economic Growth: A Case of Nepal*" examined the relation between stock market development and economic growth in Nepal for period of mid July 1994 to mid July 2008 by using Karl Pearson correlation. The study finds that stock market development is not significantly associated with economic growth during mid July 1994 to mid July 2000 while there is a positive relation between stock market development and economic growth during mid July 2000 to mid July 2008. The findings indicate that stock market has positive contribution to economic growth in Nepal.

Regmi (2012), in his journal entitled "*Stock Market Development and Economic Growth: Empirical Evidence from Nepal*" concluded that another channel through which stock markets may positively affect capital accumulation and economic growth is the improvement of risk diversification through international financially integrated markets. The role of equity markets in providing portfolio diversification, enabling individual firms to engage in specialized production is bound to result in efficiency gains. An increase in the degree of international integration of stock markets reduces the level of average investment risk through diversification and leads to a shift in the global portfolio from safe low-yield projects to riskier high-yields projects. By facilitating risk diversification through internationally integrated stock markets and increasing the array of possible investments, stock markets can augment the rate of investment in diversified portfolios. This shift boosts economic growth by inducing capital mobility, productivity and saving rates. He also examined that stock market in

Nepal promoted economic growth of the Nepalese economy. Since stock market is a vehicle for economic growth in our context, the stock market should be integrated into the whole economic system of the country while designing economic policies. The key policy implication is that the country requires a well-built and enabling stock market in order to accelerate and maintain strong growth of the economy. Hence, meaningful efforts are required on the part of the government to ensure well-organized and competent operation of stock market because the more efficient the market, the more possibility it will attract investors. The government should remove impediments to stock market development in the form of tax, legal and regulatory barriers because they are sometimes disincentives to investment, should invest more and develop the nation's infrastructure in order to create an enabling environment for businesses to grow, increase the productivity and efficiency, and the rate of returns of firms, should employ appropriate trade policies that promote the inflow of international capital and foreign investment so as to enhance the production capacity of the nation, and should strengthen the capacity of the Nepal Stock Exchange so as to check and prevent sharp practices by market operators in order to safeguard the interest of shareholders. Moreover, the Nepal Stock Exchange should improve the trading system in order to increase the ease with which investors can purchase and sell shares, thus guaranteeing liquidity on the stock market. Besides, stock market reformation policies may give a further support to the economy and may act as a key enabler and catalyst of economic growth.

2.4 Review of Thesis

As we know the behavioral of stock market plays a significant role in the development of capital market as well as the economic development of the country and to find out the realistic theoretical model to test the appropriate hypothesis in stock market. However, there are no any specific research have been performed since the establishment of capital market in Nepal. There are numerous thesis reports conducted for the partial fulfillment of Master of Business Studies in Tribhuvan University. Among those thesis reports some are related to the capital market and very few are related to the stock price in Nepal Stock Exchange. Some of those thesis reports are reviewed below.

Poudyal (2001), conducted a study on "*Share Price Behavior of Joint Venture Banks in Nepal*". Main objective of his thesis were as follows:

- To analyze the market share price behavior of the Nepalese Stock Market.
- To examine how safe or risky to invest on joint venture banks' share.
- To analyze the sensitivity of the shares in relation to the market.
- To test whether or not the shares in banking companies are blue chips in out context. To test whether the Nepalese Stock Market is efficient or not.

Major Findings of the Study were as follows:

- Nepal Stock Exchange operates in a week form an efficient market hypothesis, indicating that the market prices move randomly.
- The investors while deciding their investment and purchases neglect actual potential of the firm and semi professional advices are functioning at its height.
- The market values per share don't accommodate all the available historical information because of the in-equilibrium in the stock market is observed.

Neupane (2004), conducted a research entitled *"Determinants of Stock Price in NEPSE "*

The objectives of his research were as follows:

- To explore the factors that has significant influence on the stock price in NEPSE.

- To study and analyze the rate of listing of new companies and maintenance of listed companies in NEPSE
- To study and examine the signaling factor on stock price with the help of Nepal Stock Exchange index

Major Findings of this Study were as follows:

- Nepalese investors have not adequate education about the capital market to analyze the scenario and to forecast share price. Perhaps, due to this reason, stock price in NEPSE, rather shows irrational behavior.
- In NEPSE, DPS, BPS & EPS individually do not have constituent relationship with the market price of the share among the listed companies. But EPS, BPS & DPS, jointly have significant effect in market price of the share.
- Commercial banking sectors have dominated the overall performance of NEPSE.

  Manufacturing and processing, trading and hotel sectors have weak performance. So, financial intermediaries are strong but their ultimate investing is suffering.

Paudel (2005), has conducted a thesis on "*Stock Price Behavior of Commercial Banks in NEPSE*". The objectives of his thesis were as follows:

- To examine monthly closing price of 6 listed commercial banks.
- To analyze the risk and return of Commercial banking sector of securities market
- To examine the trend of commercial banking sectors in terms of their total paid up value, annual turnover and capitalization and forecast their trend for future.

Major Findings of this Study were as follows:

- Successive price changes were correlated with previous price series.
- Most of the stocks did not follow random walk hypothesis. The present stock price was dependent to the historical prices.
- The EPS was the most affecting factor for the price change of the stock.

- Most of the investors wanted to invest in the shares of commercial banks because the fluctuation in NEPSE index was due to the transaction of commercial bank‘s shares.

Shrestha (2007) carried out the thesis work on *‘‘Share Price Behavior and its Impact on Investment Decisions’’*. Major objectives of the study were as below:

- To analyze the share price behavior and assess the risk associated with return on common stock investment of listed commercial banks on the basis of selective financial tools.
- To assess the randomness of share price of commercial banks.
- To evaluate the return and risk proportion of investment on stock of commercial banks.
- To examine the relationship of share price with financial variables.
- To provide suggestion and recommendation to the concern authority for improvement.

Major Findings of the Study were as follows:

- The price sequence of MPS of each sample banks is not randomly moving that imply the movement of share price are dependent in the historical prices.
- There is always linear relationship between risk and return associated with the stocks of sample banks.
- MPS of all the sample banks have positive correlation with BVPS, EPS and DPS in most of the cases.

Shrestha (2008), conducted thesis on *"An Analysis on the Factors of Volatility of Share Price in Nepalese Stock Market."* Major objectives of the study were;

- To analysis of share price fluctuation factors with different listed companies in NEPSE.
- To determine the effect of earning, dividend and net worth to the stock price.
- To examine sensitivity relationship of MPS with various financial indicators like EPS, DPS and NWPS.
- To highlights about the various factors which is responsible for share price fluctuation in Nepalese Share Market.

Major Findings of the Study were as follows:

- Major 5 causes of the factors of fluctuation of stock price in NEPSE are Nepal Rastra Bank's guidelines, earning, price trend, information & net worth.
- Nepal Rastra Bank has guided all the financial institutions to raise their capital double by the end of 2069 Asadh which affects greatly to the fluctuation of the share prices in Nepalese Share Market.
- Run Test reveals that all the changes in market price behaviors are random. There are no relationships between the market prices

Gurung (2010), conducted a study on *"Share Price Behavior of Listed Companies in Nepal"*. The objectives of the study were as follows:

- To test the monthly movement of share price behavior of listed companies representing form commercial bank, insurance, manufacturing & processing and trading.
- To analyze the sensitivity of the shares in relation to the market.
- To examine risk associated with the return on common stock investment of listed companies.
- To analyze the relation between traded and listed companies
- To evaluate the trading turnover

Major Findings of this Study were as follows:

- The number of listed companies had been increase during the supply period.
- The performance of commercial banks was better than that of trading concerns and the investment in this group was more attractive so, banking group was higher than compare to the other group.
- Market was bullish during the initial period of the study. The higher fluctuation in prices in decreasing trend and higher variations in prices showed the performances of listed companies had been deteriorating. More over this implies uncertainty and instability in stock market.

Shrestha (2011) conducted a study on *"A Comparative Analysis on Stock Price Behavior of Nepalese Commercial Banks"*. The objectives of the study were as follows:

- To analyze the market position of sample banks.
- To examine the relationship between market price per share and other determinant
  variables such as earning price per share and dividend per share.
- To explore how the price behaves in stock market and how investors can safeguard their investment on stock market.
- To assess the growth of stock market.
- To test the efficient market hypothesis.
- To assess the dependence or independence of successive price changes with the price of historical change.
- To point out the problems faced by banking sector in the stock market.

Major Findings of this Study were as follows:

- The development of stock market is not in the satisfactory level. Only the banking sector is having the high performance.
- The market price has high variability during study period.
- The overall profit of the company from the view of ordinary shareholders is EPS.
- Investor who is eager to invest for the long term chooses the company with high dividend.
- All the banks have the healthy and positive P\E multiples. Earning and price relation shows the mixed behavior.
- Each bank has good earning yield which is one of the reasons why banking sector is domination the stock market.
- The dividend yield is irregular and is in decreasing tend during study period. All the sample banks have satisfactory earning yield but the dividend yield is very low because the company retained maximum or all amount of earning for further investment.
- The study found a mixed behavior between price and dividend, price and earning during the period of study.

2.5 Research Gap

Although some very valuable researches in the field of stock market have been done so far, there is still a great deal of opportunity remained for researchers in the field in this area to explore and identity new facts and figures about the immature stock market of Nepal. The above studies are performed by different researcher; their weakness is also mentioned there. This study will analyze the stock price determinants of common stock in secondary market of Nepal. Usually the price of common stock in primary market is par value but in secondary market it may be in any price. The price of common stock is largely influenced by different market related factors.

The earlier studies were done only in theoretical manner regardless of what the real market is going through while this study attempts to analyze the real market scenario like the impact of capital gain in the market or the impact of global recession on the Nepalese Security market.

Nowadays, Nepalese share market has entered to the new horizon. Its size and market capitalization are growing day by day. New Bye laws are being established to control stock market price. But it is clearly realized that share prices are fluctuating abnormally. Even if earning, dividend and net worth are taken as the main determinants of price fluctuation share prices are increased without the increment in such factors. Therefore there is still lack of appropriate researches to find out the causes of fluctuation of share price in Nepalese share market.

Therefore, this study tries to analyze the various reasons on the fluctuation of price trend and the cause and effect of different signaling factors over stock price. In addition to this, it also tends to give some measures that should be taken by related parties to develop the Stock Market. Thus, the earlier studies on share price behavior needed to be updated and validated because of the many changes taking place in the stock market in Nepal. This study is an effort to attempt in the same direction.

CHAPTER – III
RESEARCH METHODOLOGY

In this chapter, efforts have been made to present and explain the specific research design in order to attain the research objectives. It includes construction of research design, nature of data, data gathering procedure, population and sample, data processing procedures and different tools and techniques used in course of this thesis preparation for analysis and interpretation of data.

3.1 Research Design

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to the research purpose with economic procedure. As per the nature of study, secondary data as well as primary data sources such as survey method was followed with exploratory and analytical approach. The research design used in this study is both descriptive and analytical.

3.2 Population and Sample

All the companies listed in the stock exchange has been considered as the total population. Out of them, the companies that are in existence and doing share transactions in NEPSE were considered as the sample for the study.

The companies were categorized into eight groups which are done by the stock exchange.

