## CHAPTER- ONE

### 1.1 General Background

The finance is the life blood of any business organizations. It gives the basis for operating business smoothly and continuously. The key concerned of finance is to find out the sources of capital fund, its accumulation and utilization at different business activities. Finance is a specialized functional field found under the general classification of business administration. "The term finance can be defined as the management of the flows of money through an organizations, whether it be a corporation, school, banks or government agency, finance, finance concerns itself with the actual flow of money as well as any claims against money."
The finance market plays a vital role for effective mobilization of financial resources. It works as a bridge to mobilize capital from adequate block to deficit block. Financial market relates the suppliers and demanders with each other where the transaction of business capital or fund is possible. Financial market is the medium where the suppliers and demanders of fund can be interact with each other for borrowing and lending of fund. Financial market can be divided into two types, they are:

> 1.1.1 Money Market
> 1.1.2 Capital Market

### 1.1.1 Money Market

Money market is that market highly marketable, short- term securities are traded. They have majority of one or less than one year. These securities include commercial paper, large denomination certificate of deposit, bankers' acceptance, repurchase agreements (repose) and Eurodollars etc. The money market is a large wholesale market where large amount of low risk, unsecured, short term zero coupon debt instruments that are highly liquid are issued and actively traded everyday. For example Money Market in the united states are larger than the New York Stock Exchange (NYSE). The financial relationship between suppliers and demanders of short term fund is the key cause of creation of money market. At one side, financial institutions, government, individuals, business etc is in need or in search of funds. And at another side same kind of parties are willing to place their idle fund in different liquid assets or short term instruments. Finally, from the interaction of these two parties the money market exits.
"The money market is created by an intangible relationship between suppliers and demanders of short- term funds."

### 1.1.2 Capital Market

Capital market is that type of market where securities having more than one year are traded. The capital market can also be classified into the following two types:
1.1.2.1 Primary Market
1.1.2.2 Secondary Market

### 1.1.2.1 Primary Market

In primary market, the new securities (i.e. stocks, bonds etc) that are issued by any business organization or firms are traded. In such market only new securities are traded and due to which there is no need of any broker and under- writer. This market is also called the new issuance market. Here the securities of large firms, issued for the first time are bought and sold. The issuer of such securities may directly sale through private placement without underwriting to the investors. Besides, the securities may be sold after being made underwriting be the institution like investment banking. The primary market can also be divided into two types, they are:

## 1 Seasoned Primary Market

In this market the investors are announced for additional amount to invest in pre issued shares or securities. More specifically, it is used to add additional amount.

## 2 Unseasoned Primary Market

In this market only the just and new issued securities are traded. It means, the general people of the societies are first offered to purchase the securities. So that, it is also called Initial Public Offering or IPO'S in short.

### 1.1.2.2 Secondary Market

Secondary market is that type of market where pre issued securities of companies and firms are re-purchased or sold. So it is also called second hand market. In clear term, the market where second hand securities issued earlier are traded, is known as secondary market. Especially, the persons and institutions like broker, underwriter etc are involved in this market. The stock market or stock exchange is the example of this market.
Purchase and sales of existing stocks occur in the secondary market. Transaction in this market does not provide firms with additional funds to
buy new plants or buy new equipment. However the presence of a viable secondary market increases the liquidity of securities already outstanding. Without this liquidity, firms issuing new securities would have trouble finding resale market for this stocks and bonds. Thus, the ongoing trading of existing securities is crucial to the efficient operation of the primary or new issued market for long term securities. "(Van Horne; 2000:530). The secondary market can also be divided into parts as (i) Over the counter market. Over the counter (OTC) market and (ii) Registered stock exchange or stock market. Over the counter market is the market where the firms securities of the companies not listed in the stock exchange are traded is called over the counter market. The transaction of such securities is made by intermediaries and authorized dealers. The customers may order the intermediary and authorized dealer to buy and sell the securities by means of telephone or fax. They set up the price of securities. Since transaction are made informally and this market is also known as impersonal or curb market. Stock Exchange provides forum to transfer shares of listed companies from one hand to another hand. The corporate sector can mobilize the funds through this market to finance different beneficial project by issuing of share at the market. The stock market gives place to the purchaser and seller of securities to exchange their financial assets.
Nepal Stock Exchange ( NEPSE) and security board of Nepal (SEBON) are main two organization who are in attempt to make the stock market competent and efficient. Stock exchange for Nepal is only NEPSE. It is working in a Deep manner for systematize the stock market. There is combined share in NEPSE of the following parties.

