CHAPTER-I

INTRODCTION

1.1 General Background

Effective capital market helps to mobilize the financial resources and provide efficient channel to productive investment. Capital market is the place where financial assets are treated for the purpose of transformation of saving. Development and expansion of capital market is essential for the rapid economic growth of country. Capital market helps economic development by mobilizing long term capital needed for productive sector.

Economic development is the foundation development of any country. Economic development is supported by the financial infrastructure of that country. Financial institution constitutes an important part of the financial infrastructure. The main function of the bank is the collection of idle funds and mobilizes them to productive sector causing overall economic development, which finally leads to national development of the country. Bank pools the fund through deposit and mobilize them to productive sector in the form of loans and advances. Bank is the financial institution which deals with money by accepting various types of deposits, disbursing loan and rendering various types of financial services. It is the intermediary between the deficit and surplus of financial sources.

"A financial market is a market for creation and exchange of financial assets if you buy or sell financial assets, you will participate in financial market in some way or other" *(Pradawn; 2002:24).*

Security Market can be termed as a mechanism of bringing together buyers and sellers of financial assets in order to facilitate trading. In simple sense, securities market is a place where people buy and sell financial instruments. The financial instruments may be in form of government bonds, corporate bonds or debentures, ordinary share, preference share etc. So far securities market is concerned it is an important constituent of capital market. It has a wide term embracing the buyers and sellers and all the agencies and institutions that assist the sale and resale of corporate securities. Although securities

market is concerned in few locations, they refer more to mechanism rather than to pace designed to facilitate the exchange of securities. This securities market can be defined as a mechanism for bringing together buyers and sellers of financial assets in order to facilitate trading. In order to allocate capital efficiently and maintain higher degree of liquidity in securities, the securities market should be efficient enough in pricing the shares solely by economic considerations based on publicly available information (Sharpe, Balliey & Alexender, and 2003: 47).

Securities Market can be classified in terms of time to maturity of securities traded i.e. Money Market and Capital Market. Short-term securities are traded in money market where long-term securities are in capital market. Stocks, bond and debenture are traded in capital markets. These securities help to finance industrial project economic development of the country. Securities markets may be classified in terms of economic function i.e. Primary market and Secondary markets. A primary market is the market that brings surplus savings units together with deficit savings units in the process of financing productive activities. Securities are sold for the first time in primary markets and their further trading will be done in secondary market. Both these markets make possible for investor to diversify their assets holding beyond domestic investments (Jones, 1998:82).
History of Capital market in Nepal ,the concept of capital market is vary new .It is still in infancy stage through it was begun with the floatation of shares By Nepal Bank Limited and Biratnager Jute Mill Limited (BJM) in 1937 under the company act 1936.At the time, the participation of ownership structure of the corporate sector was restricted mostly to the Rana family, consequently the expansion of the capital market to the desired level had been made in eight five yare plan to reform the capital market. The first government bond was issued at 1964 .The establishment of Security Exchange Center (SEC) in 1976 was the first and most important attempt made by the government to the develop the stock market .It was established with the objective of facilitating and
Promoting the growth of capital market Before conversion it into Nepal Stock Exchange (NEPSE) in 1993, it was the only capital market institution undertaking the job

of job of broking ,underwriting ,manage public issue ,market making for government bonds and other financial services .In the same year , SEBON was also formed as the apex regulator of capital market.

Since the establishment of NEPSE and SEBON, the capital market in Nepal gets its momentum .Then after, few issue managers started their operation at primary market and 32brokers at secondary market. The listed companies have also go on increasing trend with other capital market like index, trading volume and market capitalization. The issue of corporate bonds and listing of government a bond also come into effect .Currently, regulation related to the depository , mutual funds and crediting rating agency has opened door to establish such institutions. In the current situation Nepalese capital market consists of:

SEBON	-	Regulator
NEPSE	-	Stock Exchange
Brokers	-	23+24+3(coming)
Issue manager	-	13
Listed companies	-	213
NO of corporate bond listed-	-	14
NO of government bond listed	-	20
Depository Company	-	1

(www.nepalstock.com:2012).

Rational high moral character and accountable behavior of the institution such as the government, Central Bank, Stock Exchange Board, stock exchange, organized institutions for accumulating capital from the market, mediators is the form of manager issuing securities, creator of the market manager for investment security dealer such as brokers and investors in the form of government bond holders and ordinary mutual fund unit holders help to develop healthy capital market *(The Ninth Plan: 30).*

The number of commercial banks has been growing considerably in Nepal after the introduction of liberalized financial policy by the Government in early 1980's. Today, there are 32 commercial banks operating in Nepal as far as the latest data of adopting Century Commercial Bank .However, in 1984, there were only two commercial banks. Despite many of these banks are foreign based joint venture companies. Common stocks have been issued to the general public and are the major source of their capital funds *(Nepal Rastra Bank; Monthly Report: 2012).*

Bank plays the significance role in economic development of country. The primary objective of the commercial bank is to mobilize idle scattered resources in productive sector and thereby earn responsibility profit as reward for their service. They collect require capital through issue of different types of securities primary share and debenture. Shareholders become owner of the banks by investing their saving on shares with the hope of earning capital gain and dividend. While investing their money into the shares of banking sector investor expect invested amount to be increased in term of capital appreciation day by day. This, in terms depends significantly in the efficiency and effectiveness of the trading systems applied in the stock market.

"Stocks and shares mostly traded in the securities market arc 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" *(Cerrnan: 1980:10).*

These are the short conceptual framework about the theories of stock price behavior:

"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 supplied demand arc 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 *(Sharma; I996:63-64).*

Purchase 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" *(Sliarnw: 1996. 65-66).*

In the current situation, most of the investors invest in two types of securities common stock and preference stock. Common stock refers the ownership stock from company point of view and is one of the important sources of capital structure of any company. It is also known as equally share represent ownership interest in the corporation. Preference share is another security which have own behavior and its behavior is analyzed under different theory.

There are two types of theory in the security market. Conventional theory and efficient market theory. Both the theories analyze the stock price valued. Under the conventional theory there are two types of theories, Fundamental analysis and Technical analysis. Technical analysis is a tool designed to measure demand and supply. Technical analysis uses most of the anomalies to extract information on future price movements from historical data. Fundamental theory refers the formula and principal. According to technical analysts, fundamental analysis is idealist part of analysis. Both approaches helps the investors on their investment decision which is a major component of price determinant .Efficient market theories refer the optimum price of the stock in the Competitive market (Thapa, 2008: 37).

The linkage between companies and investors has created inveigling conditions in the flow of funds both in primary and secondary market. The existing securities are traded in secondary market, where securities are transferred from one surplus unit to another. The primary market depends in an important way on the existence of an active secondary market. Secondary market provides liquidity to investors who buy securities in the primary markets.

1.2 Focus of the Study

Securities market is recognized as an effective way of raising capital for commercial enterprises and the same time providing an investment opportunity for individual and institution. (SEBON Journal vol. II, Oct 2005) Trends of stock market move daily in Nepalese securities market as secondary market. There is close relationship between the price and volume of stock i.e. high price-low volume and vice versa. Trends of price series have been always a subject matter of controversial debt to the extreme extent among the academics of financial and economic circle. In general price of the stock is determines by the demand and supply of the stock in secondary market. In our country does this condition exist or not? In investors must consider risk also before making any investment decision. NEPSE is on organized stock exchange for trading -

stocks (Shares) in secondary market. Although, smaller investors can invest their money by purchasing shares in primary markets (during initial public offering) or in the secondary markets the lack effective knowledge of capital market and its mechanism.

The focus of this research is on the efficiency of the Nepalese stock market and trades of stock market price in Nepalese securities market. Efficient market price is the one which reflects the true worth of the company and represents the financial indicators like EPS, DPS, and NEPSE etc. This study is to test whether the successive price changes to the securities are dependent or independent (there is significant different between NEPSE index before and after the various event or not). There are different approaches to predict successive price movement of the stock. Fundamental, technical efficient etc. arc the hest hut the implications of efficient market is more important while on Nepalese context extensive study on this issue has not been found. The price of the stock is the function of several factors. Investing in stock is highly risky as being ownership capital. It represent only a final claim which is liquidation stock price is determined by a number of factors also. Some are quantities, whose effect can be quantified where as other are qualitative whose effect on share price cannot be quantified. What are the factors affect the market price of stock, impact of price trend, volume of stock traded? Do the investors study the price trend and see the volume trend and other many factors while making the investment decision? It focuses to the sensitively of stock price on NEPSE with special to various listed company's towards various factors and plays in channeling the flow of capital into various industries and firm.

1.3 Statement of the Problem

In Nepal listing of shares and their trading in the stock market is recent phenomenon. The Nepalese stock market is said to be characterized by early stage of growth and limited information provides to investors. With the trend of economic liberalization and globalization policies adopted by the Nepalese government recently, many companies are emerging in the Nepalese stock market. The history of capital market is very short, the concept of capital market is growing rapidly within a short span of time and several institutions are floating their stocks in the market. It is mandatory to enlist these public limited companies in NEPSE.

Price in Nepal is determining move by other factors that the financial performance of the concerned firm and stock price does not seem accurate with the financial indicator such: Dividend per share (DPS), Earning per Share (EPS), Market price per share (MPS) etc. As a result, investors are surrounded by fear to invest in stock market.

This study will analyze the price determination of common stock in secondary market of Nepal. Corporate firms have common equity to resister. Common stock represents the ultimate ownership of firms in regard to the claim on assets and income. Common stocks are firstly market by the capital raising company through primary capital market and later on these stocks are negotiable in secondary capital market. Capital market provides good investment opportunities and plays a major role with fair returns and instant liquidity with a minimum risk of loss. The stock market also imparts liquidity to the securities holder. This offers opportunities for investors to invest in long term venture, while the markets also enables to convert their securities into liquid cash before the maturity of the project.

There are various causes that make fluctuation of stock price. These are given below:

- More than ninety percentage of the capital market is dominated by banks, finance company as insurance company.
- The buying the selling pressure in the capital market is totally dependents on the valley's limited investors and brokers only few branchs are out of valley.
- The stock market is totally concerned in the KTM valley and people feel safer in this area.
- The opportunities to invest in other sector are imitated so people are investing the stock market specially banking and financing area.
- Lack of right information is also the main cause of fluctuation of the stock price.

Factor determines the stock price. However, to specify exactly what factor do determine stock price is a controversial/unpredictable issue. Share price is the function of the several factors. The stock price fluctuates time to time and stock exchanges react to the environmental changes. However, for some environmental changes, the stock exchanges have no effect. This study will identify the determinants of stock price and find out the degree of affection of these determinants more *(Gyawali; 2008: 17).*

More specifically, this study is expected to answer the following research questions:

- What are the major determinants of the stock price in NEPSE?
- How earning and book value of the stock affect the stock price?
- How political and Economical instability affect the stock price?
- How dose required rate of return effect the investment?
- How do investors make investment decision?

1.4 Objectives of the Study

This research is base on price effectiveness of the stock market of banking sector so main objectives of thesis study are given below:

- To see the price effectiveness of sample banks.
- To see major factors which are affecting to stock price
- To identify the financial position of commercial bank listed in stock market.
- To see the relationship between performance and market price of the selected companies.

1.5 Significance of the Study

The main objective of the study is to focus on the investor's awareness, although the role of every investor will have not well knowledge about the real financial instruments. Financial sector in the economic development of nation remained controversial for same time; recent theories in finance suggest that stock markets do promote long term growth *(Papaioannou and Duke; 1993:36).* The term 'Security Market' refers to the buyer and seller of security as also structure of comprising sale and resale of companies' securities (Husain, 1991:35). Development of capital markets in any country requires political and economic stability and growth oriented policies as pre - condition. At the first stage instruments price rise and the investors gradually gain confidence in the capital market. The market is dominated by individual investors and most of them are not making informed investment decision rather driven by markets rumors. Information helps investors to decide whether or not to invest in the instruments of certain company. In order to complete the role of institutional investor, adequate instruments are required. The role of institutional investor in the capital market is known to add up new

instruments through collective investment schemes, play role in stabilization of the securities prices, make rational analysis of information and pressurize the issuer for the regular flow of credible information.

This research is very useful to all the parties like security businesspersons, market makers, brokers, companies and investors etc. who are directly or indirectly involved in the stock market because it provides the guidelines to the stock market and potential investors to make investment decisions. Issuer Company may also take the advantage of the study by examining the investors' psychology towards the investment in different financial instruments. The investors are the sovereigns of security market so their needs and desires must be identified so that they can rightly be rewarded for the sacrifice from their part Academicians, research scholars, students and policy makers may be benefited from this study as it tends to gives some practical insights that can be very useful to turn the theoretical knowledge into practical field.

This study is helpful to financial manager to be familiar with how different factors affect the stock price, price formation process and its relationship with financial position of the company. This study is also useful to potential investors who are interested to know the effect on price trend, volume of stock traded and impact of signaling factors in NEPSE index.

But non-of the researches have yet been made on the core perspectives of the determinants of the stock price. So the present study will be of substantial importance for investors, planners, researchers, students and policymakers to meet their personal and organizational objectives. Finally the research intends to help the national economy through mobilization of idle capital of average Nepalese in productive sectors to accelerate the economic growth and to reduce dependency on foreign assistance.

1.6 Limitations of the Study

As each and every study have its limitations. We have limited research and it may be difficult to explore researchers to find out new aspect. Reliability of statistical tools used and Jack of research experience are the major limitation and some other limitation can be enlisted as follows. The limitation of the studies is given below

- This study is focused on the pricing activeness of banking sector not to industrial sector.
- This study is base is sample size.
- This study covers five fiscal years.
- This study is based on secondary data as well as primary data. The primary data collection from questionnaires method.

1.7 Organization of the Study

Chapter –I Introduction

The first chapter deals with the Introduction. This includes Background, Statement of problem, objective of the study, hypothesis of the study, limitation of the study and organization of the study.

Chapter –II Review of Literature

The second chapter deals with the review of available literature. It includes review of books, reports, journals previous thesis etc.

Chapter –III Research Methodology Chapter

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.

Chapter –IV Data Collection and Presentation

The fourth, which is the important chapter of the study, will include presentation and analysis of data.

Chapter –V Summary Conclusion and Recommendation

The fifth chapter summarizes the main conclusion of the study and recommendation to the company.

Acknowledgement, Table of contents, figure, Abbreviation has been included at the beginning of this report where as Bibliography and appendixes have been included at the end.

CHAPTER - II
REVIEW OF LITERATURE

For all types of studies, review of literature is essential, which helps to find out what research studies have been conducted in one has chosen field of study and what remains to do. In fact, review of literature begins with a search for a suitable topic and continues throughout the duration of the research work. It is a path to find out what other research in this area has uncovered. It is the process of locating, obtaining, reading and evaluating the research literature in the area of the student's interest. It is also a means to avoid investing problems that are already been positively answered (Wolf and Pant, 2005:39).

2.1 Conceptual Framework

2.1.1 Common Stock

Common stock represents ownership capital in the company. The holder who owner the shares of common stocks are called stockholder or shareholder. They are legal owner of the company. Common stock represents the permanent and vital sources of capital since they do not have a maturity date. Shareholders are entitled to receive dividend as return for their capital contribution to the company. The amount and the rate of dividend is fixed by the company's board of directors. Common stock is therefore known as the variable income security. Being the owner of the company, shareholders bear the maximum risk of the ownership. They are entitled to dividends after the climbs of other fixed income securities are satisfied. Similarly at the time of liquidation of a company, they are the ultimate claimers an assets that that are left after setting various outsiders *(Endey; 1995:905)*

The common stocks are issued by the firms to raise ownership capital and the investors buy them with the expectation that they receive a share of profit periodically. The common stock legally represent the equity of business firms and the holders and the owners who share the all the profit

and loss of business. They enjoy all earnings after meeting obligations of interest on debt and dividend of preferred stocks. Thus they enjoy all net benefits of the business by assuming the risk of losing their capital *(Pradhan; 1996: 132-133).*

2.1.2 Capital Market

Capital market means anybody or individuals whether incorporation or not, constituted for the purpose of regulating and controlling the business of buying selling or dealing in securities *(Bhalla; 1995:21).*

It is just the market for capital funds. The world capital used in this context implies a long term commitment on the part of the lender and long term need for the funds on the part of borrower. Both lender and borrowers coming together in capital market to play effective financial intermediary role in primary and secondary market through the use of various long term capital market instruments. It has vital role in promoting efficiency and growth. In intermediates the flow of funds from those who want to save a part of their income from those who want invest in productive assets. It is the market, which provides the mechanism for channeling current saving into investment in productive facilities, that is, for allocating the country's capital resources among alternative use in effect the capital market provides an economy's like with the future. Since current decisions regarding the allocation of capital resources are a major determining factor of investment and portfolio decision.

Capital market consists of securities market and non securities market. Securities markets imply mobilization of funds through issuance of the securities like share, bond and debentures by corporate sector and bonds, bills and debenture by government. These securities trended in the secondary market are generally negotiable and hence can be traded in the secondary market. Non securities market refers to the mobilization of the financial by the financial resources by the financial institutions in the form of deposits and loss. Primary and secondary markets are two wings of the capital market. Primary market concerns with the issue of new companies stock whereas the secondary market deals with the previously issued shares. The majority of all capital transaction occurs in the secondary market. The proceeds from the sales of securities in this market do not go to the original issuer, which means that it does not create new additional capital. In the other words securities are traded among the individual as well as institutional investors.

2.1.3 Security Market

Security market interchangeably known as the integral part of capital market is in fact basis of the economy. The most effective use of idle and surplus resources can be brought into practice only by means of market mechanism. This indicates the structural network of the savers and users groups of funds presumably garnered for long term financing. But the formation of network originates via conversion process of saving into investment outlet. Thus the security market upholds the attempts particularly concerned with the collection and mobilization of savings. Saving meticulously diverted towards the regenerating activities, in essence financialization and industrialization activities will result in repercussion favorable to the economy as a whole *(Khitiwade; 2056:16)*

There are two important function of securities market, namely the raising of funds in form of shares and debentures and trading in the securities already issued by companies. While the first aspect is obviously much more important from the point of view of economic growth, the second aspect is also considerably important. In fact, if facilities for transferring of existing securities are abundant, the raising a new capital is considered assisted of the buyer of a new issue of security is confident that whenever he wants to get cash he can find a buyer without most difficulty. This aspect is called the liquidity of the stock market. Thus the liquidity of the stock Market affects the raising of new capital from the market *(Levine; 1992:33).*

Security market sets a price for the securities it trades and makes it easy for people to them. Securities market facilitates the sale and resale of transferable securities. The securities market can be defined as a mechanism for bringing together buyers and sellers of financial assets to facilitate trading. Securities market is classified into two; the market which new securities are sold is called the primary market and the market in which existing securities are resold is called the secondary market. Brokers bring buyer and seller together with themselves actually buying and selling; dealers set price at which they themselves are ready to buy and sell (bid and ask price respectively). Broker and dealer come together organized market or in stock or in the stock exchange *(Gitman; 1992: 457).*

2.1.4 Stock Exchange

The stock exchange is an institution where quoted securities are exchanged between buyer and seller. The stock exchange provides market in a wide range of traded securities, generally of medium to long term maturities, issued by companies, government and organization *(Winfield; 1985: 22).*

The securities exchanges help allocate scare fund to the best uses. That is by disclosing the price behavior of securities and requiring the discloser of certain corporate financial date; they allow investors to access the securities risk and return and to move their fund into the promising investments. An efficient market is one that allocated fund to the most productive uses. Along with this, there is lot of functions of security exchange such as ready market and continuous market, evaluation of securities, safety of transaction, canalization of saving and widening the share ownership etc. however, besides these functions three things a security exchange must do.