A total of 149 companies were listed till year 2010-11, but numbers of transacting companies are varied from 102 to 137 from the year 2006-7 to 2010-11(Annual Trading Report; 2006-07) to 2010-11). All the companies which are listed in the SEBO are not transacting regularly. Here, total listed companies in NEPSE are taken as population and three companies from three banking sector is regarded as sample representative of that sector as listed below;

Sector	**Company Selected as Sample**
Commercial Bank	Kumari Bank Limited. (KBL)

Development Bank	Ace Development Bank (ACEDB)
Finance	Universal Finance Limited (UFL)

3.3 Nature and Sources of Data

This study is based on primary as well as secondary data. First hand data collected directly from unpublished sources, questionnaire, and employees of the above selected companies are primary data whereas secondary data has been collected from annual reports published by respective companies and Nepal Stock Exchange Limited.

3.3.1 Primary Data

For collecting primary data, questionnaire were developed and distributed to the investors, brokers, NEPSE staffs and other employees of the above selected companies. The researcher being staff of KBL himself, has collected data, analysis, views and opinions from Legal and Shares Department of the bank to collect first hand data of stock analysis of KBL.

3.3.2 Secondary Data

Secondary data are used to analyze the factors, which affect the sensitivity of stock price, primary data are collected from the respondents through research questionnaire. The following secondary sources of information are used to extract the required information:

- Annual reports of the company
- Financial statements
- Books, Journals, Newspaper Bulletins
- Previous dissertation papers, studies
- Periodical publication from Central Bureau of Statistics
- Securities Board, Nepal
- Nepal Stock Exchange
- Nepal Rastra Bank
- Related Websites

3.4 Data Collection Procedure

Data collection for this study is based on primary and secondary data. For Primary data collection a questionnaire relevant to stock price was developed and submitted to selected companies. Direct Interview with NEPSE and KBL staff were also been conducted regarding current stock market conditions and analysis of stock price behavior. Secondary data were collected from various published annual reports, journals and websites.

3.5 Tools of Analysis

Data collected from secondary sources were analyzed by using Statistical tools like monthly trend analysis, bar diagram, multiple bar diagram, ratio analysis and paired t-test. Data collected from questionnaire were in raw from. They were classified and tabulated in the required form according to the nature of data.

Homogeneous data have been sorted in one table and similarly various tables have been prepared in understandable manner, odd data excluded from the table. Simple arithmetic percentage tools, financial as well as statistical tools have been used for data analysis and interpretation. Financial and statistical tools are the main tools to be used in the calculation of the data.

3.5.1 Financial Tools

1. Market Price per Share

One of the major data of this study consists of market price of stock. Records of maximum, minimum and closing prices are available for the purpose of this study. Since the calculation of real average price is constrained by lack of 82 adequate information regarding volume and price of each transaction throughout the year, the closing price has been used as market price of stock.

$$\text{MPS} = \frac{\text{Total Market Capitalization}}{\text{No.of Shares Outstanding}}$$

2. Earnings per Share

Earnings per share is the amount per share of the organization's total earnings.

$$\text{EPS} = \frac{\text{Total Earning of Organization}}{\text{No.of Shares Outstanding}}$$

3. Net Worth Per Share (Book Value per Share)

The NWPS represents the real net worth per share. It is simply the ratio of net worth (share capital plus retained earnings- general reserve) divided by the number of shares outstanding.

$$\text{NWPS} = \frac{\text{Net Worth}}{\text{No.of Shares}}$$

4. Dividend per Share

Both cash dividend and stock dividend and stock dividend (bonus share) declared by each company have taken into account for the purpose of this study. Total amount of dividend has been calculated as follows:

Total Amount of Dividend = Cash Dividend + Stock Dividend

$$\text{DPS} = \frac{\text{Total Dividend Paid}}{\text{No.of Shares Outstanding}}$$

3.5.2 Statistical Tools

3.5.2.1 Correlation Coefficient (r)

It is a useful statistical tool for measuring the intensity of the magnitude of linear relationship between two variables. The most important method of measuring the correlation between the two variables is "Karl person's coefficient of correlation." If the values of the variables are directly proportional then the correlation is said to be positive. On the other hand, if the values of the variables are inversely proportional, then the correlation is said to be positive. On the other hand, if the values of the variables are inversely proportional, the correlation is said to be negative, but the correlation coefficient always remains within the limit of +1 to -1. The correlation coefficients (r) between two variables X and Y can be obtained by using following formula;

$$r = \frac{N\sum XY - \sum X \sum Y}{\sqrt{N\sum X^2 - (\sum X)^2}\sqrt{N\sum Y^2 - (\sum Y)^2}}$$

Where,

r = The Correlation Coefficient between two variables X and Y

3.5.2.2 Coefficient of Determination

Coefficient of correlation between two variables series is a measure of liner relationship between them and indicates the amount of variation of one variable which is associated with or is accounted for by another variable. A more useful and readily comprehensible measure for this purpose is the coefficient of determination which gives the percentage variation in the dependent variable that is accounted for by the independent variable. In other words, the coefficient of determination gives the ratio of the explained variance to the total variance. The coefficient of determination is given by the square of the correlation coefficient i.e., r^2 (Source: Gupta, 2002: 585). Its formula is;

Coefficient of Determination (r^2) = Explained Variance-Total Variance

3.5.2.3 Test of Hypothesis

A hypothesis is defined by Webster as “a tentative theory or supposition provisionally adopted to explain certain facts and to guide in the investigation of others". However, in statistics, hypothesis means a statistical statement about the values of one or more parameters of the population. After setting the hypothesis, it is necessary to test the reliability of such statistical statements. For this purpose, an experiment is conducted by using sample information and the hypothesis is rejected if the results obtained are improbable under this hypothesis. If the results are not improbable, the hypothesis is accepted. The procedure of drawing such conclusion based on sample information is known as testing of hypothesis.

For the test of hypothesis, t- test has been used in this study with the help of simple correlation coefficient and the hypothesis is stated as following:

Null Hypothesis (H_0): There is no significant relationship between the variables.

Alternative Hypothesis (H_1): There is significant relationship between the variables.

3.5.2.4 T - Statistics

t – Statistics is applied for the test of small sample, i.e. n is less than 30. The following formula is used to test an observed sample correlation co-efficient:

$$t = \frac{\bar{d}}{s/\sqrt{n}}$$

Where,

t= Paired t-test

s= Standard error

n= Number of observations

d= Different between two data

Where standard error(s) can be calculated by using following formula:

$$s = \sqrt{\frac{1}{n-1}\left(\sum d^2 - \frac{(\sum d)^2}{n}\right)}$$

This calculated value of t is then compared with its table value and if the calculated value is less than the table value, we accept the null hypothesis at the given level of significance and may infer that there is no relationship of statistical significance between the two variables. If the calculated value of t is greater than the table value, we accept the alternative hypothesis and may infer that there is significance relationship between the variables.

3.5.2.5 Probable Error (PE)

The probable error is used to measure the reliability and test of significance of correlation coefficient. It is calculated by the following formula.

$$P.E. = 0.6745\frac{(1-r^2)}{\sqrt{n}}$$

Where,

r = The value of correlation coefficient

n= Number of pairs of observations

P.E. is used in interpretation whether the calculated value of r is significant or not (if r<P.E., it is insignificant i.e. no correlation, if r>6P.E. it is significant& if P.E.<r<6P.E. nothing can be concluded).

3.5.2.6 Trend Analysis

This is the simplest and the easiest method of studying trend. In this method, points are plotted taking time along x-axis and the value of the variable under study along y-axis on a graph. Join these points by a free hand curve. Now a trend line is fitted such that the number of points above the trend line is nearly equal to the number of points below it.

3.5.2.7 Run Test Analysis

It is one of the widely accepted techniques for a non-parametric test and has been developed to test the hypothesis that the sample taken is random or not. Due to this reason it is applied here to test the market price per share quoted in NEPSE of the companies is either random or not. To complete this test 24 market price (per month closing price for last two years) have been considered.

3.6 Research Variable

For analyzing signaling factors impact on NEPSE index with signaling factors the following major events are analyzed:

- Janaaandolon (around the end of F.Y. 2005-6)
- Lead of Govt. by Maoists (around the start of F.Y. 2008-9)
- Capital Gain Tax Increment (around the mid of F.Y. 2008-9)
- Renounce of Govt. by Maoists (around the end of F.Y. 2008-9)
- Dissemble of constitutional assembly (around the mid of F.Y. 2011-12)

CHAPTER - IV
DATA PRESENTATION AND ANALYSIS

4.1 Introduction

Data presentation and analysis is one of the important part of the research work. In this section the study tries to find out the proof from the mathematical calculation for the theoretical statement. The basic objective of this chapter is to analyze and elucidate the collected data following the conversion of understandable presentation. Thus, this chapter presents the analysis and interpretation of the data related to stocks prices, major factors leading their changes (e.g. EPS, DPS, and NWPS), NEPSE market index, volume of stock traded, etc. As stated earlier in the methodology section, this study consists of both primary as well as secondary data. Secondary data have been collected particularly from monthly and annual trading report of Nepal Stock Exchange, and published reports and websites of selected companies. Similarly, data collected from primary sources (interview and questionnaire method) have been analyzed under the heading of opinions survey that helps to gain information on investment behavior of investors. However primary data collection does not fully satisfy the need of work on this topic. As a consequence, the study has utterly relied on the secondary source of data. Data collected from the secondary sources are also tested with sophisticated statistical tools.

The main purpose of this chapter is to find the major causes of leading changes in stock prices and examine the price trend of selected companies as a sample of overall stock market with the help of different variables and NEPSE index. In the same way the study tries to check the impact of signaling effect on fluctuation of stock price with the help of different major events during the period of recent years. The study also wants to explore investor's attitude by taking primary data with field survey filled by different parties interested with stock market.

Price is the major element in the stock market analysis. For analyzing stock market behavior the price trend can be used. By seeing the NEPSE index trend one can conclude its nature in different aspects, e.g. trend of price in different periods.

Similarly, the number of stock traded is also accounted for seeing pattern of volume traded in stock market. Analysis has been classified into different categories to generalize the facts of the information collected as below;

4.2 Analysis of Relation between MPS and Major Financial Indicators-Factors Leading its Change (EPS, DPS & NWPS) Using Secondary Data

To examine and evaluate the relationship of EPS, DPS and NWPS to MPS, it is assumed that the market price of share is influenced with the changes in EPS, DPS, and NWPS and these factor are considered as major factors leading the change in MPS. So, MPS is the dependent variable; whereas EPS, DPS and NWPS are independent variables. Relationship of EPS, DPS and NWPS with MPS is analyzed separately to each of the sampled listed companies, their significance test and coefficient of determination. As we know the correlation coefficient helps to determine whether there exists any relationship among different variables, statistical test to test the significance of correlation coefficient and the coefficient of determination to explain the variation in dependent variable due to the variation in the independent variable. For the test of hypothesis of correlation coefficients calculated t-value are compared with the tabulated t-value at 95% level of significance.

Now, examining relationship among variables as mentioned above in context of individual companies considered as sample:

4.2.1 Analysis in case of KBL

Table 4.1 summarizes the MPS, EPS, DPS and NWPS with Mean, S.D. and C.V. of KBL over five year's period. Table 4.2 shows the relationship (correlation) of EPS, DPS and NWPS to MPS along with the significance of such relationships.