Nepal Government
Nepal Industrial Development (NIDC)
Security Business Person
Nepal Rastra Bank (NRB)

The stock brokers, market makers, security dealers and the managers who are engaged in the primary issuing activities all have to get membership of the stock exchange for operating business. The stock exchange creates liquidity on shares of listed companies by providing its floor for the trading of shares. There is a long history of economic activities of Nepal. However, the financial reforms have been made only after 2046 BS or after the restoration of democracy in which government had adopted the open market and liberization policy. When government adopted liberization and open market policy after restoration of democracy in 2046 BS, many financial
institutions, industries, business house etc opened. As a result, it helped the financial market to be very competent and systematic. The Nepalese stock market is in developing way. Although, it is not efficient enough to maintain the market price per share (MPS) according to the financial position of the company. The rational behind this fact is the highly fluctuating stock market price at NEPSE. The shares price are being fluctuated at NEPSE, which have been the cause of investors complain. So, under this research study it has been tried to make relation between the share price and major financial indicators and the risk and return analysis to provide bases for investment in sampled companies stock.
Common Stock is a source of long term financing. Common stock certificates are legal, documents that evidence ownership (equity) in a company that is organized as a corporation, they are also marketable financial instruments. Unlike sole proprietorship and partnership firms, only corporation can issue common stock. Common stock is recipient of the residual income of the corporation. Through the right to vote, holders of common stock have legal control of the corporation. An element of risk is also involved in equity ownership due to its low priority of claims at liquidation. Common Stockholders have limited liability. Common equity provides a cushion for creditors if losses occur on dissolution. The equity of total assets ratio is an indicator of the degree by which the amounts realized on the liquidation may decline from stated book values before creditors suffer losses.
Common Stockholders have a residual claim on the earning and assets of their corporation. Owners of common stock in a corporation are referred to as shareholders or stockholders. They received stock certificates for the shares they own. There is often a stated value on each stock certificate called par value. The corporate charter of a company specifies maximum number of authorized shares of common stock that the company can issue without emending it's charter. The common shareholders have right to vote in the affairs of the company. In most of the common stocks each shareholders castes one vote in one share. The capital obtained from common stock is called fixed capital. This cannot be redeemed in mid life of the organization.

### 1.2 Introduction

A firm fulfills its financial needs using different sources of financing. These sources of financing may be short term and long term. Short term sources of financing mature within one year or less where as fund raised from long term sources of financing can be used for several years. When firm expands
its business or activity, it needs capital. The term capital denotes the long term funds of the firms. All of the items on the liabilities side of the firm's balance sheet, excluding current liabilities, are sources of capital. The total capital can be divided into two components debt capital and equity capital. Debt capital includes all long term borrowing incurred by the firm. Debentures, bonds, long term loans etc are major sources of debt or borrowed capital.
The portion of equity capital structure of any firm is obviously higher than that of other components. This equity capital is raised from the promoters and the investors. Here the important considerable point is that why investors want to invest in any firm? The only reason behind it is the very desire of having increased wealth. Therefore corporations prime concern is to yield higher return to its investors. For this corporations must have strong profitability index. The degree of investors welfare is represented by the price of equity, they hold. Equity price is only the measuring rod which shows the corporation strength in generating returns over its capital employed .The main issue of this study is to identify the determinants of equity price and the degree of influences of such determinants up on equity price. In general, it is assumed that stock prices more randomly i.e. unidentified movement; however the basic track that the prices take is due to the performance related indicators of the corporations. Needless to say, earning per share indicates the profitability of the corporations, dividend per share reflects the direct cash benefits to the investors, net worth per share signifies the real or intrinsic value of shares, growth rate is related with the growth potentialities/ possibilities of earnings and dividends, required rate of return indicates the rate of return which investors actually desire last not least, earning multipliers reflects the ratio of MPS to the EPS.
In addition to above, the market is called "efficient" which fully reflects all available information (Eugena F. Fama 1997:142). According to Fama three forms of the model were investigated with respect to three different subjects:
i. The weak form
ii. The semi strong form and
iii. The strong form