- Determine a fair price for the securities it trades or price discovery function.
- Enable transaction to be made at as low cost as possible or minimization of transaction cost.
- Enable transaction to be made at this price quickly and easily or provision for liquidity.

Out of these functions the major function of stock exchange is price Discovery. Thus the price discovery is the process of arriving at fair prices for securities. Fair price indicates the compromise between fair offer price(lowest price4 at which any well informed trader willing to sell) and fair bid price (highest price any well informed buyer is willing to pay). Different markets do this in different way and different ways of organizing a market affect how closely the market approaches the ideal of fair prices. However, a very important fact that should not be forgotten is the concept of idle market and efficiency, which also the necessary pre-condition for approaching to the fair price. In an idle market value of securities equal its price of securities prices reflects all available information about the market.

The key function of securities exchange is to create a continuous market for securities at a price that is not very different from the price at which they were previously sold. The continuity of securities market provides the liquidity necessary to attract investor's funds. Without exchanges, investors might have to hold debt securities to maturity and equity securities indefinitely. It is

doubtful that many people would be willing to invest under such conditions. A continuous market also reduces the volatility of security price further enhancing liquidity *(Gitman; 1992:458).*

One of the major attraction of investment in equity shares in the ready marketability. One may like to buy more shares or selling existing shares from time to time when he is in need of money or when he wants to shuffle his portfolio. Since the stock exchange is a place where a large number of buyers and sellers congregate, one can, by a large, easily find his counterpart for sale or purchase of shares. The existence of a stock exchange facilitates all these function without which it almost impossible to do so.

A security is a large representation of the right to receive future benefits under conditions. Its value depends on expectation of the amount of those benefits and evaluation of risk involved. Expectation and evaluation reflect both the information available and the conclusions people draw from the information. Since the market may quit big, no single buyer or seller can influence the price of a share to any significant extent.

The stock exchange produces, through its continuous process of evaluation, price of securities, as close as possible to investment value based on present and future income yielding prospects of various enterprises, capitalized at 'national rate of interest' the rate which will prevail if and when all the liquid savings are employed into productive purposes *(Gupta; 1982:148).*

In this securities market there is a great importance of demand and supply for price fixation. The price of a given stock is determined exclusively by the interacting forces of supply and demand converting on such stock at a given time, that the price and volumes of its past transactions are meaningful indication of the probable relationship of the future demand pressure it is likely to encounter in the market and that such relationship is the most important element in determining the probable direction of the price movements *(Ackerman; 1980:85).*

2.1.5 Stock Market in Nepal

Nepal stock exchange (NEPSE), the only stock exchange in the country, was established with an objective of facilitating and promoting the growth of capital market in Nepal. Before conversion in to NEPSE, it was the only capital markets institution undertaking the job of the brokering , underwriting, managing public issue, market making for government bonds and other financial services. His majesty's government under a program initiated to reform capital markets converted securities exchange in to Nepal stock exchange in 1993.

The need of stock market in Nepal has been accepted reality. In 1990, when democracy was resolved, the interim government in its short period has initiated banking reformation and has established citizen funds (CIF). The establishment of Nepal industrial development corporation (NIDC) is also another major step to improve financial system in Nepal. His majesty's government, under the program initiator to reform the capital market converted securities exchange center in to Nepal stock exchange limited. NEPSE is a non-profit organization, operating under security exchange act 1983. NEPSE commenced its operation on 13th January 1994, with ownership among his majesty's government, the Nepal Rasta bank (NRB) and NIDC and its licensed members. The ownership of different members is given below.

Table 2.1

Shareholders & Their Ownership of NEPSE

S.N.	Shareholders	Investment
1	HMG/N	58.67%
2	NRB	34.60%
3	NIDC	6013%
4	Other member	0.60%

The stock exchange provides an organized market place for the investors to buy and sell securities freely. The market for these securities is an almost perfectly competitive one because a large number of seller and buyers participate. In stock exchange, there is active biding and two-way auction trading takes place. Through the buying and purchasing activities are done through bargaining, however the price of the securities have been determined by the basic laws of supply and demand. The stock exchange provides an auction market in which member of the stock exchange participate to ensure continuity of the price and liquidity to investors.

2.1.6 Efficiency of Stock Market

An efficiency market is defined as a market where there are large numbers of rational profit maximizes activity competing with each trying to predict future market value of individual securities, and where important current information is almost freely available to all participants. In an efficient market, competition among the many intelligent participants leads to a situation where at any point in time, actual price of individual securities already reflect the effects of information based on both on events that have already occurred and on events which as of row, the market expects to take place in the future *(Fama; 1996:133).*

An efficient market is an assumed perfect market in which there are many small investors, each having the same information and expectation with respect to others. There are no restrictions on investment, no taxes and no transaction costs and investors are rational view securities similarly, and risk-averse preferring higher returns and lower risk *(Gitman; 2000:265-266).*

The requirements of the securities market are:

- A large number of rational profits – maximizing investors exist who actively participate in the market by analyzing, valuing and trading stocks. These investors are price takers: that is, one participant along connote affect the price of a security.
- Information is free of cost and widely available to market participants at approximately the same time.
- The information is generated in random fashion such that announcement are basically independent of one another.
- Investors react quickly and accurately to the new information, causing stock price to adjust accordingly.

2.1.7 Variables affecting the Price of Securities

Though, the price of securities is determined by the interaction of demand and supply of corresponding securities. However there are many factors that cause the stock price fluctuation. Major of them can be classified as political, economic, socio-cultural and technological factors. These variables may be closely related to the internal factors of the corresponding companies like the dividend policy of the company, business volume and profitability position of the

company or to the external factor like the economic condition of the nation, government monetary policy, political environment of the country etc. For this research purpose some important variables of the classified factors to be taken and analyzed on the basis of primary as well as secondary data.

2.1.8 The Theory of Price Behavior

The forces of supply and demand interact to determine a stock market price. If demand is high and supply is low then the price of stock goes up and vice-versa. There are essentially two schools of through to explain the stock price behavior. They are:

- Inefficient Market Theory
- Efficient Market Theory

1. Inefficient Market Theory

Conventional approach has considered that market is inefficient, which includes technical analysis theory. "Prior to the development of the efficient market theory, investors were generally divided into two groups, fundamental and technicians *(Reilly; 1986:347).* The two groups analyzed by follows:

a) Technical Analysis

It is an alternative approach to predicting stock price behavior in the literatures of Investment management. Technical analysis is market-oriented philosophy and it can concentrate on the force of supply of and the demand for share as reflected in the actions of market rather than the intrinsic worth of share. The analysts or prospective investors who analyze the security to predict the future price of share on the basis of study of its price movements in the past are known as technical analysts or technician *(Fisher and Jordon; 2000).* "The technician believes the forces of supply and demand are reflected in patterns of price and volume of trading. By examination of these patterns, the predicts whether prices are moving higher or lower, and even by how much" *(Fisher and Jordan; 2005:510).*

Technical theory involves study of the past volume and price data of the securities to predict future price fluctuations. Technical analysis theory of share price behavior is based on past market information. On the assumption that history tends to repeat itself, it is believed that

knowledge or past patterns of share prices will help to predict future price under the similar circumstances. It involves the study of past market behavior with reference to various financial and economic variables are to forecast the future. The change occurs in financial and economic variables are to be adjusted in the light of the present situation. Technical analysis or chartist, as they are commonly called, believe that they can discern patterns in price or volume movement, and they by observing and studying the past behavior pattern of given stocks, they can used this accumulated historical information to predict the future price movement in the security. Technical analysis comprises many different subjective approaches, but all have one thing in common that is , belief that these past movements are vary useful in predicting future movements. Technical analyst believes in the theory behind chart formations and patterns. They read charts much like ancient astrologers read the stars, looking for "head and shoulders" formations. These, they believe, reflect the patterns of buying and selling, accumulation and distribution, or market psychology.

Stock price always move in trends because of an imbalance between supply and demand. When the supply of a stock is greater than the demand, the trend will be down as there are more seller than buyers' when demand exceeds supply, the trend will be up as buyers "bid up" the price; and if the forces of supply and demand are nearly equal, the market will move sideways in what is called a "trading range". Eventually, new information will enter the market and the market will begin to trend again either up or down, depending on whether the new information is taken as positive or negative. Trend, which are very brief, are called minor trends; those lasting a few weeks are known as intermediate trends, and trends lasting for a period of months are major trends. By analyzing trend lines we can determine what trend is in force. It helps us to act safe in market both in bullish and bearish market.

I. The Dow Theory

The Dow Theory is one of the oldest and most famous technical tools and was originated by Charles Dow, who founded the Dow- Jones Company and was the editor of *The Wall Street Journal* around 1900. The Dow Theory is used to predict traversal and trends in the market as a whole or for individual securities. According to Charles 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 to a month or more: the third is the main movement covering at least four years in duration.

Dow Theory practitioners refer to these three components as:

1. Primary Trends

They are commonly called bear or bull markers .delineating primary trends is the primary goal of the DOW theorists.

2. Secondary Movements

Secondary movements are sometimes called corrections, which last only a few months.

3. Tertiary Movements

These are simply the daily fluctuations. The Dow Theory assets that daily fluctuations are essentially meaningless random wiggles. Nonetheless, the chartists should plot the asset's price or the market average each day in order to trace out the primary and secondary trends *(Francis; 1986: 524).*

II. Confidence Index

Confidence index is another indicator of securities prices that is used by many technicians to forecast the movement of the prices in the future. Confidence index is the ratio of high grade bond yields to low grade bond yields. The ratio indicates the investor's willingness to the investment risks. When the confidence of the investors over the national economy increases, they shift their investment from high grade bonds to low grade bonds to increase the yield *(Bhattarai; 2009: 343).*

III. Odd Lot Theory

Odd lot theory try to do the right thing most of the time; that is, tend to buy the stocks as the market retreats and sells stocks as the market advances. However, technicians feel that odd lots are inclined to so the wrong thing at critical turns in the market *(Fisher and Jordan; 1995: 515).*

This theory deals with the purchase and sales of securities by small investors. These investors perform transaction of less than 100 shares. Some technicians take the ratio of these odd lot

purchases to odd lot sales as an indicator of the direction of the future prices. An increase in the index suggests relatively more buying, a decrease indicates relatively more selling. During most of the market cycle, odd lots are selling the advances and buying the declines.

IV. Random Walk Theory

Random walk theory describes whether past prices can predict future. "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." It means that the current size and direction of price changes is independent and unbiased outcome of previous price changes. The random walk model in share prices actually involves two main hypotheses:

- Successive price changes are independent.
- The price changes confirm to some probability distribution *(Famed; 1996: 34-35).*

More precisely, in algebraic term,

Pr (Xt = X\Xt-1, Xt-2) = pr (Xt=X)

Where the term on the left side of equation is the conditional probability that the price change during time t will take the value X, conditional on the knowledge, the previous price changes the values Xt-1, Xt-2 etc. But the term on the right of the equation is the unconditional probability that the price change during will take the value X. The expression means the conditional and marginal probability distribution of an independent random variable are identical *(Gupta; 1989: 31).*

b) Fundamental Analysis

Fundamentalists forecast stock price on the basis of economic, industry and company statistic. The principal decision variables ultimately take form of earnings and value with as risk-return framework based upon earning power and the economic environment.

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 assets. " 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 that 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 market prices will adjust towards the new values.

"Fundamental analysts delve into companies' earnings, their management, economic outlook, firms' competitor's market conditions and many other factors".

Fundamental analysis approach involves working to analyze different factors such as economic influences, industry factor, governmental actions, firm's financial statement, its competitor and pertinent company information like product demand, earnings, dividends and management in order to calculate and intrinsic value for firms' 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 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 matter that is relevant to company.

Under fundamental analysis various models have been formulated for the pricing of the security. Out of them some models have been reviewed as follows:

Capital Assets Pricing Model (CAPM)

The basic foundation of the theory was laid down in the microeconomics studies of mean variance choice by Markowitz (1959) and Tobin (1958). The critical extension to equilibrium in the capital market, and the development of the CAPM, was accomplished by Sharpe (1964) and Linter (1965) (Stephen, 1978; 886). Like the portfolio models of Markowitz and Tobin, the Sharpe-Linter asset-pricing model assumes a market of risk-averse consumers who can make portfolio decisions on the basis of the means and standard deviations of one period portfolio returns, implicitly assuming that these standard deviations exist *(Fama; 1971: 30).* The CAPM

substantiated the idea that, in competitive equilibrium, assets earn premium over the risk less rate that increase with their risk, by showing that the determining influence on risk premium is the covariance between the asset and the market portfolio, rather the own or intrinsic risk of the asset *(Stephen; 1978: 886).*

CAPM is concerned with two key questions:

- What is the relationship between risk and return for an efficient portfolio?
- What is the relationship between risk and return for an individual security?

The CAPM is based on the following assumptions:

- Individuals are risk averse.
- Individuals seek to maximize the expected utility of their portfolios over a single period planning horizon.
- Individuals have homogeneous expectations they have identical subjective estimates if the means, variances and co-variances among returns, expected returns and standard deviations.
- Individual can borrow and lend freely at a risk free rate of interest.
- The market is perfect; there are no taxes, there are no transaction costs; securities are completely divisible; the market is competitive.
- The quantity of risky securities in the market is given.

J.E. Walter's Model

As per the study of J.E. Walter on the relationship of dividend and stock price, dividend policy of a firm affects its stock price. The relationship between firm's internal rate of return and cost of capital are the determining factors to retain profits or distribution of dividend. The stock price will be increased with the increase in the retention ratio of the firm when the internal rate of return is greater than the cost of capital. Thus, as per Walter zero dividend policy will maximize the market value of share for growth firms.

Assumptions of Walter's model:

- Retained earnings constitute the exclusive sources of financing. The firm does resort to debt or equity financing.

- The firm's internal rate of return and its cost of capital are constant.
- Value of earning per share (EPS) and dividend per share (DPS) are remaining constant.
- The firm has perpetual life.
- The firm distributes its entire earnings or retains it for immediate reinvestment.

The relationship between stock price and dividend varies on the following stages:

a) Growth Firm (r>k)

If the firm's internal rate of return exceeds the cost of capital, such firms are known as growth firms. The relationship between dividend and stock price is negative on such firms. It means that more dividends leads to decrease in stock price and zero dividends will maximize the market value of shares for such growth firms.

b) Normal Firm (r=k)

If the firm's internal rate of return and cost of capital are equal, such firms are called normal firms and there is no role of dividend on such firm's stock price. Dividend payout ratio does not affect the value of share whether the firm retains the profit or distributes dividend.

c) Declining Firm (r<k)

If the firm's internal rate of return is less than cost of capital, such firms are known as declining firms. The relationship between dividend and stock price is positive that is increase in dividend per share leads to increase in stock price of such firms.

Thus, Walter concluded that when the firm is in growth stage then dividend is negatively correlated with price. Similarly, in normal firm there is no relationship between dividend and stock price. In the same way, there is positive relationship between dividend and price of stock in declining stage of firm.

Garden's Model

As per the Garden's Model about relationship of dividend policy and stock price, investors are not indifferent between current dividends and retention of earnings. An increase in dividend payout ratio leads to increase in the stock prices for the reason that investors consider the

dividend yield is less risky than the expected capital gain. Similarly, investors required rated of return increases as the amount of dividend decreases. This means that there exists a positive relationship between the amount of dividend and the stock prices.

The model is based on the following assumptions:

- The firm is an all-equity firm.
- No external financing is available.
- Internal rate of return (r), appropriate discount rate (Ke) are constant.
- The firm and its stream of earnings are perpetual.
- The corporate tax does not exist.
- The retention ratio (b) once decided upon is constant. Thus the growth rate (g=br) is constant forever.
- The discount rate is greater than growth rate, K>g.

As per this mode, the relationship between stock price and dividend varies on the following stages:

a) Growth Firm (r>k)

In case of growth firm, the share price tends to decline in correspondence wit increase in payout ratio or decrease in payout ratio or decrease in retention ratio. It means high divided leads to increase in share prices. Therefore, dividends and stock price are negatively correlated in such firms.

b) Normal Firm (r=k)

The price of share remains constant regardless of change in dividend. It means dividend and stock price are free from each other in normal firm.

c) Declining Firm (r<k)

The share price tends to rise in correspondence with rise in dividend payout ratio. It means divided and stock prices are positively correlated with each other in a declining firm.

ii) Efficient Market Theory

In a competitive market, the equilibrium price of any goods or services at a particular movement in time is such that the available supply is equated to the aggregate demand. This price represents a consensus of members trading in the market about the true worth of the good or service, based on all publicly available information. As soon as a new piece of relevant information becomes available, it is analyzed and interpreted by the market. The result is a possible change in the existing equilibrium price. The new equilibrium price will hold until yet another bit of information is available for analysis and interpretation. "The role of information is two-fold: (a) to aid in establishing a set of security prices, such that there exist an optimal allocation of resources among firms and an optimal location of securities among investors, and (b) to aid the individual investor, who faces a given set of prices, in the selection of an optimal portfolio of securities" *(Breaver; 1972: 408).*

"An initial and very important premise of an efficient market is that there are large numbers of knowledgeable and profit maximizing investors adjust the information rapidly" (Reilly, 1986: 166). “the degree of market efficiency has important implications for the economy and for the investment decision-makers. In an economic sense, it is important that security prices provide accurate signals that can be used to allocate capital resources correctly. Mispriced security results in incorrect allocation of capital" *(Cheney; 1997:746).*

The word "Efficiency" as applied to securities market has unfortunately been used to represent a variety of logically distinct concepts. In particular it means: (a) exchange efficiency (b) production efficiency and (c) information efficiency. In this study, it is concerned only with informational efficiency. "in and efficient market security prices 'fully reflect' available information*" (Fama; 1976: 133).* Regardless of the form of information, it is the key to the determination of stock prices; therefore, it is the central issue of the efficient market concept.