Table 4.1

Mean, Standard Deviation and CV of KBL

Fiscal Year	MPS(a)	EPS(b)	DPS(c)	NWPS(d)
2007-08	1005	16.35	10.53	128
2008-09	700	22.04	10.58	137
2009-10	668	24.24	12	137
2010-11	266	15.67	8.44	138

2011-12	242	17.18	0	148
Mean	576.2	19.096	8.31	137.6
S.D	288.28	3.41	4.31	6.34
C.V.	50.03	17.85	51.83	4.61

(Source: Annual Report KBL 2011-12)

Table 4.2

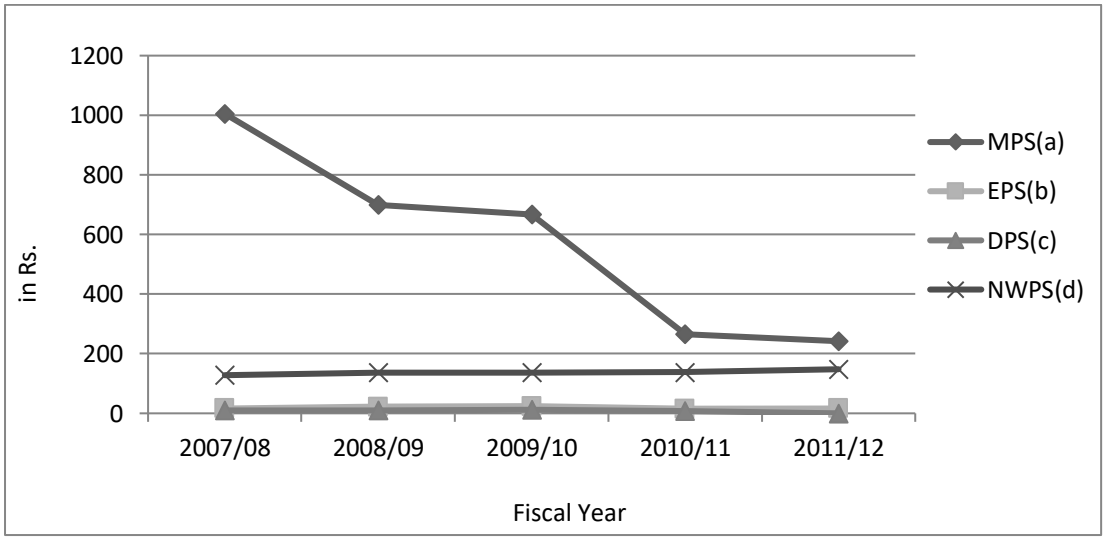
Relationship of MPS with EPS, DPS and NWPS of KBL

Variable	r	r^2	Probable Error	Test of Significance	Relation
rab	0.2773	0.0769	0.2784	Insignificant	Very low positive
rac	0.6939	0.4816	0.1564	Signicicant	Low positive
rad	-0.8580	0.7362	0.0796	Insignificant	Highly negative

(Source: Annex: IV)

Figure 4.1

Relationship of MPS with EPS, DPS & NWPS of KBL



It can be clearly stated from the analysis done above in Table 4.1, 4.2 and Figure 4.1 that CV of MPS (50.03) & DPS (51.83) are equally and highly volatile in comparison to that of EPS (17.85) & NWPS (4.61), which reflects MPS & DPS is rapidly changing than other factors considered. It shows that NWPS the least volatile of all. In addition to this correlation coefficient between MPS and EPS is very low positive, MPS and DPS low positive and MPS and NWPS highly negative. Also probable error calculated above is greater than correlation coefficient between MPS & EPS and MPS & NWPS. So we can reach to the conclusion that calculated values of r are insignificant and there is no significant relation between MPS & EPS and MPS &

NWPS. However PE<r<6PE nothing can be concluded between the relation between MPS & DPS. It means that 7.69%, 48.16% and 73.62% change in MPS has resulted due to change in EPS, DPS and NWPS respectively and rest by other factors.

4.2.2 Analysis in Case of ACEDBL

Table 4.3 summarizes the MPS, EPS, DPS and NWPS with Mean, S.D. and C.V. of ACEDBL over five year's period. Table 4.4 shows the relationship (correlation) of EPS, DPS and NWPS to MPS along with the significance of such relationships.

Table 4.3

Mean, Standard Deviation and CV of ACEDBL

Fiscal Year	MPS(a)	EPS(b)	DPS(c)	NWPS(d)
2007-08	856	12.96	10.53	122
2008-09	588	10.62	5.5	110
2009-10	280	10.62	8.5	110
2010-11	141	8.84	6.3	119
2011-12	113	0.55	0	112
Mean	395.6	8.718	6.166	114.6
S.D	285.32	4.29	3.55	4.96
C.V.	72.12	49.19	57.56	4.33

(Source: Annual report ACEDBL 2011-12)

Table 4.4

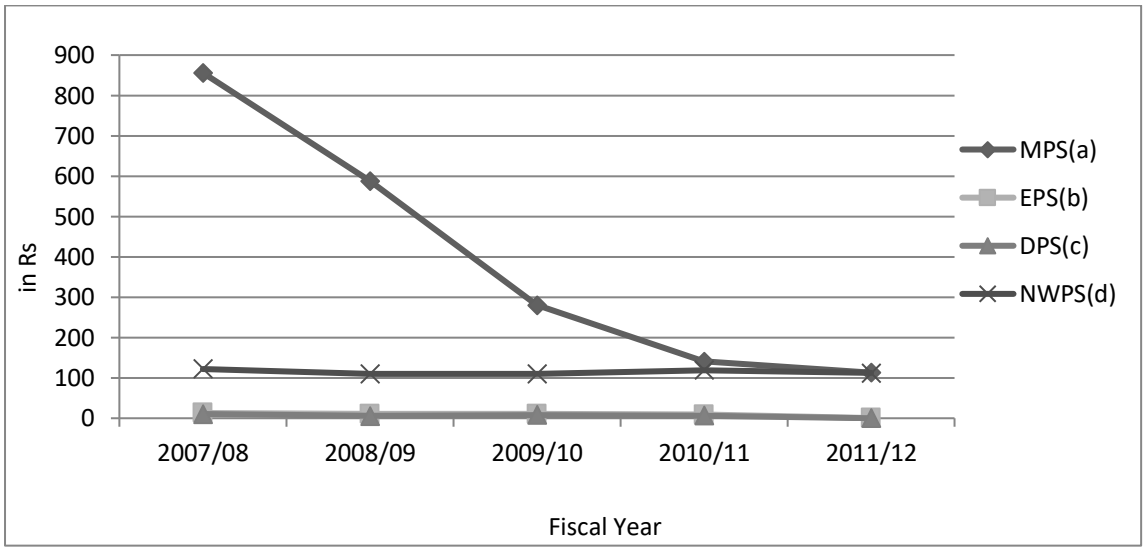
Relationship of MPS with EPS, DPS and NWPS of ACEDBL

Variable	r	r^2	Probable Error	Test of Significance	Relation
r_{ab}	0.7153	0.5117	0.1473	Significant	Positive
r_{ac}	0.6557	0.4299	0.1720	Significant	Positive
r_{ad}	0.3768	0.1420	0.2588	Significant	Low Positive

Source: Annex: IV

Figure 4.2

Relationship of MPS with EPS, DPS and NWPS of ACEDBL



It can be clearly stated from the analysis done above in Table 4.3, 4.4 and Figure 4.2 that CV of MPS (72.12) is highly volatile in comparison to that of EPS (49.19), DPS (57.56) & NWPS (4.33), which reflects MPS is rapidly changing than other factors considered. It also shows that NWPS the least volatile of all. In addition to this correlation coefficient between MPS and EPS is positive, MPS and DPS positive and MPS and NWPS low positive. Also probable error calculated above is less than correlation coefficient between MPS & DPS and MPS & NWPS. However PE<r<6PE nothing can be concluded between the relation between MPS & EPS, MPS& DPS, MPS & NWPS. It means that 14.73%, 17.20% and 25.88% change in MPS has resulted due to change in EPS, DPS and NWPS respectively and rest by other factors.

4.2.3 Analysis in Case of UFL

Table 4.5 summarizes the MPS, EPS, DPS and NWPS with Mean, S.D. and C.V. of UFL over five year's period. Table 4.6 shows the relationship (correlation) of EPS, DPS and NWPS to MPS along with the significance of such relationships.

Table 4.5

Mean, Standard Deviation and CV of UFL

Fiscal Year	MPS(a)	EPS(b)	DPS(c)	NWPS(d)
2007-08	935	17.77	10.53	151
2008-09	814	24.5	13.16	138
2009-10	294	12.12	13.16	110
2010-11	199	17.37	13.16	115
2011-12	140	10.83	10	116
Mean	476.4	16.518	12.002	125.99
S.D	330.96	4.85	1.43	15.64
C.V.	69.47	29.37	11.90	12.42

(Source: Annual Report of UFL 2011-12)

Table 4.6

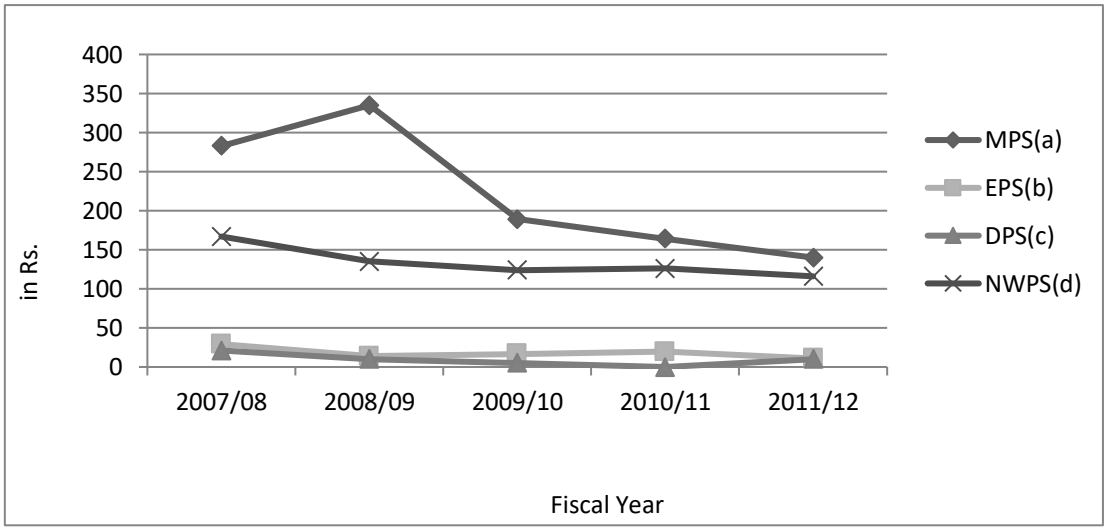
Relationship of MPS with EPS, DPS and NWPS of UFL

Variable	r	r^2	Probable Error	Test of Significance	Relation
rab	0.7159	0.5126	0.1470	Significant	Positive
rac	-0.0605	0.0037	0.3005	Insignificant	Low Negative
rad	0.9516	0.9056	0.0285	Significant	Highly Positive

(Source: Annex: IV)

Figure 4.3

Relationship of MPS with EPS, DPS and NWPS of UFL



It can be clearly stated from the analysis done above in Table 4.5, 4.6 and Figure 4.3 that CV of DPS (11.90) is highly volatile in comparison to that of EPS (29.37), MPS (69.47) & NWPS (12.42), which reflects DPS is rapidly changing than other factors

considered. It also shows that NWPS the least volatile of all. In addition to this correlation coefficient between MPS and EPS is positive, MPS and DPS low negative and MPS and NWPS highly positive. So we can reach to the conclusion that calculated values of r are significant and there is no insignificant relation between MPS & EPS and MPS & NWPS Also probable error calculated above is greater than correlation coefficient between MPS &EPS, MPS & DPS and MPS & NWPS. However PE<r<6PE nothing can be concluded between the relation between MPS& DPS. It means that 14.70%, 30.05% and 2.85% change in MPS has resulted due to change in EPS, DPS and NWPS respectively and rest by other factors.