He described three different degree of market efficiency. In a review article, Fama expanded the definition of weak form and also changed the title of second and third form of efficient market hypothesis. He used return predictability "instead of weak form, 'event studies', instead of semi strong form" and test for private information 'instead of strong form Efficient Market Hypothesis (EMH). However, Nepalese stock market is relatively small and under developed comparing with developed markets. So, it may
not be efficient to some extent. This study simply attempts to apply the most widely accepted analytical approach in the study of stock markets.
The markets of USA are considered well organized and efficient. Market participants are well informed with competition. Interaction among such well informed participants eliminate any dependencies in prices. Likewise, in England, the result revels that London stock market is less efficient than New York. Similarly, the stock market of Sweden ,Norway, Australia, Germany and India for instance, have showed statically dependence on price changes, then by indicating that these stock market are less efficient in pricing share. Furthermore, stock markets of other countries are less concerned with discovering share price behavior. There is no reason to believe that the developed countries results are adequate to stock market of other specially underdeveloped ones likes Nepal.
The Nepalese stock market still looks underdeveloped and stock market efficiency may be a prior suspect for various causes 'mentioned above. That is why; there is a need for conducting a study on Nepalese stock market in order to settle their "efficiency" or "inefficiency" in pricing of share by using secondary as well as primary data. By the help of this research study it can be hoped that the share price behavior of Nepal can be understood well.

### 1.3 Statement of Problem

Most of the investors are not aware of the financial position of the company in term of their financial indicators in which they are investing their fund through secondary market NEPSE. The market price to common share or stock does not seem to be in accordance of the market of share, has been major influences of rumors rather than strength of the companies.The MPS of commercial banks, especially foreign join venture banks has been much larger than MPS of other sectors. Moreover, the overall NEPSE is dependent upon MPS of such companies. In case of stock price behaviour, the stock market facilitates the situation of country's economic when stock market is booming, the financial market is good and when the stock market declines, the financial market is bad. It also represents the countries policies towards industry. Stock market policy as well as economy policy is formulated by government rules and regulations of different sectors. Behavior of stock price earning information was not made available timely to the investors. The investors could not identify the goods and bad of stocks. The price of some stock which have sustained profit could not increase. The MPS of public quoted companies is above their book value. In an efficient market,

MPS fully reflects all the historical information publicly available. However, the market value is determined by the supply and demand functions.
The key issue of this study is whether the MPS of listed companies are really representing the financial indicators i.e. DPS, EPS, NWPS and price appreciation etc. Moreover, this study mainly deals in following issues.
$>$ Is stock market efficient or inefficient in pricing share and whether share show any systematic patterns or they are indistinguishable from those of random walk?
$>$ Is it possible to determine price of the share from historical changes?

What are the major indicators, which have major influences on determining the MPS?
> Are the common stock sampled companies 'equilibrium period?

Do the share prices over the short periods display random phenomenon?

### 1.4 Objectives of the study

The main objective of this study is to examine the stock price behaviors .The study is undertaken with the objectives of discussing examining and evaluating the financial operation and position of commercial banks. In this context, the other subsidiary objectives of the study are as follows:
$>$ To study the present status of the stock market.
$>$ To conduct the empirical analysis of price behaviour by investigating the market position of each sample bank and compare them in terms of market price per share, earning per share, dividend per share, dividend yield, dividend pay out ratio, market price to book value ratio, liquidity ratio, profitability ratio etc.
$>$ To examine the relationship between market price per share and other determinant variables such as earning price per share and dividend per share.
$>$ To pinpoint the real problems faced by banking sector in the stock market.
$>$ To understand how the price behaves in stock market and how an investor can safeguard his or her investment on stock market.
$>$ To recommend some suggestions to the management of all concerned bank, investors and all concerned parties.