"An efficient market can exist if the following events occur:

- A large number of rational, profit-maximizing investors exist who actively participate in the market by analyzing, valuing and trading stocks. These investors are price takers; that is, one participant alone cannot affect the price of a security.

- Information is free of cost and widely available to market participants at approximately the same time.
- Information is generated n a random fashion such that announcements are basically independent of one another.
- Investors react quickly and accurately to the new information, causing stock prices to adjust accordingly" *(Charles; 1943: 425).*

In such a market, the current prices of a security obviously "Fully Reflect" all available information. Similarly, " in a perfect and competitive economy compared of rational individual with homogeneous beliefs about future prices, by any meaningful definition present security prices must fully reflect all available information about future prices" *(Rubinstein; 1975:812).*

In an efficient market, market participants, acting in their own self-interest, use available information to attempt to secure more desirable (higher returns, ceteris paribus) portfolio position. In doing so they collectively ensure that price movements in response to new information are instantaneous and unbiased and will 'fully reflect' all relevant informational. Competition among participants to secure useful information will drive security prices from one equilibrium level to another so that the change in price in response to new information will be independent of the prior change in price. Price change will be random walk in response to the information.

"In an idle efficient market, everyone knows all possible-to-know information simultaneously, interprets it similarly, and behaves rationally" *(Bhalla; 1974: 2).* In such a world, the only price change that would occur is due to the result from new information. In such a market, all prices are correctly stated and there are no "bargains" in the stock market. "Efficiency in this context means the ability of the capital markets to function so that prices of securities react rapidly to new information. Such efficiency will produce prices that are appropriate in terms of current knowledge, and investor's will be less likely to make unwise investments. A corollary is that investors will also be less likely to discover great bargains and thereby earn extraordinary high rates of return" *(Bhalla; 1974: 3).*

The conclusion is that – "In an efficient market there are neither free lunches nor expensive dinners. It is not possible to systematically gain or lose abnormal profits from trading on the basis of available information" (Weston and Copland, 1996: 93-94). No one can consistently do better than the average. "Efficient market theorists' believe that some do better than the average." Efficient market theorists believe that some do better than average because of luck. In fact they suggest that the 'traders' – those who buy and sell their stock frequently – do less well that the stock market averages by an amount equal to the commissions they pay" *(Garman and Eckert; 1985:58).*

One set of test of market efficiency examines the informational efficiency of security prices. Existing model of efficient markets imply that all relevant information regarding given stock is reflected in its current market price. This notion of market efficiency can be divided in to three categories based on type of information used in making market decisions. They are explained as follows:

a) Weak form Market Efficiency

"Weak form market efficiency hypothesizes hat today's security prices fully reflect all information contained in historical security prices. This implies that no investor can earn excess returns by developing trading rules based on historical price or return information" *(Weston and Copland; 1996:94).*

b) Semi-strong Form Market Efficiency

It says that security prices fully reflect all publicly available information. Thus, no investors could earn excess return using publicly available resources such as corporate annual reports, NEPSE price information or published investment advisory reports. It contains all publicly available data such as earnings, dividends, stock split announcements, new products development, financing difficulties and accounting changes. A market that quickly incorporates all such information into prices is said to be semi-strong efficient. "It the semi-strong hypothesis is true, then only a few than what could be earned by using a naïve buy-and-hold strategy" *(Francis; 1986: 608).*

c) Strong form Market Efficiency

"The most stringent form of market efficiently is the strong form, which asserts that prices fully reflect all information, public and non public*" (Jones; 1943: 429).* In such kind of market, no group or investors should be able to earn, over a reasonable period of time, excess rates of return by using publicly available information in a superior manner. An extreme version of the strong form holds that all non public information, including information that may be restricted to certain groups such as corporate insiders and specialists on the exchanges, is immediately reflected in prices. In effect, this version refers to monopolistic access to information by certain market participants.

These three hypotheses are not mutually exclusive; they differ only in the degree of market efficiency. It is notable point that a semi-strong efficient market encompasses the weak form of the hypothesis because price and volume data are part of the larger set of all publicly available information. Strong-form efficiency encompasses the weak and semi-strong forms and represents the highest level of market efficiency. It is necessary for the weak form hypothesis to be true in order to the semi-strong and strong form hypothesis to be true.

2.1.9 Financial Market in Nepal

Financial market plays a vital role in the economy and efficient distribution. The history of financial market in Nepal is no long and it is growth position. The development place of share market is not completely satisfactory compared to the development and emergence of various financial and non- financial institutions.

The system of lending and borrowing in an organized way is prevalent in Nepal since the ancient time. Substantial portion of rural credit is available for everybody from unorganized sectors. The system of providing loan through the organized sectors was initiated by Tejarath Adda established in 1 993 B.S. The scope of this institution, which made loans available only to the government employees in the beginning, was limited. The system of collecting deposit and granting loans in the organized manner has started with the establishment of Nepal Bank Ltd. in 1 994 B.S. The mobilization of funds by selling the securities to the general public had however started with the establishment of' Biratnagar Jute Mill in 1993 B.S. In terms of number and

financial deepening, financial sector is growing remarkably after the introduction of financial sector reform program in the country. This helps in integrating the various sector of the economy. Financial system is slowly bringing significant macro-economic policy transformation effects.

2.1.10 Classification of Financial Markets

There are mainly two type of financial market. First one is money market and second one is capital market. Short-term funds of firm are raised Idiom money market and long and middle term funds of firm's arc raised from secondary market. This can explained below:

a) 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.

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

b) Capital Market

They are Stock market, Bond market, business securities market, government securities market, Primary market and secondary market. 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.(i) 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 Lime 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. (ii) 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 he 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 Registered Stock Market: This type of market is registered in the government agency. There is only one registered stock exchange i.e. Nepal Stock Exchange (NEPSE) in Nepalese securities market. It trades the securities of listed companies firms for the general public. Here, transactions of only listed companies are made.

2.1.11 Constituents of Capital Market in Nepal Introduction of SEBO

Securities Board, Nepal (SEBO) was established on 26 May, 1993 under the provision of the Securities Exchange Act, 1983 which was the first amendment. 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. So, SEBO has identified the policy development. Legal and regulatory reform, standardizing disclosures, bringing enforcement to ensure compliance and promoting broad based market as a priority area to reform. 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 and 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 Chartered Accounts of Nepal (ICAN) and Association of Chartered Accounts of Nepal have vita support in promoting the capital market in the country.

The objectives of the SEBON are:

- To promote and protect the interest of the investors by regulating the issuance sale and distribution of securities and purchase, sale or exchange of securities.
- To supervise, look after and monitor the activities of the stock exchange and other related firms carrying on securities business.
- To render contribution to the development of capital market by making Securities transactions fair, healthy, efficient and responsible.

Introduction of NEPSE The history of securities market began with the flotation of shares by Biratnagar, Jute Mills Ltd. and Nepal Bank Ltd. in 1937. Introduction of the Company Act in 1946, the first issue of Government Bond in 1964 and the establishment of Securities Exchange Centre Ltd. in 1976 were ocher significant development resulting to capital markets. Securities Exchange Centre was established with an objective of faulting and promoting the growth of capital markets. Before conversion into stock exchange it was only the capital market institution undertaking the job brokering, underwriting, managing public issue, market making for government bonds and other financial services. His Majesty's Government, under a program initiated to reform capital market, converted Securities Exchange Center into Nepal Stock Exchange in 1993. Nepal Stock Exchange Center, in short NEPSE, is a non-profit organization operating under Securities Exchange Act. 1983.

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

Board of directors of NEPSE the board of directors of NEPSE consists 9 (Nine) members but the SEBON (Nepal Securities Board) has not nominated their representative since its establishment. Therefore it constitutes 7 directors. The chairman is from the Ministry of Finance. 2 directors are from Nepal Rasira Baik (i.e. Central Bank), one from NIDC and 2 elected from members. The General Manager is the ex-officio director of the Board.

Trading System of NEPSE

NEPSE operates on the 'NEPSE Automated Trading System '(NATS), a fully screen based automated 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.

2.2 Review of Journal and Article

Articles, journal and bulletins are of great significances for thesis writing. So in order to make this study more comprehensive some articles, books etc related to stock price are consulted and reviewed. Louis Bachelors first tested the random walk model in 1990. He tested the model in commodity prices and found that those prices followed a random walk. He present the evidence the commodity of speculation in France was a fair game. He also concluded that certain estimated was unbiased certain estimate of its future price. After the first discovery of the random walk model in 1990 by Louis Bachelors, empirical testing of the model in the stock market prices almost remained stagnant until 1960s.

In the journal of financial economics, summer 1996, entitled *"Commonly in the Determinants of Expected Stock Return by*" Robert A. Haugen and Narden L Baker, they presented with evidence that the determinants of the cross section of expected stock return were stable in their identify and influence from period to period and from country. The determinants were related to risk, liquidity, price level, growth potential and stock price history. Out of sample predications of expected returns, using moving average values for the pay-offs to these firm characteristics were strongly and consistently accurate. Two findings, however, distinguished their paper form others in the contemporary literature. First, the stock with higher expected and realized rate of return was unambiguously of lower risk than the stocks with lower

returns. Second, they found that the important determinants of expected stock returns were strikingly common to the major equity markets of the world. Given the nature of the texts, it was highly unlikely that those results may be attributed to bias or data snooping. Consequently, the result seems to reveal a major failure in the efficient market hypothesis.

Prof. Dr. Radhe Shyam Pradhan (1993), studied the market behavior in Nepal and concluded that large stocks have large PE ratios; large ratios of the market value to book of equity and smaller dividends. PE ratios and dividend ratio are more variable for smaller stocks where as market value to book value of equity is more variable for the large stocks.

Large stocks also have lower liquidity, higher leverage, lower profitability, and lower assets turnover interest coverage stocks. Smaller dividends, lower profitability, lower assets turnover, and lower interest coverage for large stock may be attributed to the fact that most of the large stocks are at their initial stage of operation. Stocks with large market value to book value of equity, large PE ratios and lower dividends PE ratios are more variable for stocks with large market value to book value ratios and dividends ratios are more variable for stocks with smaller market value to book value.

Stocks with large market value to book ratios have lower liquidity, higher leverage, lower earnings, lower turnover and lower interest coverage. However, liquidity and leverage are more variable for stocks with large market value to book value ratios while earnings, assets turnover and interests coverage are more variable for stocks with smaller market value to book value ratios.

Stock with large ratios large PE has large market value to book value of equity and smaller dividends ratios. However, their ratios of market value to book value of equity, and dividends are more variable for smaller stocks than for large stocks. Stocks with large PE ratios have lower liquidity, higher leverage, lower profitability, lower assets turnover, and lower interest coverage. However, liquidity, leverage, earning turnover, and interest coverage are all more variable for stocks with smaller PE ratios as compared to large ones.

Stocks paying higher dividends have higher liquidity, lower leverage, higher earnings and higher turnover and higher interest coverage. However, liquidity and leverage ratios are more variable for the stocks paying lower dividends while earnings, assets turnover and interest coverage is more variable for the stocks higher dividends.

K.C. (2004) has conducted a study entitled "*Development of Stock Market and Economic Growth in Nepal"* based upon the data of ten years. The study reports that the relationship between financial development and economic growth, with focus on developmental role of stock markets has been in debate for sometime in the past. Empirical studies suggest that financial development does matter and stock market do spur economic growth. Unfortunately, in Nepal, despite a history of about half decade of planned economic activities to develop real sector of the country, little attention was paid on the development of financial sectors. In the past one and half decade, financial sector despite, many problems have developed significantly in Nepal.

However, most of the developments were confined to the banking sectors. Stock market has virtually remained stalled because of this priority in the governments' financial reform policies. Various measures of stocks market deployment indicate that the stock market in Nepal is underdeveloped and has failed to show impact on the overall national economy. 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 the stock market in Nepal is highly liquid and risky. Investors tend to avoid stock market because they do not have option to it since stock market is less reliable source of raising funds for them. Due to this, financial system of Nepal has remained basically bank dominated.

Shrestha (2007), "*NRB Monetary Policy and Stock Market Impact"* According to Shrestha monetary policy directly affects stock prices. Taking an example of monetary policy announcement in 2004/05, lie writes "NRB Monetary Policy had an impact on the performance

of stock market as investors were lured into buying shares of commercial banks at higher market price with the expectation that banks would issues bonus shares to increase its capital base to Rs. 100 million. As a result, there had been tremendous demand for shares of commercial banks in every day transaction raising stock market index to unexpected highs."

Dangol (2008) wrote an article about "*Unanticipated Political Events and Stock Returns"*. According to Dangol Nepalese capital market is consistent with information content hypothesis, i.e. market reflects all political events concerned with capital market. Concluding the study he writes, "The study has provided the evidence that the good-news leads to the positive average prediction error. Similarly, the bad-news drifts the negative prediction error on the post announcement period. Finally the data present important evidence on the speed of adjustment of market prices to new political information, i.e. in as many as 2 to 3 days from the announcement date. Thus the Nepalese stock market may be inferred to inefficient, but there is strong linkage between political uncertainty and common stock returns generation."

2.3 Review of Previous Studies

Khadka (2002) entitled "*A Study on Share Price Behavior in Nepal"*. This study is focused on the analysis of the relation of MPS with different financial indicators and the level of risk associated with the common stock investment of the sample companies comprising commercial banks and finance companies. The general public investors do invest their scare saving funds in the common stock of the public companies through primary or secondary market, with the expectation of good returns in the future. The determination of MPS of any public companies should be in accordance with their financial performance. There is not a single financial indicator that has dominant role to determine MPS. The same financial indicator that has significant role in the fixation of MPS for one company is not significant for another company. The degree of interrelationship of MPS with different financial indicators varies from one company to another. There is no uniformly in the relationship of MPS with various financial indicators of the sampled companies

Mainali (2003) conducted the study on "*Share Price Behavior of Listed Commercial Banks"*. He used serial correlation and run test. Which means the market return of today in a NEPSE is affected by the return of yesterday. This cannot show clear picture about share and their relation on behalf of price. He used few techniques to identify share price behavior which are not sufficient. The share price behavior is affected by lots of factor so few technique cannot show their actual behavior. He tries to show share price behavior data from NEPSE price index for certain time which is not sufficient to predict future share price. He presented different techniques in vast way, which is not understandable for general investor. He used natural logarithms, which is difficult to known about finding? Thus he concluded that most of banks are offering cash dividends every year which may not be applicable to other types of non-banking firms, there is a race of investors towards the stock of banking sector.

Dinesh Kumar Khadka (2004), in his thesis on "*Non-Performing Assets of Nepalese Commercial Banks*" has tried to find the impact of non-performing assets and loan loss provision on financial position of the banks. Non-performing assets are non income generating assets, including loans that are past due for 90 days. Non-performing asset could wreck bank's profitability both through a loss of interest income and write of the principal loan amount. The loans are classified according to NRB directives into pass, substandard, doubtful and bad loan. Based on this classification, bank makes the necessary provision against these assets. Nepal Rastra Bank has issued guidelines on provisioning requirements of bank advances where the recovery is doubtful. Banks are also required to comply with such guidelines in making adequate provision to the satisfaction of its auditors before declaring any dividends on its shares.

Paudel (2005), "*Stock Price Behavior of Commercial Banks in NEPSE*" examined monthly closing price of 6 listed commercial banks during the period of three consecutive years from 2002 to 2004 by means of Correlation Coefficient, Regression Analysis, Run Test and Autocorrelation. He found in his study that successive price changes were correlated with previous price series. He also found that 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. There were serious limitations in the study. Data used in this study, monthly closing price of stocks not enough to predict the behavior of share prices.

Mainali (2006) has conducted research on “*A Study on Share Price Behavior of Listed Companies”*. The main objectives of this study were:

- To analyze the behavior of stock price of Listed Companies.
- To examine the stock price trend and volume of stock traded on the secondary market.
- To identify the factors affecting stock price.
- To analyze the investors' view regarding the decision on stock investment.

The following major findings of this study as follows:

- The Share trading system in share market is still uncivilized even in this IT age. Though the volume to trading has increased the number of brokers has not increased. Therefore, for the systematic operation of the share market, the number of brokers should be increased according to the volume of trading.
- Similarly, the automation system has to be put in to practice to make the share market effective and competitive.
- The studies in stock market support the idea that Nepalese stock market is not efficient even in the weak form hypothesis. Nepalese investors are not efficient enough to recognize potential for excess return.

Shrestha (2007) conducted a research on “*A Study on Share Price Behavior in Nepalese Security Market”* to find out the Share price behavior in Nepalese Security Market.
Research methodology:

- Samples covered the periods 1999/00 to 2005/6.
- Used secondary data only.
- Statistical tools such as trend analysis, correlation analysis were used.

Major findings were:

- During the period of 1999/200 to 2005/06, the NEPSE Index has experienced both bullish and bearish trends.

- The monthly trends of NEPSE Index showed that price trends during the observed period were in fluctuating trend which was not better for Nepalese Security Market.
- It was found that there was significant difference between NEPSE Index before and after NRB and NEPSE discouraged margin lending.

Singh (2008), *"A Study on Share Price Behavior of Nepalese Capital Market"* the main objectives of this study were:

- To examine the stock price behavior of the listed companies in NEPSE.
- To study whether the stocks of the sampled companies are overpriced, underpriced or equilibrium priced.
- To examine and evaluate the relationship of MPS with various financial indicators like NWPS. EPS, OPS, etc.
- To study and analyze the investors' view regarding the investment in Nepalese stock market.

The major findings are as follows:

- In the case of Nabil Bank, 99% variation in the MPS is due to the independent variables EPS, NWPS and DPS.
- En the case of Nepal Investment Bank, 93% variation in the MPS is due to the independent variables EPS, NWPS and DPS.
- The variation in the dependent variable MPS is highly dependent on the variation in the independent variable DPS in the case of Nabil Bank and Standard Chartered Rank only, while it does not depend on the variation in DPS in the case of all other sampled companies.
- The common stock of Development Credit Bank is yielding the highest rate of return *(34.5%* **),** whereas the common stock of Oriental Hotels is yielding the lowest rate of return *(-12.5%).*
- The common stocks of all the *25* sampled companies taken for Risk and Return Analysis are overpriced except Development Credit Bank and Nepal Merchant Banking & Finance.

Aryal(2009), *"Stock Price Behavior in Nepalese Capital Market"* with the following main objectives.