4.3 Analysis of Overall Behavior of NEPSE Index

The weighted average or overall situation of stock market-stock price fluctuation is reflected by NEPSE index. Therefore, it is very essential to know about its behavior when we enter into the topic of stock price fluctuation. Hence, here the analysis is focused to trace out the fluctuation-volatility of NEPSE index in overall basis and different sector's basis.

4.3.1 NEPSE Index Analysis (Yearly Trend Analysis)

Table 4.7

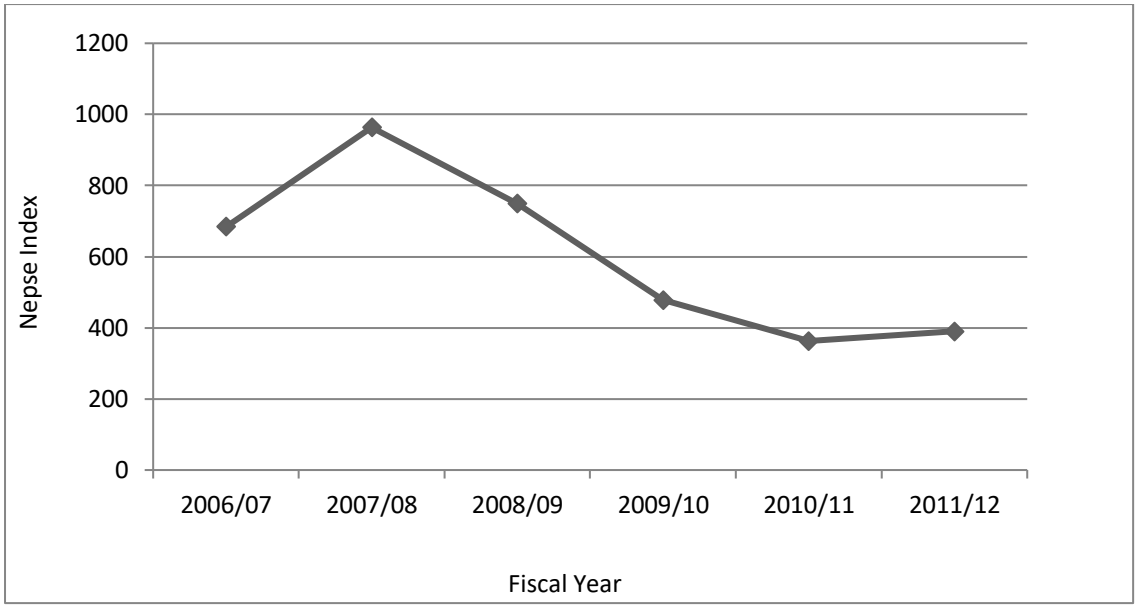
NEPSE Index for 6 Year

Fiscal Year	NEPSE Index	% Change
2006/07	683.95	
2007/08	963.36	40.85
2008/09	749.1	-22.24
2009/10	477.73	-36.23
2010/11	362.85	-24.05
2011/12	389.74	-35.47
Mean	604.46	
S.D.	214.70	
C.V.	35.52	

(Source: Annual Report NEPSE 2011-12)

Figure 4.4

NEPSE Index for 6 Year



As reflected by the above Table 4.7 and Figure 4.4 NEPSE index was increasing trend from year 2006-7 to 2007-8 and after which the decreasing trend is traced out. And the matured point of it is in the year 2011-12, which shows the overall-weighted average stock price of Nepalese Stock Market was continuously increased (bullish trend) till 2007-8 and after that declining trend (bearish trend) was seen. The C.V. of NEPSE index as above calculated i.e. 35.52% clearly reflects that the fluctuation of overall stock market index is high. So, it can be clearly noted that there is high fluctuation of stock prices in Nepalese Stock Market. Moreover, the standard deviation (214.70) calculated also exhibits high risk factor in the market. Finally, if we draw the overall trend scale to represent the NEPSE index for the period we can reach to the conclusion that the NEPSE index was increasing in few years back reaching maximum in 2007-08 after which it is in decreasing trend and signaling to be decreased in forthcoming years too.

4.3.1.1 Fluctuation of NEPSE Index

Table 4.8

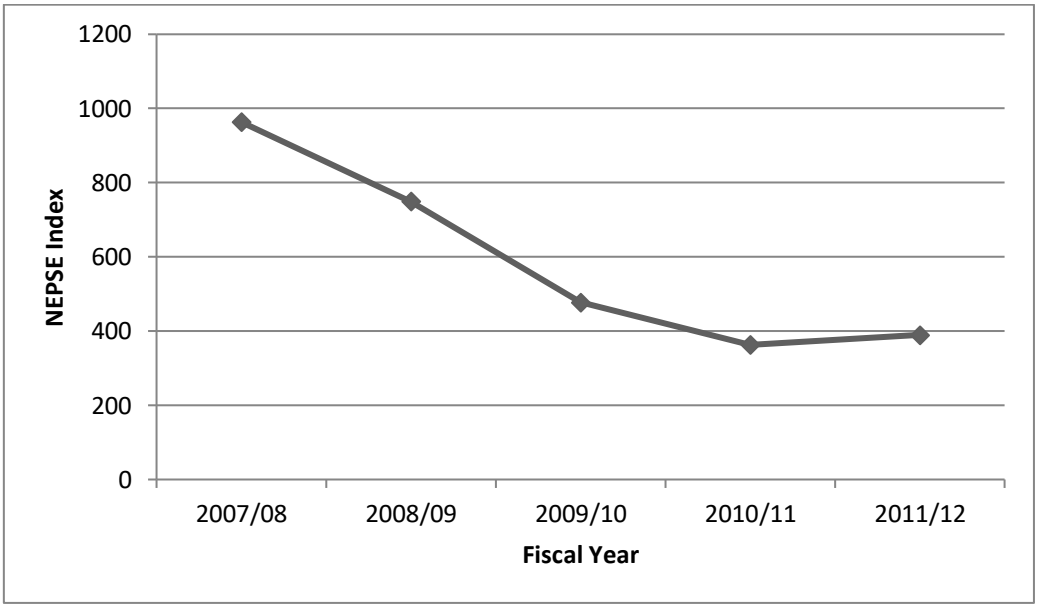
NEPSE Index of Different Years

Fiscal Year	NEPSE Index
2007/08	963.36
2008/09	749.10
2009/10	477.73
2010/11	362.85
2011/12	389.74

(Source: Annual Report NEPSE 2011-12)

Figure 4.5

NEPSE Index of Different Years



From the Table 4.8 and Figure 4.5, it can be reflected that the overall trend of NEPSE Index for the year is mixed though it seems to be improved at the end of the year. The difference between lowest point (362.85) in 2010-11 and highest point (963.36) in 2007-08 is 600.51 points, which clearly shows that as in overall NEPSE index during the year, the variation-deviation is high resulting to higher risk factor. In conclusion, the NEPSE Index during the year is in bearish trend because the Figure showed that the overall trend is decreasing, with higher decrease in 2010-11 and 2007-08, however there is increasing trend at 2010-11. Hence, we can easily reach into decision that in

Nepalese Market there is high fluctuation in stock price. However, the index is increasing in the recent years if we draw the trend scale in overall basis for the period.

4.3.2 Yearly Trend of Sector Wise Index

Nepalese industrial sector is the backbone of Nepalese economy. They play the vital role in the capital market. There are eight types of Nepalese industries registered in the NEPSE. Now, in process of data presentation and analysis, we are going to study the behavior of index of the every type of industries' on monthly trend basis.

4.3.2.1 Yearly Trend of Commercial Bank's Index

Commercial Bank play vital role in overall growth and market capitalization of the Nepalese market as their share is almost half of total market capacity as compared to that of other sectors. So, it is very essential to know the behavior of this sector's index in order to know the trend of overall NEPSE index.

Table 4.9

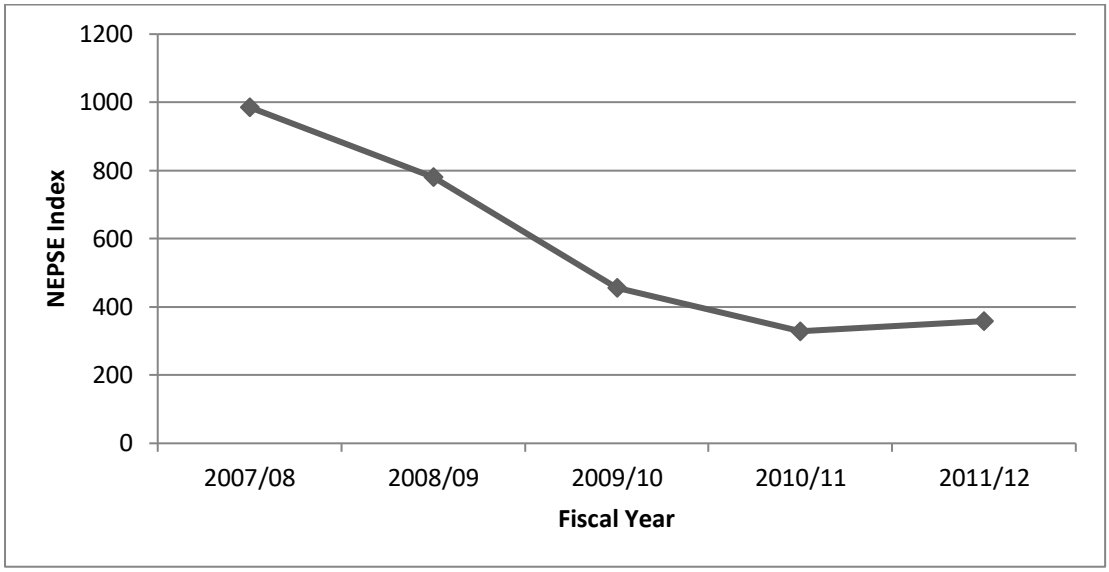
NEPSE Index of Commercial Bank

Fiscal Year	NEPSE Index
2007/08	985.65
2008/09	780.87
2009/10	456.93
2010/11	328.70
2011/12	358.57

(Source: Annual Report NEPSE 2011-12)

Figure 4.6

Index of Commercial Bank



From the Table 4.9 and Figure 4.6, it can be reflected that the overall trend of NEPSE Index for the year is decreasing trend though it seems to be improved at the end of the year. The difference between lowest point (328.70) in 2010-11 and highest point (985.65) in 2007-08 is 656.95 points, which clearly shows that as in overall NEPSE index during the year, the variation-deviation is high resulting to higher risk factor. In conclusion, the NEPSE Index during the year is in bearish trend because the Figure showed that the overall trend is decreasing, with higher decrease in 2010-11 and 2007-08, however there is increasing trend at 2010-11. Hence, we can easily reach into decision that in Nepalese Market there is high fluctuation in stock price. However, the index is increasing in the recent months of the years if we draw the trend scale in overall basis for the period. The trend line of NEPSE Index of overall stock market and commercial bank sector is similar, which is because commercial bank occupies almost half of total market capacity as compared to that of other sectors.

4.3.2.2 Yearly Trend of Development Bank's Index

Development Bank also plays vital role in overall growth and market capitalization of the Nepalese financial So, it is very essential to know the behavior of this sector's index in order to know the trend of overall NEPSE index.