### 1.5 Focus of the study

The focus of the study has been also attempted to centre the relationship among liquidity ratios, profitability ratios, market price to book value ratios and many other key ratios since this study is based on stock market , many aspects of the stock market is also attempted to deal. This study has been tried to help all the stake holders who are directly and indirectly related to the share market, about behaviours of common stock price. This research study primarily focuses the behavioral response of equity price when there do exist changes in the relevant financial indicators. This study is trying to examine the influences of pricing behaviors of common stock. In another term, the focus of the study is to identify its relationship with other financial indicators. Likewise, the study focuses on the issue that whether the successive price changes of the securities are dependent or independent .There are various approaches that handle and describes what kind of law governs the security price and how they behave over period. Although, there are two main approaches for analyzing securities i.e. technical analysis and fundamental analysis. Similarly efficient market theory is also one of the best approaches efficient to predict the successive price movement of stocks.

### 1.6 Importance or significance of the study

Movement of common stock price is important now a days because I is getting considerable attention in financial management. Movement of stock price determines and analyzes the corporations strength in getting returns over its capital employed. This research study mainly analyzes the degree of influence upon equity price in Nepalese banking sectors. It also discuses the relationship between EPS, DPS, MPS. Most of the investors are unknown about the information of the company that they invest. So, this study plays a vital role to identify the determinants or indicators that shape the price of stock. Moreover the importance or significance of this study can be expressed in following points.
$>$ The investors get the information about the stock price determinants and will invest in company after deep analysis.
> It also helps for future research on the area of behavior of common stock price by providing relevant and pertinent literature.
$>$ This study makes aware to the investors before investing in stock of any company.
> The governing body is helped by this study for making necessary rules and regulations.
$>$ This study helps to attract new investor because of the clear picture of behavior of common stock price.
$>$ The findings of the study makes beneficial to those who are engaged in similar research work.
> The listed companies can be aware about them and will take necessary steps for improvement.
> Those who are engaged in the field of financial management like shareholders, promoters, analysis, investors, policy makers etc, can be benefited from this research study.

### 1.7 Limitation of the study

The underlying characteristic of every research study is its limitation. No any research study is separate from limitation. So, it can be obviously said that this research study must have some limitations which have presented below:
$>$ The resources and time are the first and important limitation of this study.
$>$ The international or foreign rules and information which affects the price of share are not taken under consideration or are ignored.
$>$ Due to the lack of numerical values the factors of social, economical, political and legal environment are not taken under affect.
$>$ There are various financial indicators, however only some indicators are taken under consideration to find out their collective effect on price of equity.
$>$ Only the sectors listed on stock exchange are main concerned of the study.
> The date taken for the study are only of some years, which is also the main limitation of the study.
> Some master's thesis are studied as reference which are themselves not far from the limitation.
> Some variables like EPS, MPS, DPS etc are only taken into consideration to examine the impact of these variables on equity prices. But not only may these factors other qualitative and quantitative variables may influence the equity price which are not considered on the study.

### 1.8 Organization or Scheme of the study

This study has been organized into five chapters. The heading of the chapters are:

Chapter 1- Introduction
Chapter 2- Review of literature
Chapter 3- Research Methodology
Chapter 4- Presentation And Analysis of Data
Chapter 5- Summary, Conclusion and Recommendations.
The content of above chapter are:

## Chapter 1

This chapter is the introductory part of the study. It describes the background, introduction, and statement of problem, focus of study, importance of study, limitation of study, objective of study and scheme of study.

## Chapter 2

This chapter is concerned with the theoretical analysis and includes a discussion on the conceptual frame work and review of the major studies.

## Chapter 3

This chapter deals about the methodology of research used for the study. This chapter deals about research design, population and sample sources of data collection technique and tools of data analysis.

## Chapter 4

This chapter describes about the presentation and analysis and major findings of the study on stock price.