- To identify the relationship between market prices of commercial bank's equity shares and EPS, DPS and BPS.
- To examine the effectiveness of LPS, DPS and BPS in determining the market price of the securities.
- To identify the factors affecting the market prices of securities in Nepal.
- To identify problems of securities market in Nepal and suggest measures to correct the existing problems.

Major Findings from Secondary Data:

- MPS of BOK is much volatile in comparison to DPS, BPS and EPS. Bank of Kathmandu has positive correlation between MPS with DPS and EPS, but negative correlation between MPS with BPS. This indicates that they directly affect the Share Price of BOK.
- DPS, BPS and EPS are positively correlated with the MPS in the case of Everest Bank Limited. This indicates that increase in DPS, BPS and EPS increase the market price and vice versa. MPS is much volatile in comparison with OPS, BPS and EPS. In the case of Himalayan Bank Limited, MPS is positively correlated with DPS, BPS and EPS. The volatility of DPS, EPS and BPS seems to be less than MPS

Bhusal (2010) conducted a research on "*An Analysis of Stock Price Validity in Nepalese Stock Market"* to find out the Share price behavior in Nepalese Security Market.

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.

Major findings of the study:

- The correlation coefficients (r) for SCBN between MPS & EPS, MPS & DPS and MPS & NWPS are -0.3636, -0.1499 and -0.2103 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 -0.4926, -0.1996 and -0.6997 respectively which shows there exists negative relation between MPS and these variables
- The correlation coefficients (r) for PFCL between MPS & EPS, MPS & DPS and MPS & NWPS are 0.5938, 0.8068 and 0.5042 respectively which shows there is positive relation between MPS and these variables.
- The correlation coefficients (r) for IIGI between MPS & EPS. MPS & DPS and MPS & NWPS are -0.7823, 0.6692 and *-0.6539* respectively which shows there exists positive relation between MPS and DPS and negative relation between MPS and EPS and NWPS.
- The correlation coefficients (r) for CHCL between MPS & EPS, MPS & DPS and MPS & NWPS are 0.8761, 0.8916 and 0.9491 respectively which shows there is positive relation between MPS and all other variables

Shrestha (2011) conducted a study on "*Stock Price Valuation in Nepal"* The main objectives of this study were:

- To identify of major indicators which affect on determining the MVPS.
- To study signaling and informational effect on share market.
- To analyze the investors awareness regarding stock price in NEPSE. K 2wsx\
- To provide recommendation on the basis of findings.

The major findings of Shrestha are as follows:

- The MPS of SCBNL has been in increasing trend. However, the DPS, EPS and BPS have increased up to the fiscal year 2006/07 and then decreased. The mean MPS, DPS, EPS and BPS are Rs. 4972, Rs. 124, Rs. 145.65 and Rs. 502.27 respectively.
- The MPS of NABIL has decreased in the fiscal year 2008/09, and the trend of DPS, EPS and BPS is same to that of SCBNL. The mean observed MPS, DPS, EPS and BPS of NABIL is Rs. 3794, Rs. 96, Rs. 117.37 and Rs. 362.80 respectively.

- The MPS, DPS and EPS of HBL have decreased in the fiscal year 2008/09, while the BPS has fluctuated in the observed periods. The observed mean MPS, DPS and EPS and BPS is Rs. 1500, Rs. 39.03, Rs. 58.49 and Rs. 247.50 respectively.
- Except MPS and BPS, the DPS and EPS of EBL has followed increasing trend in the observed periods. In average, the MPS of the bank is Rs. 2053, DPS is Rs. 39, EPS is Rs. 77.45 and BPS is Rs. 270.75.

2.4 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. Therefore, here the studies made upon the various related factors that are major are caused of fluctuation of stock price in secondary market. Most of the studies on share price behavior conducted in the context of Nepal were based of secondary sources of information only. No study has been conducted on price fluctuation of stock price by using share brokers and individual investors as primary sources of information. There was a need to conduct a survey with the share brokers and individual investors who are the major stakeholders of the stock market. In order to find out more subjective facts on share price behavior, this cannot be testes through the use.

All the research studies mentioned above about stock movements system are basically related to the behavior movement system of listed companies' transaction activities, findings and all the dissertation have pointed out that there is no suitable stock price fluctuation systems and have recommended for the effective implementing of stock price fluctuation system. Therefore, more extensive testing measures, more close time period and adjustment of necessary variables are need in order to be more conclusive about the efficiency of Nepalese securities market. During the review of previous research, no researchers have taken the concern data and required

variables of securities market of initial periods' activities and used limited information based of sources of secondary data. No researcher has been conducted on price trend related to stock market efficiency by using share brokers and individual investors as sources of information. There were need to conduct a survey with the share brokers and individual investors who are the major stakeholders of the stock market, in order to find out more subjective facts on share price movement behavior which could not tested through the use of secondary sources of data. The earlier studies is based on the randomly selected sample stocks and shown that price of the stocks are mostly influenced by different market related factors but some cases, it is found that the facts deal there were not significant while present study arc based fully paid up, actively traded equity shares related to commercial field and various factors that are the major variables of the fluctuation on the stock market.

This study conduct on various aspects in developed securities market may not entirely be relevant in the securities market of underdeveloped country like Nepal. During the study period used technical method and statistical method such as: risk return analysis, correlation coefficient, and run test for analyzing the NEPSE trends. Furthermore, only few of studies used the very of testing method as used by this research to describe the trends. More than that, only few studies are concern about the financial indicator such as: EPS, DPS&NWPS which are the most influencing factors for the MPS. The earlier study were conducted when the organized stock market was at the initial stage without adjusting necessary information, while the present study is upon the data of after initial stage information of NEPSE related to securities exchange market.

CHAPTER- III

RESEARCH METHODOLOGY

3.1 Introduction

A methodology is instantiated and materialized by a set of methods, techniques and tools. A tool is an instrument or apparatus that is necessary to the performance of some task. A methodology doesn't describe specific methods; nevertheless it does specify several processes that need to be followed. These processes constitute a generic framework. They may be broken down in sub-processes, they may be combined, or their sequence may change. However any task exercise must carry out these processes in one form or another. Methodology may be a description of process, or may be expanded to include a philosophically coherent collection of theories, concepts or ideas as they relate to a particular discipline or field of inquiry. Methodology may refer to nothing more than a simple set of methods or procedures, or it may refer to the rationale and the philosophical assumptions that underlie a particular study relative to the scientific method. For example, scholarly literature often includes a section on the methodology of the researchers (www.wikipedia.com).

3.2 Research Design

Research design is the plan, structure and strategy of investigation conceived so as to obtain answer to research question and to control variance (Kothari, 1994:43). The research design refers to the entire process of planning and carrying out a research study. It describes the general framework for collecting, analyzing and evaluating data after identifying: (I) what the researcher wants to know and (II) what has to be dealt with in order to obtain required information (Wolf and Panta, 2003:74).

The research design is a mixture of descriptive, exploratory, and analytical. A research design is the arrangement of condition for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. Current research applies both descriptive and analytical techniques to determine the determinants

of stock price. It is analytical in the sense that it uses different analytical tools to analyze the investor‘s preferences toward factor affecting stock price similarly it is descriptive in the sense that it clarifies different aspects of investor‘s references. As per the nature of the research primary as well as secondary data have been extensively used

3.3 Population and Samples

The analysis of the determinants of equity price along with their pricing behavior largely depends on the number of such companies listed in the Nepal Stock Exchange (NEPSE) and the trading of their stocks on security market floor. We have already discussed that along with the various factors, the volume of trading of common stock also largely influence in shaping the price of common stock.

To arrive at logical inferences, three major sectors of the stock market are taken under consideration. Here only Banking Sector Company is taken as sample. Though there other development bank, Finance company insurance company and other sectors as well, but due to the low volume and amount of share transaction and insufficient data, other sectors (insurance, Mfg. Sector, service sector) have been ignored, furthermore, the sampling procedures also consider financial status, size, maturity, and market value of listed companies. The samples will be taken using stratified as follows:

1. Standard Chartered Bank Limited (SCB)
2. Nabil Bank Limited (NABIL)
3. Nepal investment Bank Limited (NIBL)

For the research work, only 3 companies as stated above, has been taken as sample companies out of total 32 population. Due to the high volume of share transactions and business volume as well as more contribution to the economy, more than 50% market cover by commercial banks. So here taken only commercial Bank only.

3.4 Sources of Data

This study based on both primary and secondary data. The primary data and information are collected through questionnaire survey. Direct interview and mail questionnaire method of data collection are employed to collect primary data. To collect the secondary data, published materials are viewed in various spots like books by different authors, unpublished thesis reports, journals, Internet web sites, online library, AGM reports of listed companies, NEPSE, SEBON etc. To collect these secondary data, the researchers visited campus library of SDC, NCC, TU Central library, SEBON library.

3.5 Data Collection Techniques

The researcher has visited the different libraries, concerned companies, NEPSE, SEBO-N and other useful book stores; and collected related publications and periodicals. Official websites were searched in order to collect required information. Furthermore, secondary data related to common stocks of concerned companies have been downloaded from the official website of NEPSE, http://www.nepalstock.com.

3.6 Data Analysis Tools

The data collected from various sources leads to the logical conclusion, only if the appropriate tools and techniques are adapted to analyze such data. The collected data has been no meaning, if such data are not analyzed. To analyze the data in this research, the researcher has used some statistical and financial tools as required to the nature of data and primary data are used as questioner methods.

3.6.1 Financial Tools

i) 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.

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

ii) Earnings per Share

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

$$\text{EPS} = \frac{\text{Earning Avilable to Common Stock Holders}}{\text{No of Common Stock Outstanding}}$$

iii) Dividend per Share

Roth 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 Total Dividend Paid/No. of Shares Outstanding.

$$\text{EPS} = \frac{\text{Total Dividend Paid}}{\text{No of Common Stock Outstanding}}$$

3.6.2 Statistical Tools

In this study, some important statistical tools have been used to present and analyze the data for achieving the objectives. Such as coefficient of correlation between different variables, trend analysis of important variables as well as hypothesis test (t-statistic) has been used, which are presented below:

- Arithmetic Mean
- Standard Deviation (S.D)

- Coefficient of Variation (C.V)
- Correlation Coefficient (r)
- Coefficient of Determination
- Regression Analysis
- Probable Error(P.E)

Statistical Tools

i)Arithmetic Mean

Arithmetic mean is the average return over periods. Arithmetic mean of a given set of observation is their sum divided by the number of observations. To illustrate it, let's suppose that X_1, X_2, X_3 …….. X_n denote return of given 'n' number of respondents and X is the arithmetic mean of the given observation.

It is calculated by,

$$\overline{X}= \frac{X_1+X_2+X_3+..X_n}{n} \text{ or } \overline{X} - \frac{\sum^n Xt}{n}$$

Where, X = Arithmetic mean, $X_1+X_2+X_3…….X_n$= Set of observations, ΣX = Sum of all the values of the variable X and n = Number of observation.

ii) Standard Deviation (S.D)

The standard deviation is an important and widely used measure of dispersion. The measurement of the scatter news of the mass of figure in a series about an average is known as dispersion. The greater the amount of dispersion is greater the standard deviation. A small standard deviation means a high degree of uniformity of the observation as well as homogeneity of a series; a large standard deviation means just the opposites it is denoted by the letter σ.

$$\text{S.D. } (\sigma) = \sqrt{\left(\frac{X_1^{\,2}}{N_1} - \left\{ \frac{X_1}{N_1} \right\}^2 \right)}$$

Where,

N = Number of Observations

X = Expected Return of the Historical Data

iii) Coefficient of Variation

The standard deviation is absolute measures of dispersion; whereas the coefficient of variation (CV) is a relative measure. It is the standard deviation divided by the expected return, which measures risk per unit of return. It provides a more meaningful basis for comparison when the expected returns on two alternatives are not the same. If investors believe that the rate of return should increase as the risk increase, then the coefficient of variation provides a quick summary of the relative trade-off between expected return and risk. It is hence used to compare the variability between two or more series.

$$\text{Coefficient of variation (CV)} = \frac{\sigma}{\overline{X}}$$

iv) Correlation Coefficient (r)

When the relationship is of quantitative nature, the appropriate statistical tool for discovering and measuring the relationship and expressing it, in a brief formula is known as 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, the correlation is said to be negative, but the correlation coefficient always remains within the limit of +1 to –1. By Karl Pearson, the simple correlation coefficient (between two variables, say X and Y) is given by,

$$r_{xy} = \frac{\text{Cov}(X,Y)}{\sigma_X \sigma_Y}$$

Or,

$$r_{XY} = \frac{N \times \sum XY - \sum X \times \sum Y}{\{N(\sum X)^2 - \sum X^2 - N(\sum Y)^2 - \sum Y^2\}^{\wedge 1/2}}$$

Where, r_{xy} is the correlation coefficient between two variables X and Y.

'r' lies always between +1 and -1

- When 'r'= +1, there is perfect positive correlation.
- When 'r'= -1, there is perfect negative correlation.

- When ‘r’ = 0, there is no correlation.
- When ‘r’ lies between 0.7 to 0.999 (or -0.7 to -0.999) there is high degree of positive or negative correlation.
- When ‘r’ lies between 0.5 and 0.699, there is a moderate degree of correlation.
- When ‘r’ is less than 0.5, there is low degree of correlation.

v) Coefficient of Determination

The coefficient of determination between the two variable series is a measure of linear relationship between them and indicates the amount of one variable which is associated with or accounted for another variable. It gives the percentage variation in the dependent variable that is accounted for by the independent variable. Moreover, it gives the ratio of the explained variance to the total variance and it is given by square of the correlation coefficient, i.e. r^2 *(Gupta; 1999: 585).*

Thus,

$$r^2 = \frac{\text{Explained Variance}}{\text{Total Variance}}$$

vi) Regression Analysis

Simple Regression Analysis

Regression is the estimation of unknown values or prediction of one variable from known values of other variables. It is a mathematical measure of the average relationship between two or more variables in terms of the original units of the data. The known value which is used for prediction (or estimation) is called independent (or regressed or predictor or explanatory) variables and the unknown value that we are going to predict is called dependent (or regressed, predicted or explained) variable *(Pant and Chaudhary; 1997: 237).*

Line of regression of X on Y

The line of regression of X on Y is the line which gives the best estimates of X for any given amount of Y. The regression equation is expressed as:

$Y = a + bx$

We shall get the normal equation for estimating ‘a’ and ‘b’ as:

$\sum Y = na + b \sum x$ ……. (i)

$\sum XY = a\sum X + b\sum x$ ……. (ii)

Where,

Y = The value of dependent variable, a = Y-intercept, b = Slope of the trend line/coefficient of regression and X = Value of independent variable.

Vii) Probable Error (P. E)

Probable error is measured for testing the reliability of an observed value of correlation coefficient. It is computed to find the extent to which it is dependable. If correlation coefficient is greater than 6 times P.E the observed value of r is said to be significant, otherwise nothing can be concluded with certainty. But if the calculated (r) is less than the P.E correlation is not at all significant. It is calculated by using following formula:

$$P.E = 0.675 \times \frac{1 - r^2}{\sqrt{N}}$$

Where,

P.E. (r) = Probable error of correlation coefficient

r = Correlation coefficient

n = Number of observations

CHAPTER - IV

PRESENTATION AND ANALYSIS OF DATA

The presentation and analysis of data consists of organizing, tabulating, performing statistical analysis and financial analysis. 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. MPS, EPS and DPS), 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.

4.1 Analysis of Financial Indicators

4.1.1 Market Price per Share (MPS)

The rate which is treated in secondary markets is known as market price of share (MPS). It is calculated through average price of annual high rate and lower rate of the particular stock. In the case of Nepal MPS is calculated by taking the average of the highest and the lowest market price of Nepal Stock Exchange (NEPSE).

Table 4.1

Analysis of Market Price of Share (MPS)

Name / Years	SCBL	NABIL	NIBL
2006/07	5900	5050	1729
2007/08	6830	5275	2450
2008/09	6010	4899	1388
2009/10	3279	2384	705
2010/11	1800	1252	505
Average	4763.8	3772	1355.4
SD	2127.316	1832.987	788.1924
CV (%)	44%	49%	58%

Source: Annual Report of Respective Bank

The above table 4.1 presents the MPS of the four sample companies for the period of fiscal year starting from 2006/07 to 2010/11. It shows that MPS of the companies in increasing order 2006/07 and 2007/08 then decreasing from 2008/09 .

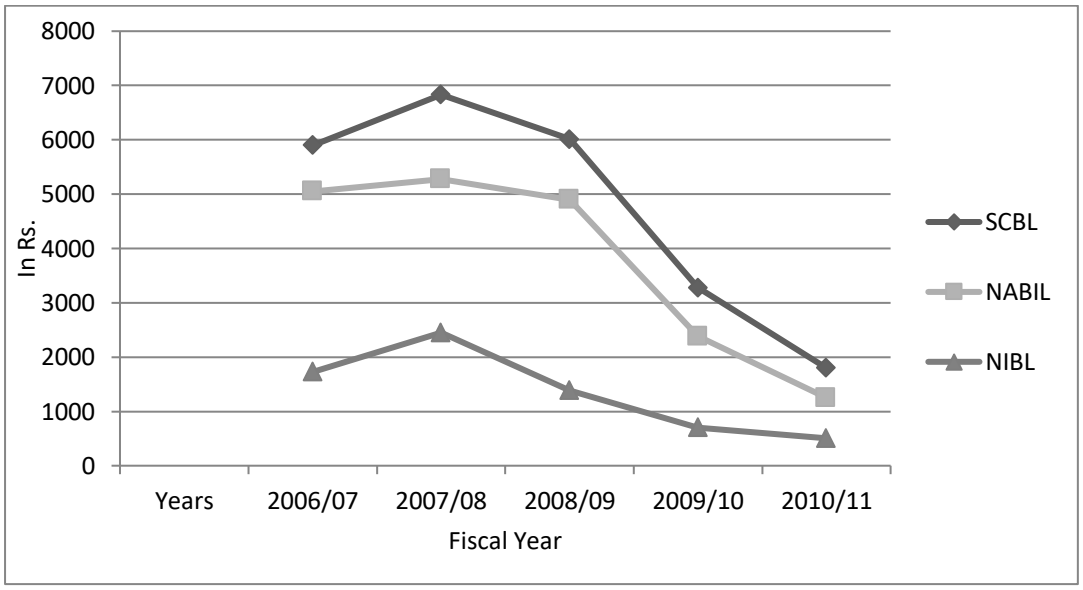
The average MPS of SCBL is Rs. 4763.8. The MPS of the company is above the average MPS in three fiscal years except 2009/106 and 2010/11. The MPS of the company ranges between Rs. 1800 to Rs.5900. Highest MPS in fiscal year 2007/08 and the lowest MPS in fiscal year 2010/11. Standard Deviation of MPS of SCBL is 2127.316 and its CV is 44%. The cross-section analysis shows the company is always below the pooled average in all fiscal years.