Table 4.10

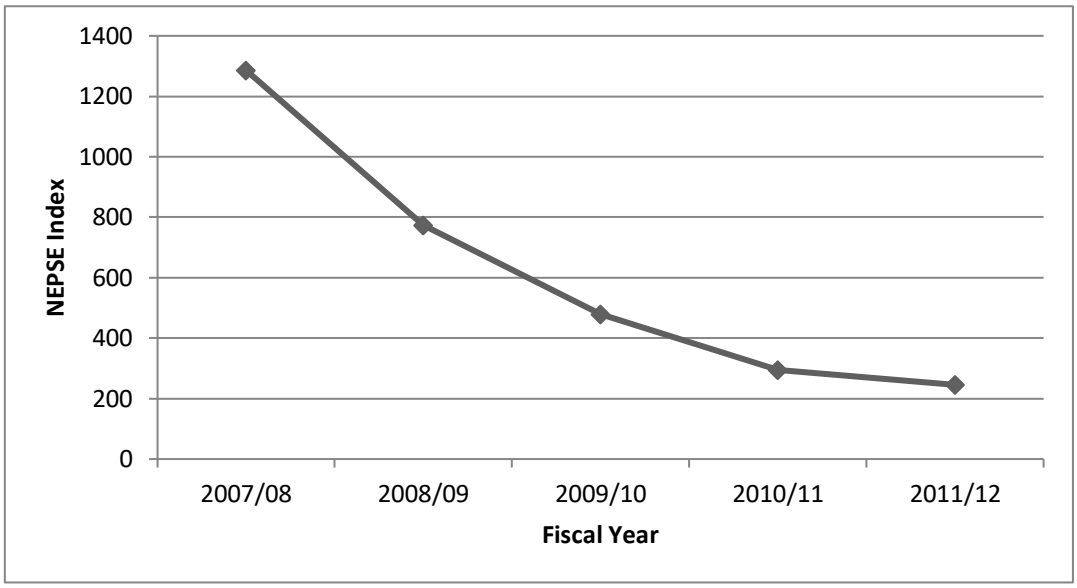
NEPSE Index of Development Bank

Fiscal Year	NEPSE Index
2007/08	1285.89
2008/09	772.56
2009/10	478.53
2010/11	294.15
2011/12	245.52

(Source: Annual Report NEPSE 2011-12)

Figure 4.7

NEPSE Index of Development Bank



From the Table 4.10 and Figure 4.7, it can be reflected that the overall trend of NEPSE Index for the year is in decreasing trend though it seems to be negligible improvement at the end of the year. The difference between lowest point (245.52) in 2011-12 and highest point (1285.89) in 2007-08 is 1040.37 points, which clearly shows that as in overall NEPSE index during the year, the variation-deviation is high resulting to higher risk factor. In conclusion, the NEPSE Index during the year is in decreasing trend because the Figure showed that the overall trend is decreasing, with higher decrease in 2011-12 and constantly decreasing trend from 2007-08, however there is no increasing trend at the end of the year. Hence, we can easily reach into decision that in Nepalese Market there is high fluctuation in stock price. However, the

index is increasing in the recent years if we draw the trend scale in overall basis for the period.

4.3.2.3 Yearly Trend of Finance Sector's Index

With finance companies mushrooming in Nepalese financial market, these sector also occupies important share in Nepalese share market being financial supporters to small income group peoples and companies. The behavior of this sector's overall NEPSE index is presented in the table and Figure below.

Table 4.11

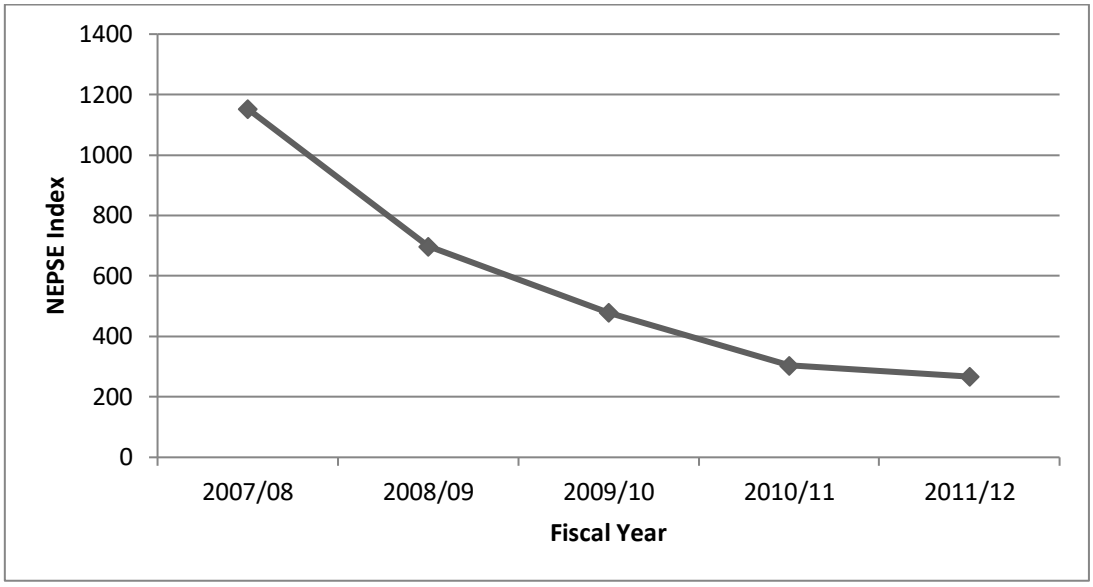
NEPSE Index of Finance Sector

Fiscal Year	NEPSE Index
2007/08	1152.74
2008/09	697.61
2009/10	478.53
2010/11	303.78
2011/12	267.01

(Source: Annual Report NEPSE 2011-12)

Figure 4.8

NEPSE Index of Finance Sector During 2010-11



From the 4.11 and Figure 4.8 it can be reflected that the overall trend of NEPSE Index for the year is in decreasing trend though it seems to be almost constant the end of the year. The difference between lowest point (267.01) in 2011-12 and highest point (1152.74) in 2007-08 is 885.73 points, which clearly shows that as in overall NEPSE index during the year, the variation-deviation is medium resulting to medium risk factor. In conclusion, the NEPSE Index during the year is in gradually decreasing trend with little constant trend at the end of the year taking 2011/12 as base period. However, the index is slightly increasing trend in the end of the years if we draw the trend scale in overall basis for the period.

4.3.3 The Number of Listed Companies and Transacting Companies in NEPSE

The greater number of listed company indicates greater size of capital market and greater the chance of diversification of investment resulting to decrease the investment in single stock if other things remained constant. It means indirectly there is the chance of fluctuation in stock price due to increment in listed companies. Table 4.12 shows the number of listed companies in Nepal Stock Exchange Ltd. from the Fiscal Year 2007-08 to 2011-12. The table clearly shows that the no. of listed company is increasing in every fiscal year. This shows the growing capital market of Nepal and future opportunities from the point of view of investors.

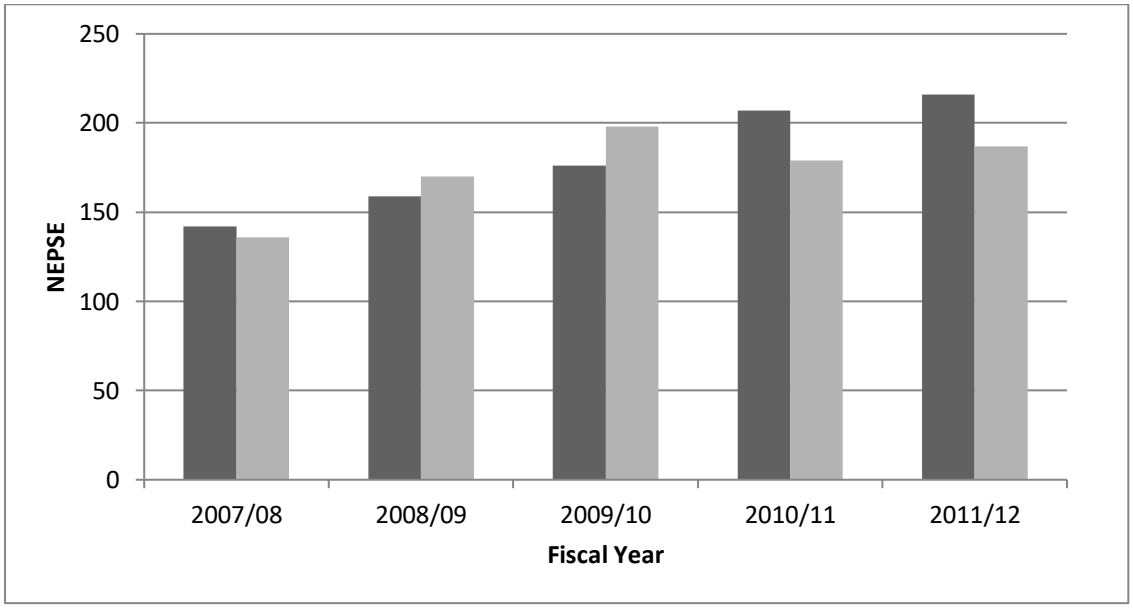
Table 4.12

Number of Listed and Transacting Companies in NEPSE

Fiscal Year	No. of Listed Companies	No. of Transacting Companies	% Change of no. of Listed com.
2007/08	142	136	-
2008/09	159	170	12.0
2009/10	176	198	10.7
2010/11	207	179	17.6
2011/12	216	187	4.3

Figure 4.9

No. of Listed and Transacting Companies in NEPSE



It has been reflected by the above table and figure that the number of listed companies is continuously increasing in recent years, which is the signal of the growing and steady market.

4.4 Signaling Effect-Events Study

Nepalese stock market is not perfect and matured one. Lack of the knowledge in investors, lack of the proper government policy, manipulated activities of brokers and unstable politics is affecting directly the stock market. Sometimes, national and international signaling effects may be the price determining factor of Nepalese securities market.

For seeing the signaling factors effect in overall stock price, we can use the pure statistical tools, i.e. paired t-test. Impact of signaling factors effect in the NEPSE index can be analyzed with the help of the NEPSE Index & t-test formula, by the help of which we can find out whether there is significant difference in index before and after the occurrence of particular event.

For analyzing the impact of signaling factors on NEPSE Index during the period of 2005-06 to 2011-12 with reference to selected four major events of the period. Viz.

- Janaandolon (around the end of F.Y. 2005-6)
- Lead of Govt. by Maoists (around the start of F.Y. 2008-9)
- Capital Gain Tax Increment (around the mid of F.Y. 2008-9)
- Renounce of Govt. by Maoists (around the end of F.Y. 2008-9)
- Dissemble of constitutional assembly (around the mid of F.Y. 2011-12)

Hypothesis between major events of the country and NEPSE price are made to find out the result, for this purpose, null hypothesis and alternative hypothesis are the bases of the study and can be set as below;

4.5 Run Test Analysis

For this test firstly Null & Alternative hypothesis are defined as under;

Null hypothesis (Ho): Price behaviors are random.

Alternative hypothesis (H1): Price behaviors are not random.

Then, during the period we considered, the movement of the stock price are analyzed and found no. of positive and negative signs and also the no. of runs. And at given level of significance (i.e. 5%) the critical value is compared to find out whether the price change is responsive or not.

4.5.1 Run Test analysis for KBL

Ho: The market price movement of KBL is random

H1: The market price movement of KBL is not random.

From annex V we can conclude that;

n_1 (number of +ve signs) = 14

n_2 (number of –ve signs) = 10

Number of runs (r) = 7

At $\alpha = 0.05$, we can test whether the market price movement is random or not. The critical value of r for n_1 =14 and n_2 = 10 from the r table is I_1 is 5 and I_2 is 15. Since the value of r lies in between 5 and 15 i.e. 7, the null hypothesis is accepted i.e. the market price movement of KBL is random.