## Chapter 5

This chapter is related to summary, conclusion and recommendation. The bibliography and appendices are also organized at the end of this research study.

## CHAPTER- TWO

## REVIEW OF LITERATURE

The purpose of this chapter is to find out what research studies have been conducted in one's chosen field of study, and to have some ideas for developing a research design. Thus, the previous studies cannot be ignored because they provide the foundation for the present study.
In other words, there has to be continuity to research .This continuity is emerged by linking the present study with past research studies.
Thus, various books, journal and articles concerned to this topic have been reviewed. The review has been organized as:

- Conceptual review
- Review of international research studies
- Review of Nepalese research studies


### 2.1 Conceptual Review

### 2.1.1 Common stock

Common stock is the basic form of ownership in a company. People who hold common stock have a claim on the assets of a firm after those of preferred stock holders and bond holders. Common stock holders of a corporation are its residual owners, their claim to income and assets comes after creditors and assets preferred stockholders have been paid in full. As a result, a stockholders return on investment is less certain than the return to a lender or to be a preferred stockholder. On the other hand, the return to a common stock holder is not bounded on the upside, as are return to the others .A share of common stock can be authorized either with or without par value. A par value of stock is merely a stated figure in the corporate charter and is of little economic significance. A company should not issue stock at a price less than par value, because stockholders who bought stock for less than par value would be liable for the difference between below the par price they paid and the par value.

The founder of a corporation obtain a corporate charter from the state, have shares of common stock printed, and sell the shares to as many different people as they wish in order to raise the capital to start the new business .Thus, common is always the first security issued by every new corporation.

Common stockholders have a residual claim on the earnings and assets of the corporation. This means that the law requires corporation first to pay employees wages, suppliers bills, and bondholders' interest; then, after all other bills are paid, and the common stock holders share in whatever earnings or losses are left. Also, if the corporation comes to its demise in bankruptcy, the law says that all liability must be paid first from the assets and then whatever remains is divided to the common stockholders.
Common stockowners enjoy certain advantage from their investment .First, they enjoy limited liability, that is, if the corporation goes bankrupt and does not have enough assets to pay all of its bills ,the common stockowners cannot be forced to participate in the payout of unpaid bills. Second, stockholders enjoy unlimited participants in the firm's profit if earning becomes highly lucrative. Third, shares of common stock are marketable securities designed to be bought and sold with case. Finally, only common stockowners are entitled to vote at the stockholder's meeting of the corporation. Thus, stockholders have a voice in management

## i. Common Stock Values

a. Par Value

Par value is the face value of a share of stock. It was originally used to guarantee that the corporation receives a fair price for the value of the firms represented by a share stock.

The value established at the time of stock is initially issued is the par value. Without a stock split or other action by the board of directors, the par value of the stock does not change (Cheney and Mosses, 1995:417)

## b. Book Value

Book value per share can be calculated by adding the common stock's total value (or par value plus paid- in surplus plus retained earnings accounts) in the net worth section of the balance sheet and then dividing by the number of shares of common stock outstanding. Book value gives a picture of the assets of the corporation, but it has no real relation to stock prices. Companies sometimes find their common stock selling for the prices for different from book value.

## c. Market Value

Market value per share is the current price at which the stock is traded. For actively traded stocks, market price quotations are readily available. For the many inactive stock that have thin markets, prices are difficult to obtain. The
market value is influence by many factors including economic and industry conditions, expected earnings and dividends, and market and company risk considerations (Cheney and Mosses, 1995-418).

## ii. Classification of Common stock on the Basis of their features <br> a) Growth Stocks

Stocks whose price grows with the growth of corporations earnings and dividend with a comparatively higher growth than the average price appreciation are called growth stocks.

## b) Blue Chip Stock

Stocks of very large, well established companies which has dominant position, strong balance sheets and size are called blue chip- stocks. For example, foreign companies like general Motors ,IBM and Xerox etc are often referred as to blue chips.

## c) Income Stocks

Stocks that have a long term record of stable cash dividends are called income stocks. For example, utilities.