The average MPS of NABIL is Rs.3772. The MPS of the bank is above average in 2006/07 ,2007/08 and 2008/09. The NABIL was lowest MPS is 1252 in 2010/11 and highest MPS is 5275 in 2007/08. The Standard Deviation of MPS of NABIL is 1832.987and its CV is 49%which is higher than that of SCBL. That means the MPS of NABIL is more fluctuating than that of SCBL. The cross-section analysis shows that the bank is lower than the Pooled average EPS.

Likewise, the average MPS of NIBL is Rs. 788.1924. The MPS of the company is above average MPS in 2006/07 ,2007/08 and 2008/09. The MPS of the company range from Rs. 505 to Rs.1729. The MPS was highly decreased to RS. 505 in 2010/11. The Standard Deviation of MPS of the NIBL is 788.1924 and its CV is 58%. That means the MPS of NIBL is more fluctuate than SCBL and NABIL. The cross-section analysis shows that the bank is above the pooled average MPS.

Figure 4.1

Market Price of Share in Fiscal Year 2005/06 to 2009/10



In above figure 4.1, show the MPS of all sample Company. The OX axis indicates the sampling years and OY axis indicates the MPS amount. All bank MPS is decreasing then beginning amount. In above figure shows the SCBL is higher MPS all fiscal years and the NIBL is lowest MPS amount in every sampling year except 2007/08. NIBL MPS is less volatile then the other all sampling banks..

4.1.2 Earning Per Share (EPS)

In business organization performance and success is measure by earning capacity of the company. Lower earning shows weak position and higher earning show strength position of the business organization.

Table 4.2

Analysis of Earning Per Share (EPS)

(In Rs.)

Name / Years	SCBL	NABIL	NIBL
2006/07	167.37	137.08	62.57
2007/08	131.92	115.86	57.87
2008/09	109.99	113.44	37.42
2009/10	77.65	83.81	52.55
2010/11	69.51	70.67	48.84
Average	111.288	104.172	51.85
SD	40.1543	26.65725	9.60
CV (%)	36%	25%	18%

Source: Annual Report of Respective Bank

The above table 4.2 presents the EPS of the three sample companies for the period fiscal year starting from 2006/07 to 2010/11. Above table shows the EPS of company first increasing order and decreasing order. The EPS of SCBL is also increasing order till 2007/078 then decreasing at 2010/11. Its average EPS is 111.288. The EPS of the bank is above average in 2006/07 ,2007/08 and 2008/09 and SD of EPS of SBL is 40.1543 and its CV is 36%. The cross section analysis shows that the bank is always above the pooled average EPS.

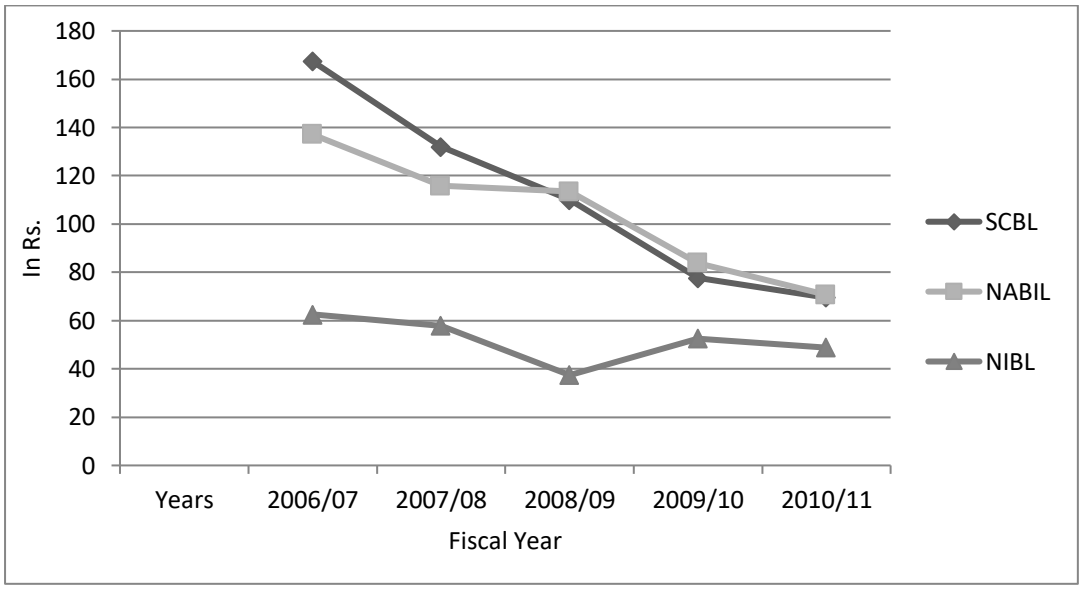
Likewise, the average EPS of NABIL is Rs. 104.172. The EPS of the company is above average EPS in 2006/07 ,2007/08 and 2008/09. The Standard Deviation of EPS of the NABIL is 26.65725

and its CV is 25%. That means the EPS of NABIL is less fluctuates than SCBL. The cross-section analysis shows that the bank is higher the pooled average EPS.

In the same way, the average EPS of NIBL is Rs. 51.85 The EPS of the company range from Rs.37.42 to Rs. 62.57. The Standard Deviation of EPS of the NIBL is 9.60and its CV is 18%. That means the EPS of NIBL is less fluctuating than SCBL, and NABIL. The cross-section analysis shows that the company is always below the pooled average EPS.

Figure 4.2

Earning Per Share in Fiscal Year 2006/07 to 2010/11



In above figure 4.2 shows the EPS of sample Company. The OX axis shows the sampling years and OY axis shows the EPS amount. Except the NSBI all bank EPS is decreasing then beginning amount. In above shows the NABIL is higher EPS and the NSBI is lowest EPS amount in every sampling years. HBL EPS is less volatile then the other all sampling banks.

4.1.3 Dividend per Share (DPS)

The common shareholders received the amount from company which is paid on a per share basis is generally Dividend per share (DPS). DPS shows what amount exactly paid to the common shareholders. It is calculated by dividing the dividend provided to equity shareholders by the total number of equity shares of particular company.

Table 4.3

Analysis of Dividend per Share (DPS)

Name / Years	SCBL	NABIL	NIBL
2006/07	80	100	5
2007/08	80	60	7.5
2008/09	50	35	20
2009/10	55	30	25
2010/11	50	30	25
Average	63	51	16.5
SD	15.65	30.083	9.617692
CV (%)	25%	59%	58%

Source: Annual Report of Respective Bank

The above table 4.3 presents the DPS of the four sample companies for the period fiscal year starting from 2006/07 to 2010/11. It shows that DPS of the companies in volatile order. The DPS of SCBL is higher in 2006/07 and 2007/08 year and lower in 2008/09 and2010/11. Its average DPS is 63. The DPS of the bank is above average in 2006/07 to 2007/08 and SD of DPS of SCBL is 15.65 and its CV is 25%. The cross section analysis shows that the bank is always above the pooled average DPS.

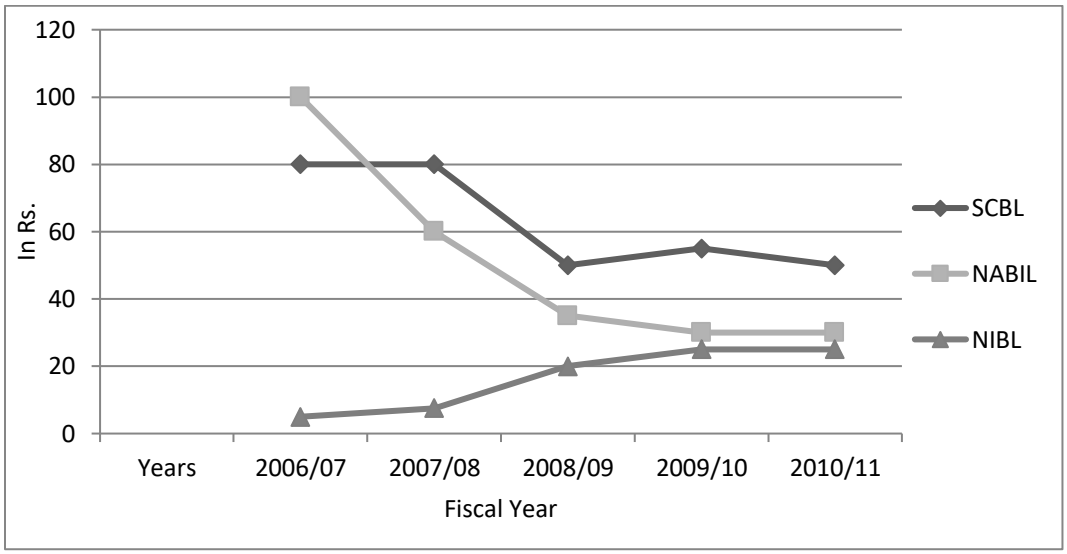
The DPS of NABIL is decreasing order at 2010/11. Its average DPS is 51. The DPS of the bank is above average in 2006/07 and 2007/08 and SD of DPS of NABIL is 30.083 and its CV is 59%. It means the DPS is lower fluctuating then SCBL . The cross section analysis shows that the bank is always above the pooled average DPS.

Likewise, the average DPS of NIBL is Rs. 16.5. The DPS of the company is above average DPS in two years 2008/09 , 2009/10 and 2010/11. The DPS of the company range from Rs. 5 to Rs. 25. The Standard Deviation of DPS of the NIBL is 9.617 and its CV is 58%That means the DPS

of NIBL is more fluctuate than SCBL and NABIL. The cross-section analysis shows that the bank is lower the pooled average EPS.

Figure 4.3

Dividend per Share in Fiscal Year 2006/07 to 2010/11



In above figure 4.3, show the DPS of all sample Company. The OX axis indicates the sampling years and OY axis indicates the DPS amount. All bank DPS is decreasing then beginning amount except then NIBL. In above figure shows the NABL is higher DPS all fiscal years except year 2006/07 . SCBL EPS is less volatile then the other all sampling banks. And in aggregate NABIL pays higher DPS amount then other three .

4.2 Analysis of Statistical Indicators and Variables

4.2.1 Correlation and Regression Analysis

Correlation analysis helps in determining the degree of relationship between two or more variables. The coefficient of correlation is a number which indicates to what extent two variables are related with each other. Its value ranges from -l for perfect negative correlation up to +1 for perfect positive correlation.

4.2.1.1 Correlation between DPS and MPS

Table 4.4

Correlation Coefficient Between DPS and MPS

Banks	r	r^2	P.E.	Relationship	Significant/ Insignificant
SCBL	0.6656	0.4430	0.168	Positive	Insignificant
NABIL	0.6356	0.4039	0.1797	Positive	Insignificant
NIBL	0.4038	0.163	0.25	Positive	Insignificant

Source: Appendix: II

The above table 4.4 explains the relationship between dividend of last year DPS $_{(t-1)}$ and the current MPS of the sample banks. The coefficient of correlation between DPS $_{(t-1)}$ and MPS of SCBL is 0.6656, which shows there is high degree of positive correlation between DPS $_{(t-1)}$ and MPS of SCBL. Likewise, it's coefficient of determination is 0.4430 means, MPS is affected by DPS only by 44.3% and the rest 55.7% is affected by other unknown variables. Since r<6PE, the value of r is not significant.

The coefficient of correlation between DPS $_{(t-1)}$ and MPS of NABIL is 0.6356, which shows there is high degree of positive correlation between DPS $_{(t-1)}$ and MPS of NABIL. Likewise, it's coefficient of determination is 0.4039means, MPS is affected by DPS only by 44.39% and the rest 55.61% is affected by other unknown variables. Since r<6PE, the value of r is not significant.

In the same way, coefficient of correlation between DPS $_{(t-1)}$ and MPS of NIBL is .4038, which shows there is High degree of positive correlation between DPS $_{(t-1)}$ and MPS of NIBL. Likewise, it's coefficient of determination is .163 it means, MPS is affected by DPS by 16.3% and the rest 83.7% is affected by other unknown variables. Since r>6PE, the value of r is significant.

4.2.1.2 Regression Analysis between DPS and MPS

Let the dependent variable MPS is denoted by Y and independent variable DPS is denoted by X, and then the regression equation of MPS on DPS is given by:

$Y= a + bX$

MPS_{SCBL} = 10462.591+ 90.457 x DPS_{NSBI}

MPS_{NABIL} = 8031.75+38.725x DPS_{NABIL}

MPS_{NIBL} = 3073.91+ 33.144x DPS_{NIBL}

Table 4.5

Regression Analysis between DPS and MPS

Banks	No. of Obsv. (n)	Constant (a)	Regression Coefficient (b)	T-value
SCBL	5	10462.591	90.457	0.2105
NABIL	5	8031.75	38.725	0.1944
NIBL	5	3073.91	33.144	0.10255

Source: Appendix: II

In above table 4.5, shows the relation between DPS and MPS of selected companies. As far as the regression of MPS and DPS is concerned, the regression coefficient of SCBL, NABIL, and NIBL 90.457, 38.725, and 33.144 respectively. It indicates that a one-rupee increase in DPS leads to an average of Rs 90.457increase in SCBL, Rs. 38.725increase in NABIL and Rs. 33.144 increase in NIBL.

The test of t-statistics aid to conclude that in SCBL the results are insignificant, since the calculated t-value (0.2105) is lower than the tabulated t-value (3.182) at 5% level of significance on 5 degree of freedom.

In NABIL the result is insignificant, since the calculated t-value (0.1944) is higher than the tabulated t-value (3.182), and in NIBL the result is significant, since the calculated t-value (0.10255) is higher than the tabulated t-value (3.182)

4.2.1.3 Correlation between EPS and MPS

Table 4.6
Correlation Coefficient between EPS and MPS

Banks	r	r^2	P.E.	Relationship	Significant/ Insignificant
SCBL	0.8150	0.664	0.2996	Positive	Insignificant
NABIL	0.2262	0.0511	0.2862	Positive	Insignificant
NIBL	0.4038	0.163	0.2524	Positive	Insignificant

Source: Appendix: II

The above table 4.6 explains the relationship between earning per Share of last year $EPS_{(t-1)}$ and Market price per Share of the sample companies. The coefficient of correlation between $EPS_{(t-1)}$ and MPS of SCBLis 0.8150, which shows that there is very high degree of positive Correlation between $EPS_{(t-1)}$ and MPS of HBL. Likewise, its coefficient of determination is 0.664means, MPS is affected by $EPS_{(t-1)}$ only by 66.4% and rest 33.6% by other unknown variables .Since r<6PE, the value of r is not significant.

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In the case of NABIL, it has coefficient of correlation 0.2262, and 0.2862 coefficient of determination. It shows the positive relation of $EPS_{(t-1)}$ and MPS of NABIL and the $EPS_{(t-1)}$ only effect 28.62% of current MPS and rest 71.38% affect other factors so, it is insignificant.

In the same way the coefficient of correlation between $EPS_{(t-1)}$ and MPS of NIBL is 0.4038, which shows that there is low degree of positive Correlation between $EPS_{(t-1)}$ and MPS of NIBL. Likewise, its coefficient of determination is 0.163means, MPS is affected by $EPS_{(t-1)}$ only by 16.3% and rest 83.7% by other unknown variables .Since r<6PE, the value of r is not significant.

4.2.1.4 Regression Analysis between EPS and MPS

Let the dependent variable MPS is denoted by Y and independent variable EPS is denoted by X, and then the regression equation of MPS on EPS is given by:

$$Y = a + bX$$

$MPS_{SCBL} = 12137.73 + 66.2599 \times EPS_{SCBL}$

$MPS_{NABIL} = 4441.72 + 6.429 \times EPS_{NABIL}$

$MPS_{NIBL} = 3073.91 + 33.144 \times EPS_{NIBL}$

Table 4.7

Regression Analysis between MPS and EPS

Banks	No. of Obsv. (n)	Constant (a)	Regression Coefficient (b)	T-value
SCBL	5	12137.73	66.259	0.0332
NABIL	5	4441.72	6.429	0.0562
NIBL	5	3073.91	33.144	0.10255

Source: Appendix: II

Above table 4.7 shows the major output of simple regression analysis of market price per share (MPS) on Earning per share (EPS) of the sample companies. As far as the regression of MPS and EPS is concerned, the regression coefficient of SCBL, NABIL,and NIBL are 66.259, 6.429and 33.144respectively. It indicates that a one-rupee increase in EPS leads to an average of Rs. 66.259 increase MPS of SCBL Rs. 6.429increase in MPS of NABIL, Rs 33.144increase MPS of NIBL bank.

If the other variable remains constant the test of t-statistics aid to conclude that in, SCBL the relationship between MPS and EPS is insignificant as the calculated value of t(0.0332) is lower than tabulated value of t (3.182), in NABIL the results are also insignificant, since the calculated t-value (0.0562) is lower than the tabulated t-value (3.182), in NIBL the results are also insignificant, since the calculated t-value (0.10255) is lower than the tabulated t-value (3.182) and at 5% level of significance on 5 degree of freedom.

4.2.1.5 Correlation between EPS and DPS

Table 4.8

Correlation Coefficient between EPS and DPS

Banks	r	r^2	P.E.	Relationship	Significant/ Insignificant
SCBL	0.08485	.00719	0.04844	Positive	insignificant
NABIL	0. 8418	0.7086	0.0878	Positive	Significant
NIBL	-0.6704	0.449	0.437	Negative	Insignificant

Source: Appendix: II

The above table 4.8 shows the correlation coefficient between EPS and DPS of sample companies. The coefficient of correlation between EPS and DPS of. SCBL is 0.08485, which shows there is positive correlation between EPS and DPS of SCBL. Its coefficient of determination is 0.04844, which means 4.844% of DPS is affected by EPS and rest is due to other unknown factors. Since r<6PE, the value of r is not significant.

The coefficient of correlation between EPS and DPS of NABIL is 0.8418, which shows that there is high degree of positive correlation between EPS and DPS of NABIL. Likewise, its coefficient of determination is 0.7086which means, DPS is affected by EPS only by 70.86% and the rest 29.44% is affected by other variables. Since r>6PE, the value of r is significant.

Similarly, coefficient of correlation between EPS and DPS of NIBL is -0.6704, which shows there is high degree of negative correlation between EPS and DPS of NIBL. Likewise, its coefficient of determination is 0.449 which means, DPS is affected by EPS only by 44.9% and the rest 55.1% is affected by other variables. Since r< 6PE, the value of r is not significant.