4.5.2 Run Test analysis for ACEDBL

Ho: The market price movement of ACEDBL is random

H1: The market price movement of ACEDBL is not random.

From annex V we can conclude that;

n_1 (number of +ve signs) = 12

n_2 (number of –ve signs) = 11

Number of runs (r) = 9

At $\alpha = 0.05$, we can test whether the market price movement is random or not. The critical value of r for n_1 =12 and n_2 = 11 from the r table is I_1 is 5 and I_2 is 14. Since the value of r lies in between 5 and 14 i.e. 9, the null hypothesis is accepted i.e. the market price movement of ACEDBL is random.

4.5.3 Run Test Analysis for UFL

Ho: The market price movement of UFL is random

H1: The market price movement of UFL is not random.

From annex V we can conclude that;

n_1 (number of +ve signs) = 11

n_2 (number of –ve signs) = 8

Number of runs (r) = 12

At $\alpha = 0.05$, we can test whether the market price movement is random or not. The critical value of r for $n_1 = 11$ and $n_2 = 8$ from the r table is I_1 is 4 and I_2 is 11. Since the value of r doesn't lie in between 4 and 11 i.e. 12, the null hypothesis is rejected i.e. the market price movement of UFL is not random.

4.6 Presentation and Analysis of Primary Data

Primary data plays the vital role to make the research task meaningful as well as concrete. The study has followed secondary data as supporting base which has been taken from previous resources such as; web sites and annual reports of companies, case studies, journals and magazines, previous thesis report, library search and other related documents. In the course of availing first hand data to justify the study on the topic primarily discussions with experts and questionnaire methods have been made applicable. It reveals the important information as to outlook of the investment decision of investors.

4.6.1 Questionnaire Analysis

One of the important methods of primary data collection is questionnaire method. Under this method, major 10 questions related with stock price volatility and Nepalese Capital Market were prepared and given to the respondents to be filled up.

These Questionnaires are distributed among 40 respondents including Bankers, investors, Brokers and employees of KBL, NEPSE and SEBO. Questions were set in the following category:

- Yes/No questions.
- Multiple choice questions.
- Open ended questions.

100% of the questionnaires were collected from the field survey. The questionnaire so collected is thus related to find out the opinion of investors on investment action for trading shares through secondary market. Questionnaire format has shown in ANNEX-1. Their responses have been analyzed below in different category;

4.6.1.1 Influencing Factor Analysis

Regarding the major influencing factors for the stock price, different brokers, individual investors, institutional investors and NEPSE staffs have given different views on their own ideas. Table 4.14 provides the clear picture on the subject as presented below;

Table 4.13

Influencing Factors of the Stock Price

S.N.	Research Variable	No. of Respondents	%
A	Company's Profit	10	25
B	Company's NWPS	8	20
C	Company's Growth/Future	6	15
D	Company's DPS	10	25
E	Signaling factor	2	5
F	Above all	4	10
	Total	40	100

(*Source: Field Survey, 2012)*

4.6.1.2 Political Instability

To find out whether the current political instability is the major reason/cause for leading the capital market to the present context (i.e. NEPSE index declined to 485 points from 1150 points), here the question was asked to the respondents and the response shown by them is as below;

Q:Do you agree with the statement 'Political Instability is the major reason for crash in capital market'?

Table 4.14

Analysis of Political Instability

S.N.	Research Variable	No. of Respondents	%
A	0-25%	5	12.5
B	25-50%	10	25
C	50-75%	20	50
D	75-100%	5	12.5
	Total	40	100

(*Source: Field Survey, 2013)*

4.6.1.3 International Environment Analysis

Regarding the international environment effect in the Nepalese Stock Market, different individual investors, institutional investors, brokers, NEPSE staffs and other gave their own ideas about this. The result obtained from this issue is cleared as below;

Table 4.15

International Environment Analysis

S.N.	Research Variable	No. of Respondents	%
A	Yes	20	50
B	No	15	37.5
C	Don't know	5	12.5
	Total	40	100

(Source: Field Survey, 2013)

4.6.1.4 Government's Policy Analysis

As the regulatory body of the Capital Market is the Government and the entities established under direct control of the Government, the policies issued by them are also linked with the Capital Market. So, to know the concerns view about it the question is forwarded and the obtained result is;

Table 4.16

Government's Policy Analysis

S.N.	Research Variable	No. of Respondents	%
A	Yes	30	75
B	No	5	12.5
C	Don't know	5	12.5
	Total	40	100

(Source: Field Survey, 2013)

4.6.1.5 Awareness of Investors Analysis

Regarding this topic the result obtained from the survey is as follows;

Table 4.17

Awareness of Investors Analysis

S.N.	Research Variable	No. of Respondents	%
A	Yes	15	37.5
B	No	20	50
C	Can't say	5	12.5
	Total	40	100

(Source: Field Survey, 2013)

4.6.1.6 Basis of Decision Making Analysis

The investment in security by the investor is made only after the proper decision is taken by them. So, to drag the view of investors and other concerns basis of decision was asked and the result obtained is;

Table 4.18

Basis of Decision Making Analysis

S.N.	Research Variable	No. of Respondents	%
A	Family Advice	2	5
B	Rumors	7	17.5
C	Own Analysis	12	30
D	Market Price	8	20
E	Following Others	11	27.5
	Total	40	100

(Source: Field Survey, 2013)

4.6.1.7 Purpose of Investment in Share

The reasons behind the investment in shares of different companies by respondents can be summed up in the following table;

Table 4.19

Purpose of Investment in Share Analysis

S.N.	Research Variable	No. of Respondents	%
A	Social Status	5	12.5
B	To Secure Future	4	10
C	Business Purpose	8	20
D	Above All	23	57.5
	Total	40	100

(Source: Field Survey, 2013)

4.6.1.8 Sector of Investment Analysis

The secured sector of investment that on the view point of investors are tried to catch up in this section and the result obtained is;

Table 4.20

Secured Sector of Investment Analysis

S.N.	Research Variable	No. of Respondents	%
A	Commercial Bank	10	25
B	Development Bank	4	10
C	Finance Company	4	10
D	Hydro Power	11	27.5
E	Trading	9	22.5
F	Other	2	5
	Total	40	100

(Source: Field Survey, 2013)

4.6.1.9 Analysis of Free Opinions of Respondents

Out of 10 questions about stock market only 2 questions were arisen as open-end questions. About the questions ANNEX-1 clears for the related parties. Question no. 9 is related with the major problems of Nepalese stock market and question no 10 is related with the suggestion about developing the Nepalese stock market.

Out of 40 questionnaire papers only 80% respondents replied about this questions and rest 20% respondent gave no response about these questions. So, opinions are taken

here only from 80% respondents. Actually making the report as original from all the common as well as new suggestive points are presented here as follows:

Question No. (9): In your opinion, what are the major problems of Nepalese stock market?

- Here, respondent said:
- Lack of awareness in the people.
- Lack of rules and regulation of government.
- Lack of another stock exchange limited.
- Annual general meeting is not timely.
- Information about stock was not coming timely.
- Lack of knowledge of investors and rural people.
- Instable government of country.
- Weak buying and selling system.
- Middle man tries to cheat.
- Companies are not honest.
- Proper information about the listed company.
- High rate of speculation.
- Lack of industries.
- Lack of investors.
- Number of brokers and investors are very few.
- Brokers are not working professionally.
- There is no timely presentation of financial statement.
- Less transparency.
- Downward economy of the country.

In another question about Nepalese stock market development, different parties gave their suggestions which are as follows;

Question No. (10): In your opinion, how to develop the Nepalese stock market?
Respondent said:

- Proper rules and regulation of the government.
- Every aspect of Stock Exchange should be properly managed.

- Awareness of the people about stock market.
- Improvement of economic condition of country.
- Transparency.
- Timely presentation of financial statement.
- Ownership transfer process should be computerized.
- Professional brokers.
- Number of brokers and investors should increase.
- Establish the other stock exchange limited in the different part of the country.
- Information about stock should be published timely.
- Stable Government in the country.
- Strong buying and selling system.
- Proper information publication about listed company.
- End the high rate of speculation.
- Development of the industrial sectors.
- Increasing the number of foreign investors.

4.6.2 Discussion with Experts

While conducting discussion with senior officials of NEPSE about the periphery of investors awareness about investment decision, it was learnt that the reason behind frequently swing in the market price of shares is due to lack of institutional investors who can properly analyze and study the market trends before making their investment decisions. According to the officials, Nepalese stock market is dominated by retailing investors come forward to act in bullish trend. They emphasized that stability cannot be fully achieved unless rational and institutional investors come forward to participate in the secondary market. However, they agreed the fact that lately the investors have become more sensitive and professional at least in comparison to early nineties, when market was at the early stage. At the time of interview, the question has been asked about which method of analysis you adopt. Most of the experts replied that they used technical as well as fundamental analysis method of stock price behavior.

While conducting discussion program, it was found that Nepal Stock Exchange, investors and officials were at loggerheads' over the cases of stock market slack,

blaming each other or volatility of stock prices. Though, they have different theories to offer over the price fluctuations, the efforts to improve the domestic stock market should be done from all the stakeholders. In course of conducting the informal discussion with many investors in the stock market, they claimed that though they made investment decision after analyzing shares, they got less than the expected return from the investment. They accused brokers and NEPSE officials of joining hands for price manipulation. They also shared the experience of sharp wealth devaluation in the past days. It was learnt that unprecedented swings in the Nepal stock exchange market index caused uproar among investors.

4.7 Major Findings of the Study

- The correlation coefficients (r) for KBL between MPS & EPS, MPS & DPS and MPS & NWPS are 0.2773, 0.6939 and -0.8580 respectively which shows there exists low negative relation between MPS and these variables.
- The correlation coefficients (r) for ACEDBL between MPS & EPS, MPS & DPS and MPS & NWPS are 0.7153, 0.6557 and 0.3768 respectively which shows there exists negative relation between MPS and these variables.
- The correlation coefficients (r) for UFL between MPS & EPS, MPS & DPS and MPS & NWPS are 0.7159, -0.0605 and 0.9516 respectively which shows there is positive relation between MPS and these variables.
- By the analysis of overall trend of NEPSE in yearly basis it was found that the NEPSE index is increasing in recent years signaling to the growth and maturity of Capital Market. However, the C.V. is higher representing the high volatility of overall stock prices in Nepalese Capital market.
- While analyzing the monthly trend analysis of all nine sectors, it was found that all the sectors – Commercial Bank, Finance, Development Bank were in decreasing trend on overall basis. However, it was found that the highly volatile sectors are Development Bank, Finance and Commercial Bank.
- By the analysis of run test it was found that;
  - The change in stock price of KB, ACEDBL was random.
  - The change in stock price of UFL was not random.
- On studying primary data the study found out following;

- Out of total respondents 25% and 25% believed that the major influencing factor of stock price is Profit/EPS and DPS respectively.
- 50% of the respondents believed that 50-75% volatility in stock price is due to political instability.
- 75% of the respondents said Govt. Policy is responsible for present unwanted change in stock price.
- 50% of the respondents said that investors in the Nepalese Stock Market are not aware about share transaction.
- 50% of the respondents were agreed with the statement that international environment also affects the Nepalese Stock Market.
- Only 30% of the respondents believe that investors in the Nepalese Stock Market use own analysis for decision making in investing.
- 27.5% (highest) of the respondents the most secured sector among all is Hydro Power.
- On discussion with personnel of different sectors if was concluded that most of them use technical as well as fundamental analysis in analyzing investment in stocks. And there exist manipulation in stock price by some group of players in stock market which cause unwanted and irrational volatility in stock price.