## d) Speculative Stocks

Stocks, which are viewed by investors with some speculative motives, are called speculative stocks. Most investors as a highly risky and consequently a speculative issue would view new company without a successful track record.

## e) Cyclical and Defensive Stocks

Stock which are influenced by economic and industrial cycles, are called cyclical stocks whereas stocks which are less susceptible to economic cycles are called defensives stocks.

## f) Small Stocks

If the company's total capitalization is small than the stock is called small stocks. New York Stock Exchange (NYSE) of American considered a small stock with total capitalization of less than Rs 500 Million. In over the counter (OTC) market less than Rs 50 million total capitalizations referred as small stocks.

## g) Treasury Stocks

If the corporation decides to buy back its own stock the acquired stocks are called treasury stocks (Cheney and Mosses, 1995:419).

## iii. Characteristic of Common Stocks

## a) Voting Rights or Control

Common stock is voting stock. The power to vote for the board of directors and for or against Major issues (such as merge or an expansion into new product lines) belongs to the common share holders because they are the owners of the corporation.

## b) Preemptive Rights

The preemptive rights allows stockholders to subscribes to any new issue of stock so that they can maintain their previous fraction of the total number of shares sold (usually called the "outstanding shares"). Some states automatically make the preemptive right a part of every corporate charter. The preemptive right, if exercised, prevents the dilution of ownership control inherent in additional stock shares .Thus, the preemptive right, if exercised, guarantees the investor's undiluted maintenance of voting control, share in earnings, and share is assets.

## c) Liquidation Right or Dissolution Right

Another most important rights of common stockholder's is also to liquid or dissolve the company and they have their own right on all remaining capital, assets and saving amount after retuning the capital of the creditors and preference shareholders.

### 2.1.2 Securities Market

Securities Market plays a vital role in collecting funds from the issue of share .A securities Market (or financial market ) can be defined as a mechanism bringing together buyers and sellers of financial assets in order to facilitate trading. Alternatively, securities market is a place or places where securities are bought and sold, the facilities and people engaged in such transactions the demand for and people engaged in such transactions the demand for and availability of securities to be traded, and the willingness of buyers and sellers to reach agreement on sales. Over the counter market (OTC), the New York Stock Exchange (NYSE), the Chicago Board of Trade (CBT) the American Stock Exchange (AMEX), and Nepal Stock Exchange (NEPSE) are the examples of securities market. "Securities Market is one of
the constituents of capital market. It has a wide embracing for the buying and selling securities and all these agencies and institution which access the sale and resale of corporate securities" (Rough, 1996:50)
To cite the definition of securities as defined by Securities Exchange Act 2040 (1983). According to this Act-"Securities means shares, stock, bond, debenture, debenture stock issued by a corporate body or a certificate relating to unit saving scheme or group saving scheme issued by any corporate body in accordance with the prevailing laws or negotiable certificates of deposit or treasury bond issued by His Majesty Governments and it includes the securities issued under full guarantee of His Majesty's Government by a notification published in Nepal Gazette or receipts relation to deposit of securities as well as rights and interest relating to securities." There are various ways of categorizing the security market. They can be on the basis of lifespan of the securities traded, such as money market and capital market; on the basis of financial claims, such as debt market and equity market; on the basis of economic functions such as primary market and secondary market. The classification on the basis of economic function is the predominant among all. So it has been explained briefly below:

### 2.1.2.1 Primary Market

Securities issued for the first time are traded in the primary market. The issuer may be a brand new company or one that has been in business for many years. Primary market is used to denote the market for the original sale of securities by an issuer to the public. The volume of new issues in the primary market, particularly of common stock, is directly related to market conditions. When the market is high or rising, the number of new issues being offered to the public rises and when the market is low or falling, the number declines (J.M Cheney and E.A Moses, 1992:64).
The institution that dominates the primary market is the investment- banking house. It is a traditional middleman in the primary market. When a company decides to acquire new funds from the outside, it will frequently do so through the intermediation of an investment bankers in the developed countries.The investment banker's principle activity is to bring sellers and buyers together in the market. They are specialists in the marketing of new securities. They advice companies in the design of the security. Although they are a number of possible arrangements, the investment banking house underwrites a new issue of securities .In underwriting agreement, an investment bankers agree to buy the securities from the issuing company and then sell them to the public.