4.2.1.6 Regression Analysis between EPS and DPS

Let the dependent variable DPS is denoted by Y and independent variable EPS is denoted by X, and then the regression equation of DPS on EPS is given by:

$Y= a + bX$

$DPS_{SCBL} = 4800.60 + 00.3307 x EPS_{SCBL}$

$DPS_{NABIL} = 200.09 + 0.95x\ EPS_{NABIL}$

$DPS_{NIBL} = -18.19 + (-0.6691)\ x\ EPS_{NIBL}$

Table 4.9

Regression Analysis between EPS and DPS

Banks	No. of Obsv. (n)	Constant (a)	Regression Coefficient (b)	T-value
SCBL	5	4800.60	0.3307	0.7028
NABIL	5	200.09	0.95	0.3682
NIBL	5	-18.19	-0.6691	-0.2874

Source: Appendix: II

Above table 4.9 shows the simple regression analysis of earning price per share (EPS) on Dividend per share (DPS) of the sample companies. The regression of DPS and EPS is concerned about selected banks SCBL, NABIL and NIBL are 0.3307, 0.95, and -0.6691 respectively. It indicates that a one-rupee increase in EPS leads to an average of Rs 0.3307 increase in DPS of SCBL., Rs. 0.95increase in DPS of NABIL, Rs. -0.6691decrease in DPS of NIBL.

The test of t-statistics aid to conclude that in SCBL the relationship between DPS and EPS is insignificant, since the calculated value of t 0.7028 is lower than tabulated value of t 3.182 at 5% level of significance and 5 degree of freedom, in NABIL the relationship between DPS and EPS is insignificant as the calculated value of t 0.3682is higher than tabulated value of t 3.182, in NABIL also insignificant, since the calculated t-value -0.2874is lower than the tabulated t-value 3.182.

4.3 Primary Data Analysis and Presentation

For collecting primary data a questionnaire having a set of 10 questions are prepared and presented to 50 respondents. The respondents are selected randomly from the group of share-known personalities especially form the share buyer/ purchasers/investors in broker's office and college students. The questions contained variety in types. The questions from 1 to 5 are of multiple choice types in which the respondent were asked to choose the best alternative from the list. Remaining question No. 5(under 6 to 10), are the yes/no type. For the 1st and 3rd objective of the study the questions are prepared and asked to respondents.

4.3.1 Classification of Respondents

A total of 50 respondents were survey randomly to conclude the determinants of share price of Nepalese capital market. Among these, 30 respondents were professional investors of share investment, 18 were potential investors who are willing or invest in share but have not invested yet and rests 2 were market analyzer.

Table 4.10

Classification of respondents

Basis of Classification	**Number**	**Percentage**
Professional Investor	25	50
Potential Investors (Management Students)	15	30
Market Analyzer	10	20
Total	**50**	**100**

(Source: Field Survey 2012; Appendix: I)

4.3.1.1 Factor affects the share price of the Listed Companies

Table 4.11 shows the result of the responses of the first question.

Table 4.11

Factor affects the share price of the listed companies

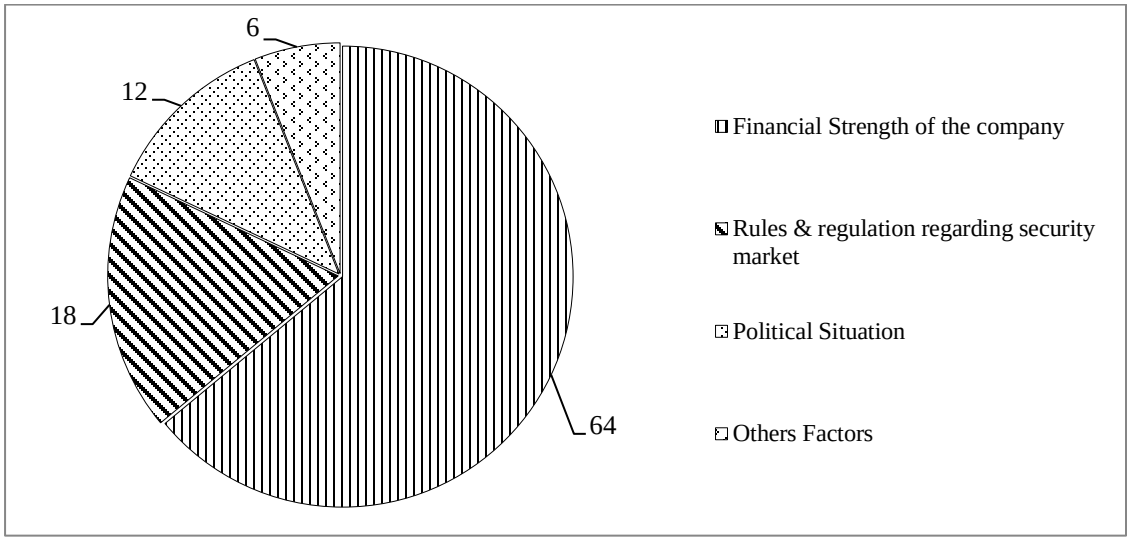
Classification of Respondents / **Response**	**Professional Investor**	**Potential Investors (Management Students)**	**Market Analyzer**	**Total**
Financial Strength of the company	18	14	2	32
Rules & regulation regarding security market	6	3	0	9
Political Situation	4	1	0	6
Others Factors	2	0	0	3
Total	30	18	2	5 0

(Source: Field Survey 2012; Appendix: I)

In above table 4.11 shows the number of respondents and their percentage relating the factor affects the share price of the listed companies. It clearly that majority (64%) the financial strength of the company affects the share price of the listed company. Only 18%, 12% and 6% of the respondent gave the response as Rules & regulation regarding security market, Political Situation, Others Factors respectively. It can be shown in pie-chart (Figure 4.4) as follows:

Figure 4.4

Factor Affects the Share Price of the Listed Companies



4.3.1.2 Purpose of Investment

The following table shows the view of respondents.

Table 4.12

Purpose of Investment

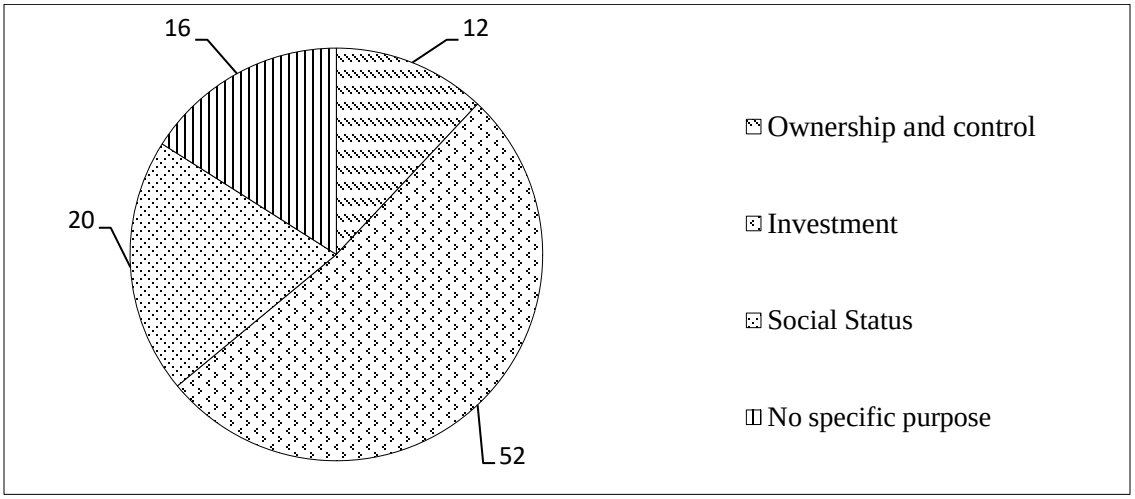
Classification of respondents / Response	Professional Investor	Potential Investors (Management Students)	Market Analyzer	Total
Ownership and control	4	2	0	6
Investment	18	6	2	26
Social Status	6	4	0	10
No specific purpose	2	6	0	8
Total	30	18	2	50

(Source: Field Survey 2012; Appendix: I)

In above table shows the 52 percent (52 %) respondents agree on investment for their transaction of securities. Similarly 20 percent (20 %),16 percent (16 %) and 12 percent(12%) are social status, no specific purpose and ownership and control respectively. We can say maximum transactions are made for investment through survey. Below the figure shows the above respondent.

Figure 4.5

Purpose of Investment



4.3.1.3 Trends of Stock Price Movement

Table 4.13

Trends of Stock Price Movement

Classification of respondents / Response	Professional Investor	Potential Investors (Management Students)	Market Analyzer	Total
Bullish trends	5	4	2	11
Bearish trends	3	2	1	6
No particular trends	16	8	1	25
No idea	6	2	0	8
Total	30	16	4	50

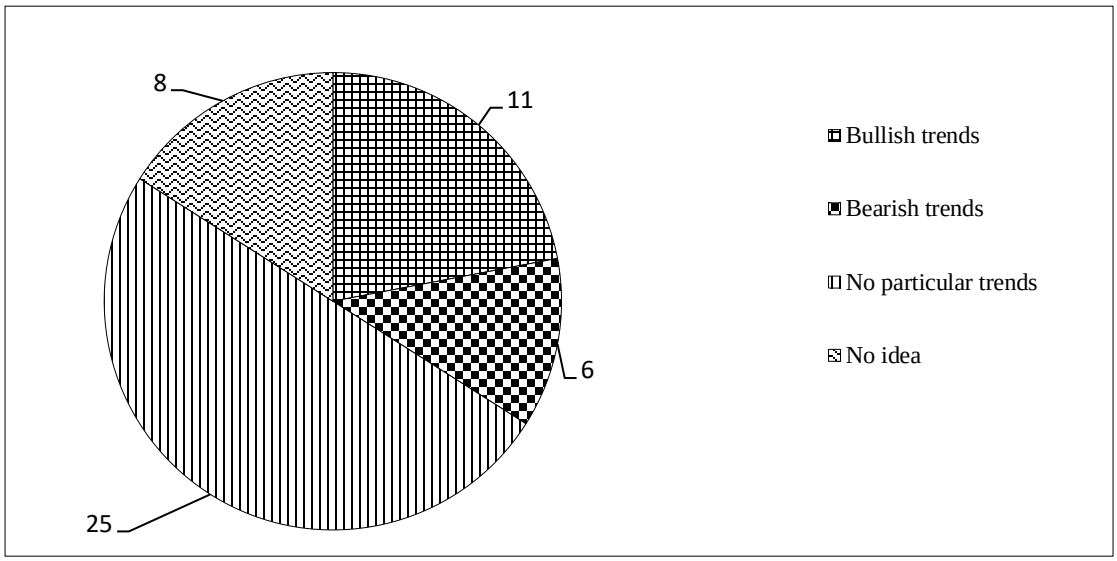
(Source: Field Survey 2012; Appendix: I)

Regarding the suitability trend of the stock price movement in Nepalese security market different investors, NEPSE staff and brokers gave the different opinion about the trend on which 22

percent (22%) gave their opinion towards no particular trend, 50 percent (50%) to no idea, 16 percent (16%) to bullish trend but 22 percent (22%) have bearish trend. The results are shown in the Table 4.12and Figure 4.5

Figure 4.6

Trends of Stock Price Movement



4.3.1.3 Political instability is the major reason for crash in Capital Market'*?*

In the view of Political instability, 50 percent (50 %) of respondents said that general investors have no access to all the information related to stock market, 36 percent (36 %) said yes and 14 percent (14 %) had no idea about this matter. Thus we know that the Security market is information available is in inefficient. It is clearer from the following table.

Table 4.14

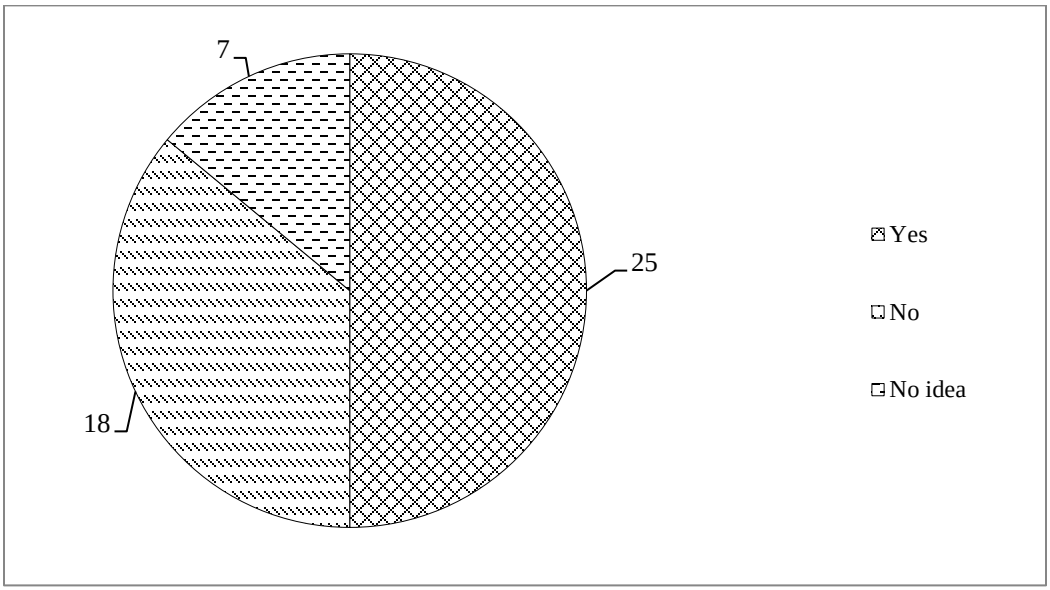
Political instability is the major reason

Classification of respondents / Response	Professional Investor	Potential Investors (Management Students)	Market Analyzer	Total
Yes	18	6	1	25
No	10	7	1	18
No idea	3	4	0	7
Total	31	17	2	50

(Source: Field Survey 2012; Appendix: I)

Figure 4.7

Information Available in Early



4.3.1.5 Factors Considered when Investment Period

The below table 4.14 shows the different factors considered when investment period into the Nepalese capital market.

Table 4.15

Factors Considered When Investment Period

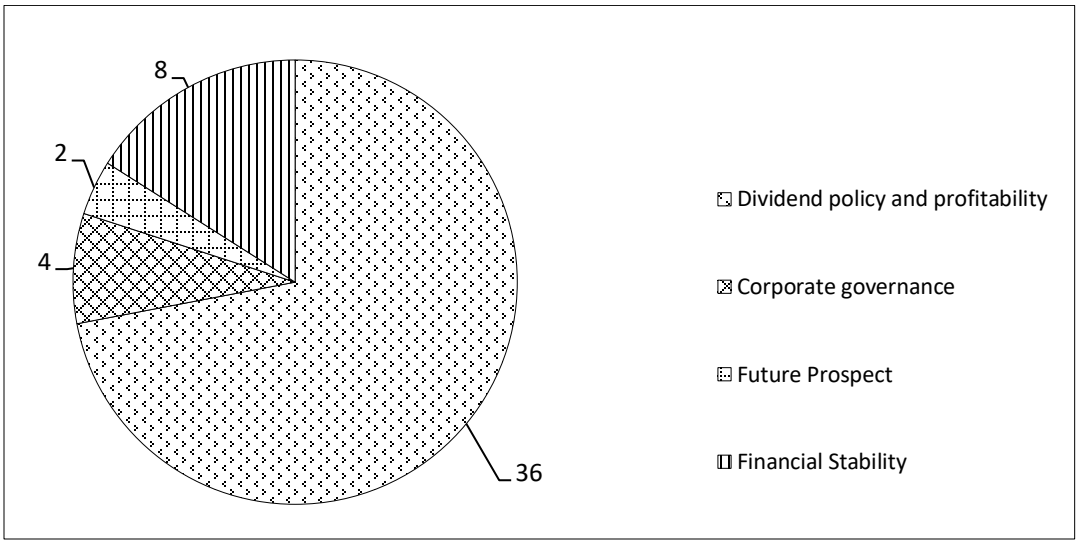
Classification of respondents / Response	Professional Investor	Potential Investors (Management Students)	Market Analyzer	Total
Dividend policy and profitability	22	12	2	36
Corporate governance	2	2	0	4
Future Prospect	2	0	0	2
Financial Stability	3	5	0	8
Total	29	19	2	50

(Source: Field Survey 2012; Appendix: I)

It shows that a slight higher percentage 72% is convinced to declare that dividend policy and profitability. Likewise, 16% of the total respondents stated that financial stability. In the same way 8% said corporate governance and rest 4% said to future prospect.

Figure 4.8

Factors Considered when investment period.