CHAPTER –V
SUMMARY, CONCLUSION AND RECOMMENDATIONS

In this chapter the concrete view of the overall research is summed up, conclusions are presented on the basis of the major findings made in the preceding chapter and the points of recommendation are presented so that the way to improve the overall stock market and the remedies to work on behalf of volatile behavior of Nepalese Securities Market can be drawn by the concerned authorities.

5.1 Summary

This research is especially designed to find out the major causes responsible for volatility of stock price in secondary market, their relationship with market price of the stock and to find out the overall behavior of NEPSE, only stock price indicator of Nepal, and the impact of major signaling effects over it.

According to the nature and objective of the study, primary data as well as secondary data has been used to meet the objective. In course of finding out the facts related to the problem mentioned above, correlation analysis has done to find out the relation of MPS with major financial indicator leading the change on it (i.e. EPS, DPS and NWPS) in relation to sampled companies from various sectors in the first step. It clearly presents that to some extent these indicators are also responsible for the change in stock price in the Nepalese Stock Market.

The analysis made taking consideration to the overall NEPSE index and sector wise NEPSE index representing different sectors of the economy showed that sector wise as well as overall stock market of Nepal is much more volatile and there exists risk factor in the market. Similarly insurance, banking and other companies are leading the price in the stock market since a year.

For measuring the signaling effect on the stock market, paired t-test formula of hypothesis had been adopted from the hypothesis; it shows that to some extent

signaling factors also play role in determining the NEPSE index. The change in price of all sampled companies except UFL was random change.

From the primary data analysis, factors of volatility of the stock price in NEPSE are identified. Such internal factors affecting the share price are earnings, dividend paid, net worth and risk associated with the company. Similarly, there are other environmental factors affecting the market price of share. Such environment factors affecting the share price are Nepal Rastra Bank's guidelines, information, demand and supply, time of AGM, political stability, Government Policies, bonus shares etc are the major factors for the sensitivity of the stock price in NEPSE. Nepalese Stock Market is in developing stage.

5.2 Conclusion

From the above research study, we can conclude that the Nepalese Stock Market is in the developing stage. The study concludes that there is a gap between the theory and practice of investment in Nepalese stock market due to the lack of proper analysis of stock market for the smooth operation of the secondary market. Stock market was not properly analyzed for smooth operation of secondary market. Moreover, it can also be concluded that the investment is made without the proper identification and analysis so that the true/fair view of the company's position cannot be reflected by its stock price.

It can also be concluded that the market is growing day by day and the future is full of opportunity from investor point of view. However, small market size has made it vulnerable to manipulation and price rigging. Some investors tend to avoid stock market because they do not have options to invest in securities according to their risk-return preference. Similarly, firms shun it because stock market is less reliable source of raising funds for them. Due to this financial system in Nepal has remained basically bank dominated. The market seems gaining to some extent the confidence of investors. A scarcity of floating stock prevails in the market. Professionalism is still lacking in the service of investors and investment management. A system of preponderance of speculation trading is guessed to be prevailed where the primary motive is to derive benefit from short term price fluctuations. It appears that a very

small fraction of transaction represents purchases/sales by genuine investors. The rest are driven mainly by the speculative motive. The corporate sector is still reluctant on disseminating information timely. The kind of securities trading in the market is confined only to ordinary and preference shares. These are various major problems observed in the market nowadays.

In course of discussing with concerned with stock market it can be concluded that most of the investors are complaining that the market makers, brokers and Nepal Stock Exchange Limited staff's are making coalition for fraudulent activities towards investors. And to some extent Govt. and governing authorities are also negligent for the betterment or improvement of overall market. Stock market is seeing bearish trend nowadays because during this period most of the listed companies are announcing dividend and issuing right shares also. However, it can be said from discussion with experts that political and Govt. instability is much more responsible for this. There seem no logical reasons for the declining of NEPSE index. The study also concluded that there is hand of signaling factors to play role for fluctuating NEPSE index.

Finally, the study of stock market behavior is a very useful subject matter if properly analyzes for the development of stock market.

5.3 Recommendations

On the way of finalizing this research work many weaknesses, negligence, avoidance, interruptions, misleading and rigidity for fluent operation and development of Nepalese Stock Market were identified. Here are some points of commendations by the adoption of which individuals can gather a lot of ideas about improving the present situation of capital market and even the overall market growth and improvement can be achieved;

- One of the key points to improve the capital market is to enact and implement the clear-cut policy and guideline by the Nepalese Government so that no confusion and hesitation should be felt by investor about the future of the market. And the political influence should be totally removed in the stock market related issues, policies and other aspects.

- For smooth operation and growth of the market Central Depository System is crucial and decentralization of trading system over the country is essential. So, it is recommended to take steps on such strategies by the Government.
- Increment on awareness amongst the general public about the capital market, regarding nature of risk and return, through promotions, campaigns, seminars, publications and programs in FM/TV etc. are necessary.
- Foreign investors (individual as well as institutional investors) should be encouraged and promoted to invest in the Nepalese stock market to improve not only the stock market but also the overall economy of the country.
- Economic development of every large country depends upon the industrial advancement of various types and classes of industries and development of stock market, on the other hand depends upon the development of industries. Government therefore should encourage and consider the industrial development in the country.
- It is apparent that, seeing the investment priority of investors' majority of investors was found attached with banking sectors. Diversification of investment in other sector should be done by taking action against the unproductive manufacturing, trading, insurance and other. The companies which are not performing their activities should be removed from the list of Nepal security exchange Ltd. So that the unproductive sectors gave the productive results by running efficient way.
- Signaling factors should be analyzed so that future movements of price can be predicted from the side of analyst and form the side of investors.
- The study of stock market behavior should be done in periodic manner so that proper results can be drawn for betterment of stock market from the side of NEPSE.
- The role of market players in the stock market should made effective in promoting capital market on the country by giving proper training and adopting changed environment with modern tools and technique.
- The stock market lacks the existence of sophisticated investors, it is recommended to regulatory bodies to carry out programs using various media and spot program to inform and attract the potential investors in investing into shares and to create awareness.

From the study it is fact that much work remains to be done, a growing body of evidence suggests that stock market is not merely casinos where players come to place bets. Stock markets provide services to the non-financial economy that are crucial for long term economic development. The ability to trade securities easily may facilitate investment, promote the efficient suggestion that stock market price encourages or at least strongly forecasts corporate investment even though much of this investment is financed through retained earnings, bank loans rather than equity issues.

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ANNEXURE

Annex-I

Questionnaire

(1) What is the major influencing factor for the stock price?

a. Company's Profit ( )
b. Company's NWPS ( )
c. Company's Growth/Future ( )
d. Company's DPS ( )
e. Signaling Factor ( )
f. Above All ( )

(2) Do you agree with the statement 'Political instability is the major reason for crash in Capital Market'?

a. 0-25% ( )
b. 25-50% ( )
c. 50-75% ( )
d. 75-100% ( )

(3) Does international environment affects the Nepalese Stock Market?

a. Yes ( )
b. No ( )
a. Don't know ( )

(4) Is Government's Policy responsible for unwanted change in stock price?

a. Yes ( )
b. No ( )
c. Don't Know ( )

(5) Do you think investors in the Nepalese stock market are aware of share transaction?

a. Yes ( )
b. No ( )
c. Can't say ( )

(6) On which basis do you make decisions to invest in shares in the secondary market?

a. Family Advice ( )
b. Rumors ( )
c. Own Analysis ( )
d. Market price ( )
e. Following Others ( )

(7) For what purpose do you want to own shares of a company?

a. Social Status ( )
b. To secure future ( )
c. Business Purpose ( )
d. Above all ( )

(8) Which sector of investment do you think secured one?

a. Commercial Bank ( )
b. Dev. Bank ( )
c. Finance Company ( )
d. Hydro Power ( )
e. Trading ( )
f. Other ( )

(9) In your opinion, what are the major problems of Nepalese stock market?

a. ……
b. …….
c. …….

(10) In your opinion, how to develop the Nepalese Stock Market?

a. …….
b. ……
c. ……

Name:

Address (office/residence):

.....

Signature

Annex-II

Name of Listed Companies in NEPSE

	Commercial Bank
S. No.	**Name of Companies**
1	Agriculture Development Bank Limited
2	Bank of Asia Nepal Limited
3	Bank of Kathmandu
4	Citizens Bank International Limited
5	DCBL Bank Ltd.
6	Everest Bank Ltd
7	Global Bank Limited
8	Himalayan Bank Ltd.
9	Kumari Bank Ltd
10	KIST Bank Limited
11	Laxmi Bank Limited
12	Lumbini Bank Ltd.
13	Machhachapuchhre Bank Ltd
14	Nabil Bank Ltd.
15	Nepal Bangladesh Bank Ltd.
16	Nepal Credit And Com. Bank
17	Nepal Investment Bank Ltd.
18	Nepal Industrial And Co.Bank
19	NMB Bank Ltd.
20	Prime Commercial Bank Limited
21	Nepal SBI Bank Limited
22	Siddhartha Bank Limited
23	Standard Chartered Bank Ltd.
24	Sunrise Bank Limited

	Manufacturing & Processing
S. No.	**Name of Companies**
1	Bottlers Nepal Ltd.(Balaju)
2	Bottlers Nepal (Terai)Ltd.
3	Gorakhakali Rubber Udhyog Ltd.
4	Himalayan Distillery Ltd.
5	Nepal Lube Oil Ltd.
6	Uniliver Nepal Ltd.

	Development Bank
S. No.	**Name of Companies**
1	Annapurna Bikash Bank Limited
2	Ace Development Bank Limited
3	Alpine Development Bank Limited
4	Araniko Development Bank Limited
5	Bhrikuti Vikash Bank Limited
6	Bageshowori Dev.Bank
7	Business Development Bank Ltd.
8	Biratlaxmi Bikash Bank Limited
9	Bishwa Bikas Bank Limited
10	Chhimek Laghubitta Bikas Bank Ltd.
11	City Development Bank Limtied
12	Clean Energy Development Bank Limited
13	Diyalo Bikas Bank Ltd.
14	Diprox Development Bank
15	Excel Development Bank Ltd.
16	Garima Bikash Bank Limited

	Insurance
S. No.	**Name of Companies**
1	Alliance Insurance Company Limited
2	Asian Life Insurance Co. Limited
3	Everest Insurance Co. Ltd.
4	Guras Life Insurance Co. Ltd.
5	Himalayan Gen.Insu. Co.Ltd.
6	Lumbini General Insurance
7	Life Insurance Co. Nepal
8	NB Insurance Co. Ltd.
9	Nepal Insurance Co.Ltd.
10	Neco Insurance Co.
11	Nepal Life Insurance Co. Ltd.
12	National LifeInsu. Co.Ltd.
13	Premier Insurance co. Ltd.
14	Prudential Insurance Co.
15	Prime Life Insurance Company Limited
16	Rastriya Beema Sansthan
17	Sagarmatha Insurance Co.Ltd
18	Shikhar Insurance Co. Ltd.
19	Siddhartha Insurance Limited
20	Surya Life Insurance Company Limited
21	United Insurance Co.(Nepal)Ltd.