In addition, placing new securities through the intermediation of investment bankers, many companies engage in the private placement of securities .In private placement, the issuer of the securities sell securities directly to investors without underwriting services of an investment bankers .This method id cheaper, and it avoids the underwriting costs.

### 2.1.2.2 Secondary Market

Securities that have been previously issued are traded in the secondary market. The majority of all capital market transactions occur in the secondary market. The process from sale of securities in the secondary market do not go to the original issuer but to the owners of the securities. In other words, securities are traded among the individual as well as institutional investors.
"The existence of well functioning secondary market, where investors come together to trade existing securities, assures the purchase of primary securities that they can quickly sell them to securities, if the need arises." (John, 1992:48)
The function of the secondary market is to provide liquidity for securities purchased in the primary markets. Once investors have purchased securities in the primary market, they need the place to sell those securities in the secondary market. Secondary markets are divided into
I. The over the counter market
II. The organized stock exchanges.

## I) The over- other counter market

The over the- counter market (OTC) is the market for these securities which are not listed on the stock exchanges. When the company first sell its securities to the public, the securities are traded in the OTC. It includes all transactions in the securities other than those taking place on the stock exchanges .In practice, however, the term is usually limited to the activities of dealers and brokers specializing in unlisted securities. OTC market have very low entry barriers and traders may range in size from very large houses doing an international business to one person or firms that trade only in local markets.

## II) The organized stock Exchange

The organized stock exchanges are voluntary association of members who come together for the purpose of buying and selling, for the general public, the securities of the great companies. Only listed securities are traded in the exchange and are bought and sold by auction.

### 2.1.3 Theory of Stock Price Behaviors

Market prices are the functions of various factors, these factors affects the market prices of security. Thus market prices fluctuate and it is not for a short period but over a century. Broadly there are three schools of thought concerning the valuation of securities and their price behaviors.
> Technical Analysis
> Fundamental Analysis
> Random Walk or Efficient Market Analysis

### 2.1.3.1 Technical Analysis

The technical analysis theory of share price behaviors is based on past market information .Technical analysis seek to identify price pattern and trends in financial markets and attempts to exploit those patterns. While technical use various methods and tools, the study of price charts is primary. This theory includes the study of the past price and value date of stocks to forecast future price movement.

Technical analysis has some assumption; they are:
$>$ Market value is determined by the interaction of demand and supply.
$>$ Supply and demand are governed by the numerous factors, both rational and irrational,
$>$ Security price tend to move in trends that persist for an appreciable length of time, despite minor fluctuations in the market,
$>$ Changes in supply and demand, no matters why they occur, can be defected sooner or later in charts of markets transactions ,and
$>$ Some chart pattern trend to repeat themselves.
Technical analysis has become increasingly popular over the past several years as more and more people believe that the historical performance of a stock is strong indicators of future performance. Many more technical tools
and theories have been developed and enhanced in recent decades, with an increasing emphasis on computer assisted technique.
"A highly specialized form of market is practical technical analysis .They try to predict future stock price as we might predict that the pattern of wall paper behind the mirror is the same as the pattern above the mirror." (Malkiel B.G.:181)

Technical analysis believes that important information about future stock price movements can be obtained by studying the historical movement of stock prices. Financial data are recorded on graph paper and the data are scrutinized in search of repetitive patterns. Technical analysis base their buy and sell decision on the charts they prepare (K. Thapa, R. Bhattarai \& D. Basnet 2008:393).
Since technical analysis focus most of their attention on charts of securities market prices and on related statistics about security transactions, technical analysis are sometimes called chartists. Most technical analysis prepares and study charts of various financial variables in order to forecast security prices. But the existence of technical analysis in Nepal is still doubtful. The methodology of technical analysis rest upon the assumption that history tends to repeat itself in the stock exchange. If a certain pattern of activity has in the past produced certain result nine times out of ten, one can assume a strong likelihood of the same outcome whenever this pattern appears in the future. It should be emphasized, however, that a large part of the methodology of technical analysis lacks strictly logical explanation.
Various studies evidence that technical analysis is useful in enabling investors to beat the market. Many proofs of the ability of technical analysis to beat the market were offered, but they committed at least one of the errors. However, several recent studies have indicated that technical analysis may be useful to the investors. As technical analysis give more emphasis on when to buy or sell the stock.