4.3.1.6 Investment Sectors

Table 4.16

Investment Sectors

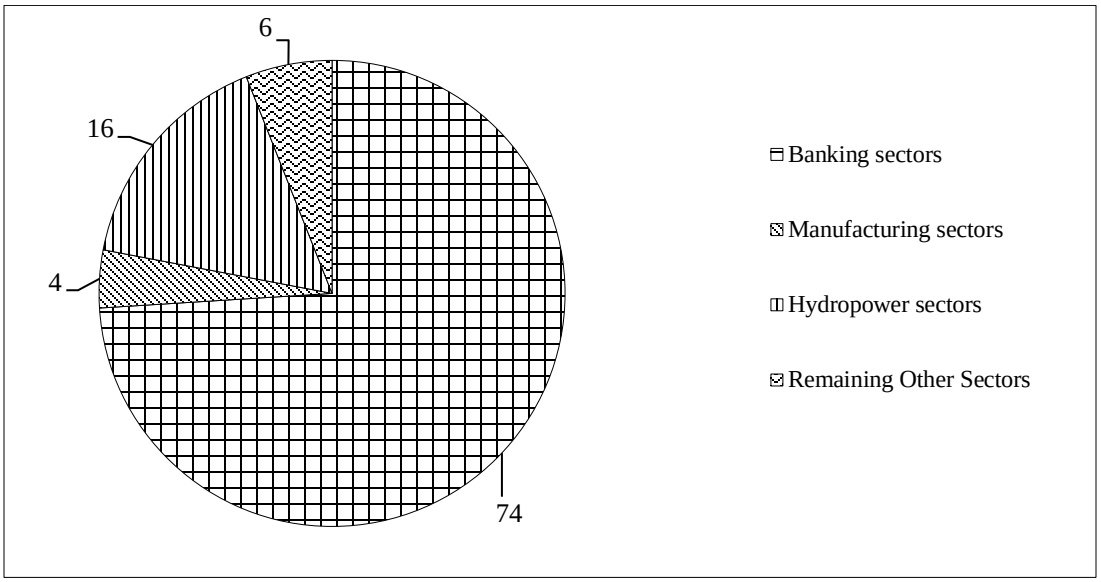
Classification of respondents / Response	Professional Investor	Potential Investors (Management Students)	Market Analyzer	Total
Banking sectors	25	10	2	37
Manufacturing sectors	1	1	0	2
Hydropower sectors	3	5	0	8
Remaining Other Sectors	1	2	0	3
Total	30	18	2	50

(Source: Field Survey 2012; Appendix: I)

In above table shows the respondents view about classification of the different sectors. Majority 74 percent (74 %) agree on the banking sector. In the same way Hydropower sector second alternative16 percent (16 %) agree, like ways 6 percent (6%) and 4 percent (4%) agree on remaining others sectors and manufacturing sectors respectively. So we conclude banking sector is most demanded sectors. Below the pie chart shows the above conclusion

Figure 4.9

Investment Sectors



4.3.1.7 Future Price Movement Through Historical Price

Table 4.17

Future Price Movement Through Historical Price

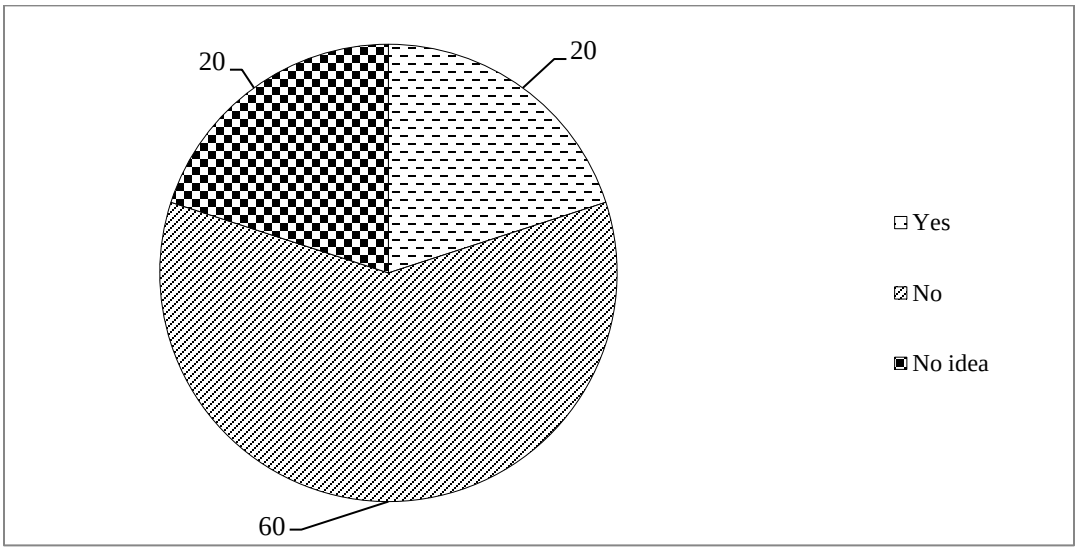
Classification of respondents / Response	Professional Investor	Potential Investors (Management Students)	Market Analyzer	Total
Yes	5	3	2	10
No	23	7	0	30
No idea	2	8	0	10
Total	30	18	2	50

(Source: Field Survey 2012; Appendix: I)

In the contents of future price movement through historical price effect the 20 percentage (20%) conclude yes, 60 percentages (60%) said no doesn't affect future and rest 20 percentages (20%) said no idea about the future price movement. We can conclude the future price movement is little effect the historical price movement. Above table shows the result of future price movement through historical price.

Figure 4.10

Future Price Movement Through Historical Price



4.3.1.8 Difficulties Trading Share on Nepalese Capital Market

Regarding the question whether the trading the share in Nepalese securities market is difficult; 60 percent (60 %) of the investor replied that they have to face many difficulties while trading. 36 percent(36 %) of the investor replied that they have to face no problem. 4percent(4 %) of the investor replied that they have to face no idea Thus it is clear that somehow the investor have problem while trading in security market. Below table and figure shows the clear picture about results.

Table 4.18

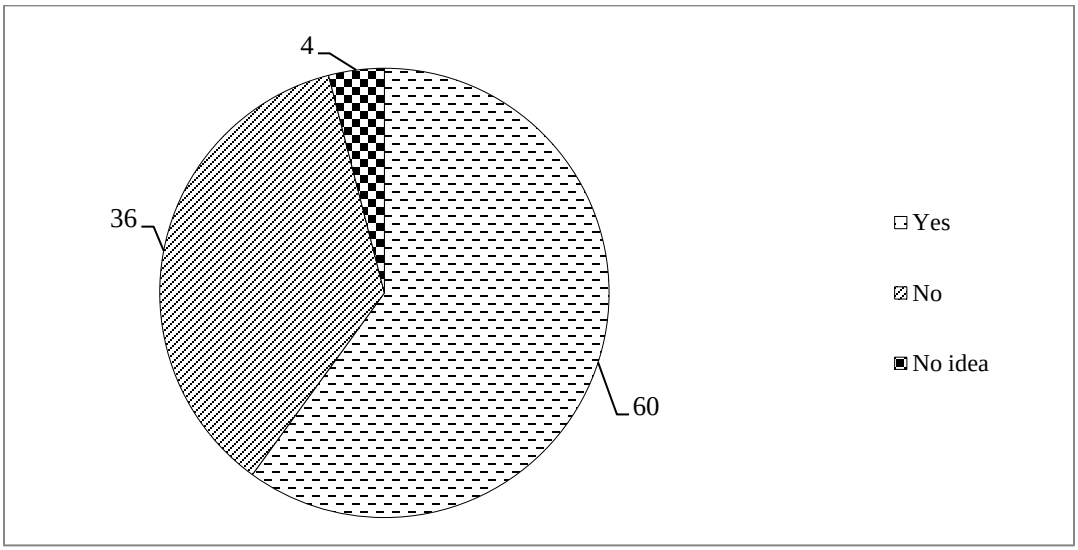
Difficulties Trading Share on Nepalese Capital Market

Classification of respondents / Response	Professional Investor	Potential Investors (Management Students)	Market Analyzer	Total
Yes	16	12	2	30
No	12	6	0	18
No idea	2	0	0	2
Total	30	18	2	50

(Source: Field Survey 2012; Appendix: I)

Figure 4.11

Difficulties Trading Share on Nepalese Capital Market



1.3.1.9 International Environment Affect

Table 4.19

International Environment Affect

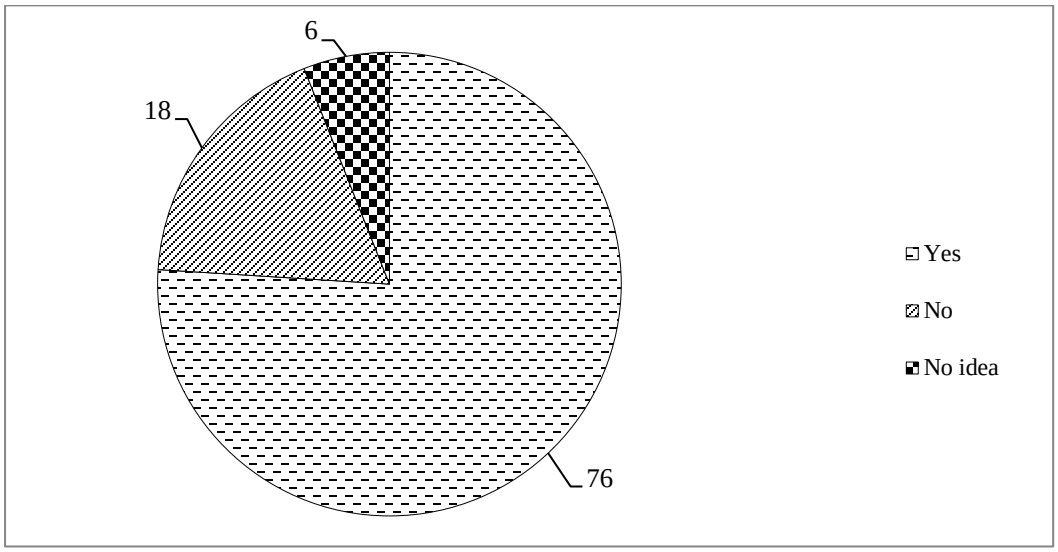
Classification of respondents / Response	Professional Investor	Potential Investors (Management Students)	Market Analyzer	Total
Yes	25	11	2	38
No	3	6	0	9
No idea	2	1	0	3
Total	30	18	2	50

(Source: Field Survey 2012; Appendix: I)

About the environmental factors that affect the Nepalese stock market or not, different individual and institutional investors, brokers, NEPSE staff and SEBON staff gave their own idea, Among them 76 percent(76%) said that environment affect the NEPSE, 18 (18%) percent said it does not affect, 6 percent (6%)said to some extent. Above table shows the view of respondents.

Figure 4.12

International Environment Affect



4.3.1.10 Nepalese stock market are aware of share transaction

Regarding the Nepalese stock market are aware of share transaction effectively asking to the people, 42 percentages (42%) said yes, 50 percentages(50%) said no and remaining 8 percentages (8%)said there is no idea. It seems to be concluding that the Nepal Stock Exchange (NEPSE) and SEBON are not protecting investor effectively. The finding result is shown below table and figure.

Table 4.20

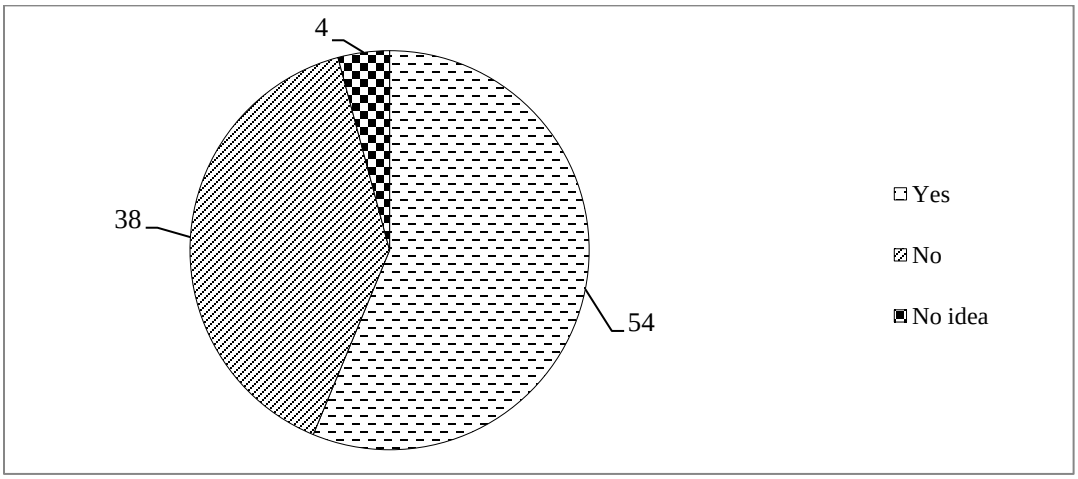
NEPSE & SEBON Protect Investor Effectively

Classification of respondents / Response	Professional Investor	Potential Investors (Management Students)	Market Analyzer	Total
Yes	17	10	0	27
No	11	6	2	19
No idea	2	2	0	4
Total	30	18	2	50

(Source: Field Survey 2012; Appendix: I)

Figure 4.13

NEPSE & SEBON Protect Investor Effectively



4.4 Major Findings of the Study

Major findings of secondary data are as below:

- The analysis of MPS also showed that the average MPS of the MPS had quite high level of fluctuation SCBL Rs 4763.8 NABIL Rs3772, NIBL Rs1355.4. Among the banks under study, SCBL and NABIL had highest level of fluctuation.
- The average earning per share (EPS) of banks did not seem satisfactory except for SCBL and NABIL. The average earning per share is highest RS11.280 of SCBL and lowest Rs 51.85 NIBL
- The correlation between DPS and MPS of NABIL, NIBL are negative and SCBL, is positive correlation with MPS of particular companies.
- Correlation coefficient between EPS & MPS of three banks is insignificant. All are positive relation of EPS and MPS.
- Correlation coefficient between EPS & DPS of NIBL is negative relation of EPS and MPS, rest (SCBL and NABIL) are positive relation. The NABIL is significant and rest SCBL and NIBL, is insignificant.
- Regression Coefficient (b) is highest between DPS and MPS of SCBL and lowest is NIBL. The highest t-value (.70) is SCB and lowest T-value (0.095) is NIBL.
- Regression Coefficient (b) is highest between EPS and MPS of SCBL (66.45) .The highest t-value (0.10) is NIBL..
- Regression Coefficient (b) is highest between EPS & DPS of SCBL (.3307), NIBL have negative regression coefficient. In the case of t-value the SCBL bank has highest t-value (0.70) and the NIB has a lowest (-0.28) t-value.

The findings from the primary data are as follows:

- The factor affect of the listed company share price is Financial Strength of the company 64 percent (64%) then other factors 36 percent (36%).
- The respondents don't want to particular trends of stock market movement.
- Most of respondent's purpose of investment is investment 52 percent (52%) and rest 48 percent (48%) (Ownership and control, Social Status and No specific purpose).
- The suitability trend of the stock price movement in Nepalese security market different investors, NEPSE staff and brokers gave the different opinion about the trend on which 22 percent (22%) gave their opinion towards no particular trend, 50 percent (50%) to no idea, 16 percent (16%) to bullish trend but 22 percent (22%) have bearish trend
- Political instability, 50 percent (50 %) of respondents said that general investors have no access to all the information related to stock market, 36 percent (36 %) said yes and 14 percent (14 %) had no idea about this matter).
- It shows that a slight higher percentage 72% is convinced to declare that dividend policy and profitability. Likewise, 16% of the total respondents stated that financial stability. In the same way 8% said corporate governance and rest 4% said to future prospect
- Majority 74 percent (74 %) agree on the banking sector. In the same way Hydropower sector second alternative16 percent (16 %) agree, like ways 6 percent (6%) and 4 percent (4%) agree on remaining others sectors and manufacturing sectors respectively
- he contents of future price movement through historical price effect the 20 percentage (20%) conclude yes, 60 percentages (60%) said no doesn't affect future and rest 20 percentages (20%) said no idea about the future price movemen%)
- the environmental factors that affect the Nepalese stock market or not, different individual and institutional investors, brokers, NEPSE staff and SEBON staff gave their own idea, Among them 76 percent(76%) said that environment affect the NEPSE, 18 (18%) percent said it does not affect, 6 percent (6%)
- Most of respondents agree on difficulties trading share on Nepalese capital market.
- Future price movement is not through historical price movement.
- Future price movement is not through historical price movement.
- NEPSE & SEBON are not protecting investor effectively.

CHAPTER - V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

In this chapter consists of three sections; first section provide the summary of the study, the second draw the conclusion of the study and final section proposes recommendation to deal with the problems observed on the basis of findings.

5.1 Summary

Capital market is the place where different types of financial securities are traded. The history of securities market began with the floatation of shares by Biratnagar Jute Mills Ltd. and Nepal Bank Ltd. in 1937. The Company Act was introduced in 1964. Government Bonds were issued for the first time in 1964. Securities exchange centre Ltd. was established in 1976 with the objective of facilitating and promoting the growth of capital markets with the initiative of the Government of Nepal and Nepal Rastra Bank.

The Nepalese capital market is in its growing stage. Average citizens and investors have not proper ideas about the capital market, share, book value, par value, market price, pricing mechanism and the factors affecting the market price of shares. Investors are willing to invest, but are not able to do so due to lack of knowledge, in this subject. In spite of that, the listed companies in the capital market are suffering. The policy and view of every major party who ruled the government have different towards capital market. Hence, policy and priority has also changed with changed in government. Government has not given priority for the development of capital market even though it was thirds the priority list in the tenth five-year plan and interim 3-year plan also. Government is not able to create implementation for the capital market development. As a result, there is not adequate transparency in the performances of the listed companies and the capital market due to which the capital market is struggling to become matured. The stock investors have not proper education and information to speculate the share price.

From the primary data analysis, market price of share is affected from different sources in NEPSE are identified. Such internal factors affecting the share price are earnings, book value,

dividend payment, growth rate and risk associated with the company. Similarly, there are other environmental factors (external factors) affecting the market price of share, such environmental factor's affecting the share price is government instability, information, rumors and whims. NEPSE is in primitive stage and it has not significant effect of interest rate, retention ratio, and cost of equity, market liquidity, and change management.

5.2 Conclusion

The capital market is more sensible by other internal of company as well as other external environmental factors. Due to the inadequate knowledge regarding tile share market among Nepalese investors, capital market of Nepal has not been well developed yet. The investors generally tend to earn profit from share and they think that EPS and DPS are prime factor to be analyses and to be considered on investing their savings on share price.

Most investors are unknown to laws and policies regarding share market. Poor rules and regulations as well as ineffective regularity mechanism of market makers are the problems of Nepalese Capital Market. Market price per share of most of the banks is insignificantly correlated with all the indicators (DPS and EPS) in most of the cases. This implies that they individually don't influence the share price but they jointly influence. The commercial bank is the first choice of Nepalese investors. But the lack of systematized and managed regulatory system is required for the further improvement of share market.

On the basis of primary data analysis, it can be concluded that the investors are interested in stock dividend than other factor like interest rate, retention rate, cost of equity etc. Besides, stock dividend the external environment of the nation, like political, economic and environmental instability significantly affects the share price, whereas the global environmental has nothing to do with the price change. Also, the exchange rate, seasonal factors, change in management have insignificant impact on share price. However, the size of the company, rumors and whims, demand and supply significantly affects the share price. Eventually, on the basis of primary data, be concluded that capital market is not well developed in Nepal. Listed companies are not serious about shareholder's interests amid NEPSE and SEBON are not able to protect share holders interest.

5.3 Recommendations

This study is concerned with determination of stock price in Nepalese capital market with listed companies, it may be appropriate to provide a package of suggestion in the light of major findings and conclusions. This study has tried to find out some real facts about price determination of different commercial banks. Based on the above summary and conclusions following recommendation have been provided.

- Since general publics are unaware about the share and share market an organized effort is necessary to aware the publics about it. A separate department in NEPSE or an independent organization is recommended which analyze, inform and create the awareness within the emerging potential.
- The Nepalese stock market (NEPSE, SEBON and NRB) should take some effective initiatives to control random fluctuation of MPS and establish the system of regular monitoring and evaluation of stock market. So that investors would be assured on the NEPSE, SEBON, NRB.
- From the research, it is known that the investors lack the education and information to analyze company's performance and forecast price. So they are recommendation to foster their frontier of knowledge to protect them from loosing, since self- protection is the best protection. They hesitate to demand adequate information from the listed companies and though cheated, accept whatever the management of the companies decides. So they are suggested to raise their voices and complain about such misconducts to SEBON and Ministry of Finance. They are suggested to forecast future price based on not only the company specific factors such as earnings, dividend, timely AGM etc, but also on environmental factors.
- Government should formulate and implement a rigid rules and regulations for the further development of Share Market. A mechanism to take immediate action for the faulty company is to be established.
- The investors are recommended to receive a clear picture of their financial track before investing in the company. They should be alert and aware about the misconduct of relative company, brokers. NEPSE or government. They are required to boost their knowledge up regarding share and share market to get the expected returns from their investment.