	Finance
S. No.	**Name of Companies**
1	Alpic Everest Finance Company Limited
2	Api Finance Limtied
3	Arun Finance Limited
4	Bhajuratna Fin.And Sav. Co. Ltd.
5	Butwal Finance Ltd
6	Birgunj Finance Ltd
7	Central Finance Co. Ltd.
8	Crystal Finance Limited
9	Citizen Investment Trust
10	Capital Mer. Bank And Fin
11	Cosmic Mer.Bank And Fin.
12	Civil Merchant bittya sanstha
13	Everest Finance Ltd,
14	Fewa Finance Co. Ltd.
15	Goodwill Finance Co. Ltd.
16	General Finance Ltd.
17	Gorkha Finance Ltd.
18	Guheyshwori Mer. Bank. Fin
19	Himalayan Finance Limited (Bittiya Sanstha)
20	ICFC Bittya Sanstha Ltd.
21	Imperial Financial Inst. Ltd.
22	IME Financial Institution
23	Janaki Finance Ltd.
24	Kaski Finance Limited
25	Kathmandu Finance Limited.
26	Kuber Merchant Finance Limited
27	Lord Buddha Financial Institutional Limited
28	Lalitpur Finance Ltd.

17	Gandaki Bikas Bank Limited	29	Lumbini Finance Ltd.
18	Gurkha Development Bank	30	Maha Laxmi Finance Ltd.
19	Gaurishankar Development Bank Ltd.	31	Nepal Aawas Finance Ltd.
20	Himchuli Bikash Bank Ltd.	32	NIDC Capital Markets Ltd.
21	Infrastructure Development Bank Limited	33	Nava Durga Finance Co.Ltd.
22	Jyoti Bikash Bank Limited	34	Nepal Express Finance Limited
23	Kasthamandap Development Bank Ltd.	35	Nepal Finance and Saving Co.Ltd.
24	Kabeli Bikas Bank Limited	36	Nepal Housing And Merchant Fin.
25	Kankai Bikas Bank Ltd.	37	Narayani National Finance Co. Ltd.
26	Karnali Development Bank Limited	38	Nepal Shree Lanka Merchant Bank
27	Mahakali Bikas Bank Ltd.	39	Om Finance Ltd.
28	Miteri Development Bank Limited	40	Paschimanchal Finance Co. Ltd
29	Malika Bikash Bank Limited	41	Peoples Finance Limited.
30	Manakamana Development Bank Limited	42	Premier Finance Co. Ltd
31	Narayani Development Bank Ltd.	43	Prudential Bittiya Sans
32	NDEP Development Bank Limited	44	Pokhara Finance Ltd.
33	Nilgiri Bikas Bank Limited	45	Patan Finance Ltd.
34	Nepal Industrial Dev. Corp.	46	Prabhu Finance Company Limited
35	Nerude Laghubita Bikas Bank Limited	47	Progressive Finance Limited
36	Nirdhan Utthan Bank Ltd.	48	Reliable Finance Limited
37	Pathibhara Bikas Bank Limited	49	Royal Mer. Bank. And Fin
38	Public Development Bank Limited	50	Shikhar Finance Limited
39	Paschimanchal Bikash Bank	51	Suryadarshan Finance Company Limited
40	Professional Bikas Bank Limited	52	Seti Bittiya Sanstha Limited
41	Pashupati Development Bank Limited	53	Shrijana Finance(Bittiya Sa
42	Resunga Bikas Bank Limited	54	Siddhartha Finance Limited
43	Sahayogi Vikas Bank	55	Shree Investment Finance Co. Ltd
44	Siddhartha Development Bank Limited	56	Subha Laxmi Finance Co. Ltd.
45	Sewa Bikas Bank Limited	57	Sagarmatha Mer Banking And Finance Ltd
46	Subhechha Bikas Bank Limited	58	Swastik Merchant Finance Co. Ltd.
47	Swabalamwan Bikash Bank	59	Standard Finance Ltd.
48	Triveni Bikas Bank Limited	60	Union Finance Ltd.
49	Tinau Development Bank Limited	61	Unique Financial Institution Limited
50	Udhyam Bikas Bank Limited	62	United Finance Ltd
51	Vibor Bikas Bank Limited	63	Universal Finance Ltd.
52	Western Development Bank Limited	64	Valley Finance Limited
		65	World Merchant Bank Ltd

	Hotel	66	Yeti Finance Company Ltd.
S. No.	**Name of Companies**	67	Zenith Finance Limited
1	Oriental Hotel Ltd.		
2	Soaltee Hotel Ltd.		**Trading**
3	Taragaon Regency Hotel	**S. No.**	**Name of Companies**
		1	Bishal Bazar Co. Ltd.
	Hydro Power	2	Salt Trading Corporation
S. No.	**Name of Companies**		
1	Arun Valley Hydropower Dev Company Ltd		**Others**
2	Butwal Power Co. Ltd.	**S. No.**	**Name of Companies**
3	Chilime Hydro power Co.	1	Nepal Film Dev.Co. Ltd.
4	National Hydro Power Co.	2	Nepal Doorsanchar Company Limited

Annex-III

Calculation of Mean, S.D., C. V., Correlation Coefficient, Coefficient of Determination and Probable Error

1. For KBL

Year	MPS(a)	EPS(b)	DPS(c)	NWPS(d)	a*b	a*c	a*d	a2	b2	c2	
7/08	1005	16.35	10.53	128	18841.00	17471.50	113710.00	688900	515.29	443.103	1
8/09	700	22.04	10.58	137	16431.75	10582.65	128640.00	1010025	267.323	110.881	1
9/10	668	24.24	12	137	15428.00	7406.00	95900.00	490000	485.762	111.936	1
0/11	266	15.67	8.44	138	16192.32	8016.00	91516.00	446224	587.578	144	1
1/12	242	17.18	0	148	4168.22	2245.04	36708.00	70756	245.549	71.2336	1
tal	**2881**	**95.48**	**41.55**	**688**	**71061.29**	**45721.19**	**466474.00**	**2705905**	**2101.5**	**881.153**	**9**
=∑×/N	576.2	19.096	8.31	137.6							
=∑×	288.28	3.41	4.31	6.34							
V.	50.03	17.85	51.83	4.61							

Here, n = 5

Now,

$$\text{Correlation Coefficient (r)} = \frac{n\sum ab - \sum a \times \sum b}{\sqrt{[\sum a^2 - (\sum a)^2]}\quad\sqrt{[\sum b^2 - (\sum b)^2]}}$$

Coefficient of Determination = r^2

Probable Error (P.E.) = $0.6745\ (1-r^2) / \sqrt{n}$

Therefore,

Variable	r	r^2	PE
rab	0.2773	0.0769	0.2784
rac	0.6939	0.4816	0.1564
rad	-0.8580	0.7362	0.0796

2. For ACEDBL

Year	MPS(a)	EPS(b)	DPS(c)	NWPS(d)	a*b	a*c	a*d	a2	b2	c2	d
08	856	12.96	10.53	122	3079.89	2414.34	51408.00	210681	45.0241	27.6676	
09	588	10.62	5.5	110	11093.76	9013.68	104432.00	732736	167.962	110.881	
10	280	10.62	8.5	110	6244.56	3234.00	64680.00	345744	112.784	30.25	
11	141	8.84	6.3	119	2973.60	2380.00	30800.00	78400	112.784	72.25	
12	113	0.55	0	112	1246.44	888.30	16779.00	19881	78.1456	39.69	
tal	**1978**	**43.59**	**30.83**	**573**	**24638.25**	**17930.32**	**268099.00**	**1387442**	**516.7**	**280.739**	
=∑×/N	395.6	8.718	6.166	114.6							
=∑×	285.32	4.29	3.55	4.96							

V.	72.12	49.19	57.56	4.33

Here, n = 5

Now,

Correlation Coefficient (r) $= \frac{n\sum ab - \sum a \times \sum b}{\sqrt{[\sum a^2 - (\sum a)^2]} \quad \sqrt{[\sum b^2 - (\sum b)^2]}}$

Coefficient of Determination = r^2

Probable Error (P.E.) = $0.6745\ (1-r^2) / \sqrt{n}$

Therefore,

Variable	r	r^2	PE
rab	0.7153	0.5117	0.1473
rac	0.6557	0.4299	0.1720
rad	0.3768	0.1420	0.2588

3. For UFL

Year	MPS(a)	EPS(b)	DPS(c)	NWPS(d)	a*b	a*c	a*d	a2	b2	c2
08	935	17.77	10.53	151	6848.00	4210.00	33600.00	40000	1172.378	443.1025
09	814	24.5	13.16	138	8257.94	5957.15	47261.00	80089	851.4724	443.1025
10	294	12.12	13.16	110	4612.95	3350.00	45225.00	112225	189.6129	100
11	199	17.37	13.16	115	3182.76	945.00	23436.00	35721	283.5856	25
12	140	10.83	10	116	3189.80	0.00	20664.00	26896	378.3025	0
al	**2382**	**82.59**	**60.01**	**629.95**	**26091.45**	**14462.15**	**170186.00**	**294931**	**2875.351**	**1011.205**
∑×/N	476.4	16.518	12.002	125.99						
∑×	330.96	4.85	1.43	15.64						
.	69.47	29.37	11.90	12.42						

Here, n = 5

Now,

Correlation Coefficient (r) $= \frac{n\sum ab - \sum a \times \sum b}{\sqrt{[\sum a^2 - (\sum a)^2]} \quad \sqrt{[\sum b^2 - (\sum b)^2]}}$

Coefficient of Determination = r^2

Probable Error (P.E.) = $0.6745\ (1-r^2) / \sqrt{n}$

Therefore,

Variable	r	r^2	PE
rab	0.7159	0.5126	0.1470
rac	-0.0605	0.0037	0.3005
rad	0.9516	0.9056	0.0285

Annex-IV

Run Test Analysis

Monthly market prices from Jul/Aug2010 to Jun/Jul2012

Date	KBL	Sign	Runs	ACEDBL	Sign	Runs	U
Jul/Aug010	**432**	**+**	**1**	**266**	**+**	**1**	
Aug/Sep010	**381**	**-**		**240**	**-**	**2**	
Sep/Oct010	**352**	**-**		**257**	**+**	**3**	
Oct/Nov010	**346**	**-**		**235**	**-**	**4**	
Nov/Dec010	**287**	**-**	**2**	**235**	**0**		
Dec/Jan011	**305**	**+**	**3**	**208**	**-**	**5**	
Jan/Feb011	**299**	**-**	**4**	**202**	**-**		
Feb/Mar011	**265**	**-**		**188**	**-**		
Mar/Apr011	**290**	**-**		**168**	**-**		
Apr/May011	**236**	**-**		**149**	**-**		
May/Jun011	**184**	**-**		**120**	**-**		
Jun/Jul011	**266**	**+**	**5**	**141**	**+**	**6**	
Jul/Aug011	**249**	**-**	**6**	**145**	**+**		
Aug/Sep011	**216**	**-**		**130**	**-**	**7**	
Sep/Oct011	**215**	**-**		**126**	**-**		
Oct/Nov011	**231**	**+**	**7**	**130**	**+**	**8**	
Nov/Dec011	**208**	**-**	**8**	**114**	**-**	**9**	
Dec/Jan012	**215**	**+**	**9**	**104**	**-**		
Jan/Feb012	**195**	**-**	**10**	**112**	**+**	**10**	
Feb/Mar012	**178**	**-**		**109**	**-**	**11**	
Mar/Apr012	**189**	**+**	**11**	**102**	**-**		
Apr/May012	**254**	**+**		**159**	**+**	**12**	
May/Jun012	**223**	**-**	**12**	**122**	**-**	**13**	
Jun/Jul012	**242**	**+**	**13**	**113**	**-**		

Source: NEPSE Annual Report for 2010/11 and 2011/12