- An open policy to encourage and promote foreign investors in share price would be fruitful to strengthen the share market of Nepal considering the fact of present globalization.
- The public companies should provide up-to-date information to the present and potential investors regularly so that they can be an informed investor.

For Future Scope

Capital market is the marketplace where different types of financial securities are traded. The future of capital market is in its developing phase in the context of Nepal. Proper training and education about the market intermediaries is very essential for the overall development of the stock market. This study has enriched the existing literature while it would help policy maker who are interested in deploying instruments of monetary policy and other economic indices for the growth of the capital market.

Sufficient information provided regarding the capital market and stock price helps to promote foreign investors which would be fruitful to strengthen the share market of Nepal in future, considering the fact of present globalization. The governmental policies should also be flexible for this purpose. Thus taking into consideration about the possibilities of future investment the following actions should be taken:

- Educate the people about the market place and stock price
- Attract the foreign investors.
- Make flexible governmental policies.
- Immediate governmental action is required for any kind of false action of any company regarding capital market.

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Web site

www.nrb.net.n

APPENDICES

Appendix - I

Research Questionnaire

Please make tick mark (☑) for the best option

1. Which of the following factors affect the stock price of the listedcompanies?

a) Financial strength of the company ( )

b) Rules and regulation regarding security market ( )

c) Political situation ( )

d) Rumors ( )

2. In your opinion which of the following trend of stock price movement is suitable for Nepalese security market?

a) Bullish Trend ( )

b) Bearish Trend ( )

c) No Particular Trend ( )

d) No Idea ( )

3. Which of the following factor do you consider while making investment decision regarding the stock of a particular company?

a) Profitability and Dividend policy ( )

b) Corporate governance ( )

c) Future prospect ( )

d) Financial stability ( )

4. Which of the following sector do you think secure from investment point of view?

a) Banking sector ( )

b) Manufacturing sector ( )

c) Hydro-power sector ( )

d) Remaining Other Sectors ( )

5. For what purpose do you want to own share of a company?

a) Ownership & Control ( )

b) Investment ( )

c) Social Status ( )

d) No Specific purpose ( )

Yes/No Type

6. Future price changes of a given share can be predicted from historical price changes?

a) Yes ( )

b) No ( )

c) No Idea ( )

7. Does international environment affect the stock price of Nepalese securities?

a) Yes ( )

b) No ( )

c) No Idea ( )

8. Do you think necessary information is easily available in Nepalese stock market?

a) Yes ( )

b) No ( )

c) No Idea ( )

9. Do you think is there any difficulties in trading share in Nepalese stock market?

a) Yes ( )

b) No ( )

c) No Idea ( )

10. NEPSE and SEBON are able to protect investor's interest effectively?

a) Yes ( )

b) No ( )

c) No Idea ( )

Name : ---------- (Optional)

Designation : ---------- (Optional)

Email Address : ---------- -- (Optional)

Respondents View in Details for QN. (1 to 5) (OPTONS)

Q. N.	Variables	Agree on Available Options			
		Option A	**Option B**	**Option C**	**Option D**
1	Factors affect the stock price	32(64%)	9(18%)	6(12%)	3(6%)
2	Trends of stock price movement	10(20%)	5(10%)	27(54%)	8(16%)
3	Factors considered when investment period	33(68%)	5(8%)	3(6%)	9(18%)
4	Investment sectors	37(74%)	2(4%)	8(16%)	3(6%)
5	Purpose of investment	6(12%)	26(52%)	10(20%)	8(16%)

Respondents View in Details for QN. (6 to 10) (YES/NO)

Q.N.	Variables	Agree on Available Options		
		Yes	**No**	**No Idea**
6	Future price movement through historical price	10(20%)	30(60%)	10(20%)
7	International environment affect	38(76%)	9(18%)	3(6%)
8	Information available in early	20(40%)	22(44%)	8(16%)
9	Difficulties trading share on Nepalese capital market	30(60%)	18(36%)	2(4%)
10	NEPSE and SEBON protect investor effectively	25(50%)	21(42%)	4(8%)

APPENDIX-II

Calculation of Correlation Coefficient and Regression Analysis between EPS and MPS

A) SCBL

Calculated table of Correlation Coefficient between EPS & MPS

Year	EPS(X)	MPS(Y)	XY	X^2	Y^2
2006/07	167.37	5900	987483	28012.72	34810000
2007/08	131.92	6830	901013.6	17402.89	46648900
2008/09	109.99	6010	661039.9	12097.8	36120100
2009/10	77.65	3279	254614.4	6029.523	10751841
2010/11	69.51	1800	125118	4831.64	3240000
	∑X=556.44	∑Y=23819	∑XY=2929269	∑X2=68374.57	∑Y2=131570841

Here, N=5

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

$$= \frac{5 \times 2929269 - (556.44)(23819)}{\sqrt{5 \times 68374.57 - (556.44)^2} \times \sqrt{5 \times 131570841 - (23819)^2}}$$

$$= \frac{14646345 - 13253844.36}{\sqrt{341872.85 - 309625.47} \times \sqrt{657854205 - 567344761}}$$

$$= \frac{1392500.64}{179.57 \times 9513.645}$$

r = 0.8150

And,

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

$$= \frac{0.6745 \times (1 - 0.8150^2)}{\sqrt{5}}$$

= 0.2996

Regression equation of X on Y

Y=a + bX

Where, a= Regression constant, b= Regression coefficient (Slope of the Regression line). According to the principal of least square, two normal equations for estimating two numerical constant a & b are given by

$\sum Y = na + b\sum X$, $\sum Y = a\sum Y + b\sum X^2$

Solving two normal equations we get,

$$b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

$$= \frac{14646345 - 13253844.36}{5 \times 68374.57 - (556.44)^2}$$

b= -365.586

Similarly,

$$a = \frac{\sum Y}{n} + b \times \frac{\sum X}{n} \qquad a = \frac{23819}{5} + (-65.586) \times \frac{556.44}{5}$$

= 4763.8-7298.93

= 2535.13

Similarly,

$$t = \frac{r \times \sqrt{n-2}}{\sqrt{1-r^2}} \qquad t = \frac{0.8150 \times \sqrt{5-2}}{\sqrt{1-(\ 0.8150)^2}}$$

= .3320

B) NABIL

Calculated Table of Correlation Coefficient between EPS & MPS

Year	EPS(X)	MPS(Y)	XY	X2	Y2
2006/07	137.08	5050	692254	18790.93	25502500
2007/08	115.86	5275	611161.5	13423.54	27825625
2008/09	113.44	4899	555742.6	12868.63	24000201
2009/10	83.81	2384	199803	7024.116	5683456
2010/11	70.67	1252	88478.84	4994.249	1567504
	∑X=520.86	∑Y=18860	∑XY=2147440	∑X2=57101.46	∑Y2=84579286

Here, N=5

520.86

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

$$= \frac{5 \times 2147440 - (520.86)(18860)}{\sqrt{5 \times 57101.46 - (520.86)^2} \times \sqrt{5 \times 84579286 - (18860)^2}}$$

$$= \frac{10737200 - 9823419.6}{492.689 \times 8197.367}$$

$$= \frac{913780.4}{4038755.705}$$

r = .2262

And,

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

$$= \frac{0.6745 \times (1 - .2262^2)}{\sqrt{5}}$$

0.2862

Regression equation of X on Y

Y=a + bX

Where, a= Regression constant, b= Regression coefficient (Slope of the Regression line)

According to the principal of least square, two normal equations for estimating two numerical constant a & b are given by:

$\sum Y = na + b\sum X$, $\sum Y = a\sum Y + b\sum X^2$

Solving two normal equations we get,

$$b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

$$= \frac{(5 \times 2147440 - (520.86)(18860)}{5 \times 57101.46 - (520.86)^2}$$

b= 6.429

Similarly,

$a = \frac{\sum Y}{n} + \text{b} \times \frac{\sum X}{n}$ $a = \frac{18860}{5} + (6.429) \times \frac{520.86}{5}$

= 3772+669.721

= 4441.72

Similarly,

$\text{t} = \frac{\text{r} \times \sqrt{\text{n} - 2}}{\sqrt{1 - \text{r}^2}}$ $\text{t} = \frac{.2262 \times \sqrt{5 - 2}}{\sqrt{1 - (.22626)^2}}$

=.0562

C)NIBL

Calculated table of Correlation Coefficient between EPS and MPS

Year	EPS(X)	MPS(Y)	XY	X2	Y2
2006/07	62.57	1729	108183.5	3915.005	2989441
2007/08	57.87	2450	141781.5	3348.94	6002500
2008/09	37.42	1388	51938.96	1400.26	1926544
2009/10	52.55	705	37047.75	2761.503	497025
2010/11	48.84	505	24664.2	2385.346	255025
	∑X =259.25	∑Y =6777	∑XY=363615.9	∑X2=13811.05	∑Y2=11670535

Here, N=5

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

$$= \frac{5 \times 363615.9 - 259.25(6777)}{\sqrt{5 \times 13811.05 - (259.25)^2} \times \sqrt{5 \times 11670535 - (6777)^2}}$$

$$= \frac{61142.25}{42.95 \times 3524.90}$$

r = .4038

And,

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

$$= \frac{0.6745 \times (1 - (-.4038)^2)}{\sqrt{5}}$$

= 0.2524

Regression equation of X on Y

Y=a + bX

Where, a= Regression constant, b= Regression coefficient (Slope of the Regression line)

According to the principal of least square, two normal equations for estimating two numerical constant a & b are given by:

$\sum Y = na + b\sum X$, $\sum Y = a\sum Y + b\sum X^2$

Solving two normal equations we get,

$$b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

$$= \frac{61142.25}{1844}$$

b= 33.144

Similarly,

$$a = \frac{\sum Y}{n} + b \times \frac{\sum X}{n}$$

$$a = \frac{6777}{5} + (33.144) \times \frac{259.25}{5}$$

= 1355.4+1718.5

= 3073.91

Similarly,

$$t = \frac{r \times \sqrt{n-2}}{\sqrt{1-r^2}} \qquad t = \frac{.4038 \times \sqrt{5-2}}{\sqrt{1-(.4038)^2}}$$

= .10255

C) SCBL

Calculated table of Correlation Coefficient between DPS & MPS

Year	DPS(X)	MPS(Y)	XY	X2	Y2
2006/07	80	5900	472000	6400	34810000

2007/08	80	6830	546400	6400	46648900
2008/09	50	6010	300500	2500	36120100
2009/10	55	3279	180345	3025	10751841
2010/11	50	1800	90000	2500	3240000
	∑X=315	∑Y=23819	∑XY=1589245	∑X2=20825	∑Y2=131570841

Here, N=5

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

$$= \frac{5\times 1589245-(315)(23819)}{\sqrt{5\times 20825-(315)^2}\times\sqrt{5\times 131570841-(23819)^2}}$$

$$= \frac{7946225-7502985}{\sqrt{104125-99225}\times\sqrt{657854205-567344761}}$$

$$= \frac{443240}{70\times 9513.645}$$

r = 0.6656

And,

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

$$= \frac{0.6745\times(1-.6656^2)}{\sqrt{5}}$$

= 0.168

Regression equation of X on Y

Y=a + bX

Where, a= Regression constant, b= Regression coefficient (Slope of the Regression line). According to the principal of least square, two normal equations for estimating two numerical constant a & b are given by

$\sum Y = na + b\sum X$, $\sum Y = a\sum Y + b\sum X^2$

Solving two normal equations we get,

$$b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

$$= \frac{7946225\text{-}7502985}{104125 - 99225}$$

b= 90.457

Similarly,

$$a = \frac{\sum Y}{n} + b \times \frac{\sum X}{n} \qquad a = \frac{23819}{5} + 90.457 \times \frac{315}{5}$$

= 4763.8+5698.791

= 10462.591

Similarly,

$$t = \frac{r \times \sqrt{n-2}}{\sqrt{1-r^2}} \qquad t = \frac{.6656 \times \sqrt{5-2}}{\sqrt{1-(\ .6656)^2}}$$

= .2105

D) NABIL

Calculated Table of Correlation Coefficient between DPS & MPS

Year	**DPS(X)**	**MPS(Y)**	**XY**	**X^2**	**Y^2**
2006/07	100	5050	505000	10000	25502500

2007/08	60	5275	316500	3600	27825625
2008/09	35	4899	171465	1225	24000201
2009/10	30	2384	71520	900	5683456
2010/11	30	1252	37560	900	1567504
	$\sum X=255$	$\sum Y=18860$	$\sum XY=1102045$	$\sum X^2=16625$	$\sum Y^2=84579286$

Here, N=5

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

$$=\frac{5\times 1102045-(255)(18860)}{\sqrt{5\times 16625-(255)^2}\times\sqrt{5\times 84579286-(18860)^2}}$$

$$=\frac{5510225-4809300}{134.536\times 8197.367}$$

$$=\frac{700925}{1102840.967}$$

r = .6356

And,

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

$$=\frac{0.6745\times(1-.6356^2)}{\sqrt{5}}$$

0.1797

Regression equation of X on Y

$Y=a + bX$

Where, a= Regression constant, b= Regression coefficient (Slope of the Regression line)

According to the principal of least square, two normal equations for estimating two numerical constant a & b are given by:

$\sum Y= na + b\sum X$, $\sum Y=a\sum Y + b\sum X^2$

Solving two normal equations we get,

$$b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

$$= \frac{(5 \times 1102045) - (255)(18860)}{5 \times 16625 - (255)^2}$$

b= 38.725

Similarly,

$$a = \frac{\sum Y}{n} + b \times \frac{\sum X}{n} \qquad a = \frac{18860}{5} + (38.725) \times \frac{550}{5}$$

= 3772+4259.75

= 8031.75

Similarly,

$$t = \frac{r \times \sqrt{n-2}}{\sqrt{1-r^2}} \qquad t = \frac{.6356 \times \sqrt{5-2}}{\sqrt{1-(.6356)^2}}$$

=.1944

C)NIBL

Calculated table of Correlation Coefficient between DPS & EPS

Year	DPS(X)	DPS(Y)	XY	X^2	Y^2
2006/07	5	62.57	312.85	25	3915.005
2007/08	7.5	57.87	434.03	56.25	3348.94
2008/09	20	37.42	748.4	400	1400.26
2009/10	25	52.55	1313.75	625	2761.5025
2010/11	25	48.84	1221	625	2385.346
	$\sum X=82.5$	$\sum Y=259.25$	$\sum XY=4030.03$	$\sum X^2=1731.25$	$\sum Y^2=13811.05$

Here, N=5

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

$$=\frac{5\times 4030.03-(82.5)(259.25)}{\sqrt{5\times 1731.25-(82.5)^2}\times\sqrt{5\times 13811.05-(259.25)^2}}$$

$$=\frac{-1237.975}{43.011\times 42.949}$$

r =-.6704

And,

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

$$= \frac{0.6745 \times (1 - (-.6704)^2)}{\sqrt{5}}$$

= 0.437

Regression equation of X on Y

Y=a + bX

Where, a= Regression constant, b= Regression coefficient (Slope of the Regression line)

According to the principal of least square, two normal equations for estimating two numerical constant a & b are given by:

$\sum Y = na + b\sum X$, $\sum Y = a\sum Y + b\sum X^2$

Solving two normal equations we get,

$$b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

$$= \frac{-1237.975}{1850}$$

b= -.6691

Similarly,

$$a = \frac{\sum Y}{n} + b \times \frac{\sum X}{n}$$

$$a = \frac{82.5}{5} + (-.6691) \times \frac{259.25}{5}$$

= 16.5 – 34.69

= -18.19

Similarly,

$$t = \frac{r \times \sqrt{n-2}}{\sqrt{1-r^2}} \qquad t = \frac{-.6704 \times \sqrt{5-2}}{\sqrt{1-(-.6704)^2}}$$

= -0.2874

E) SCBL

Calculated table of Correlation Coefficient between EPS &DPS

Year	**EPS(X)**	**DPS(Y)**	**XY**	**X^2**	**Y^2**
2006/07	167.37	5900	987483	28012.72	34810000
2007/08	131.92	6830	901013.6	17402.89	46648900
2008/09	109.99	6010	661039.9	12097.8	36120100
2009/10	77.65	3279	254614.4	6029.523	10751841
2010/11	69.51	1800	125118	4831.64	3240000
	∑X=556.44	∑Y=23819	∑XY=2929269	∑X2=68374.57	∑Y2=131570841

Here, N=5

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

$$= \frac{5 \times 2929269 - (556.44)(23819)}{\sqrt{5 \times 68374.57 - (556.44)^2} \times \sqrt{5 \times 131570841 - (23819)^2}}$$

$$= \frac{14646345 - 13253844.36}{\sqrt{341872.85 - 309625.47} \times \sqrt{657854205 - 567344761}}$$

$$= \frac{1392500.64}{179.57 \times 9513.645}$$

r = 0.8150

And,

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

$$= \frac{0.6745 \times (1 - 0.8150^2)}{\sqrt{5}}$$

= 0.2996

Regression equation of X on Y

Y=a + bX

Where, a= Regression constant, b= Regression coefficient (Slope of the Regression line). According to the principal of least square, two normal equations for estimating two numerical constant a & b are given by

$\sum Y = na + b\sum X$, $\sum Y = a\sum Y + b\sum X^2$

Solving two normal equations we get,

$$b = \frac{n\sum XY - \sum X \sum Y}{n\sum X^2 - (\sum X)^2}$$

$$= \frac{14646345 - 13253844.36}{5 \times 68374.57 - (556.44)^2}$$

b= -365.586

Similarly,

$$a = \frac{\sum Y}{n} + b \times \frac{\sum X}{n} \qquad a = \frac{23819}{5} + (-65.586) \times \frac{556.44}{5}$$

= 4763.8-7298.93

= 2535.13

Similarly,

$$\mathrm{t} = \frac{\mathrm{r} \times \sqrt{\mathrm{n} - 2}}{\sqrt{1 - \mathrm{r}^2}} \qquad \mathrm{t} = \frac{0.8150 \times \sqrt{5 - 2}}{\sqrt{1 - (\ \ 0.8150)^2}}$$

= .3320