### 2.1.3.2 Fundamental Analysis

Fundamental analysis of a business involves analyzing its financial statements and health, its management and competitive advantages, and its competitors and markets. When applied to futures and forex, it focuses on the overall state of the economy, interest rates, production, earning and management. This theory is also known as intrinsic value theory. It claims that at any point of time, an individual security has an intrinsic value, which
should be equal to present value of the future cash flows from that security, discounted at appropriate risk.
This value is an as interest part of the company as is person's intelligence or an engine's core power. It is further believed that intrinsic value can be discovered by analysis of financial information. If the intrinsic value is below the market price, the security should be sold before its price drops. Under priced stocks are purchased until their price is bid up to equal their value. And over priced stocks are sold, which drives their price down until it equals their value. The fundamentalists attempts to estimate the real worth of a security by considering economic and financial variables and then decide as to what investment action is called for in a given situation depending upon whether the actual price is above or below its intrinsic value (Jack Clark Franchis , 1980:287).

For fundamental analysis to work successfully a number of assumptions must be fulfill. These are as follows:

- A business must have an intrinsic value,
$>$ This can be determined by analysis of economic and financial information generated by the company.
$>$ This value may go unrecognized by the market in the short term, and
$>$ This market will eventually recognize it in the short term.
John B. Williams (1938) was the first person to originate the concepts of intrinsic- value and had also presented an actual formula for determining the intrinsic value of stocks. Several other researchers have suggested further development in the theory.
Fundamental security analysis estimates the intrinsic value of a security. In contrast, technical analysis (Chartists) seeks to predict security prices rather than value. The technicians usually attempt to predict short term price movements and thus make recommendation concerning the timing of purchase and sales of either specific stocks or groups of stocks such as industry or stocks in general. But in an efficient stock market, market prices are equal to their intrinsic value. Both the conventional theories to security valuation and price behaviors assumed that the pricing of shares in the markets is not efficient. Therefore, while making investment decision, technical analysis theory suggests for proper time of buying and selling whereas fundamental analysis theory advices for the choice of suitable securities. So, it is sometimes said that fundamental analysis is designed to answer the question "what" and technical analysis to answer the question "when" (W.F Sharpe and J.V Bailey, 1998:884).


### 2.1.3.3 Random Walk Efficient Market Theory

Early in the past century, statisticians noticed that changes in stock prices seem to follow a fair game pattern. This has led to the random walk hypothesis, $1^{\text {st }}$ espoused by French Mathematician Louis Bachelier in 1900, which states that stock prices are random like the steps taken by a drunk, and therefore, are unpredictable.

A few studies appeared in the 1930's, but the random walk hypothesis was studied and debated intensively in the 1960's. The random walk theory assumes that all future streams of income from the equity investment are independent of preceding income. In other words, future prices cannot be predicted on the past price behavior. The share prices fluctuate randomly, however this does not mean that the market is irrational in the determination of prices. It operates through market mechanism. In a free and competitive market, the relative forces of demand and supply determine the share price. The so-called efficient market automatically adjusts the prices of shares since the market is very sensitive. Any discrepancies in the market are automatically corrected and the actual prices fluctuate randomly about its intrinsic value. This is a free and most competitive market and the value. This is a free and most competitive market and the prices of shares in the market are assumed to reflect all relevant information. It states that financial markets are efficient and that prices already reflects all known information concerning a stock or other security and those prices rapidly adjust to any new information. Information includes not only what is currently known about a stock, but also any future expectations, such as earnings or dividend payments. It seeks to explain the random walk hypothesis by positing that only new information will move stock prices significantly and since new information is presently unknown and occurs at random, future movements in stock prices are also unknown and, thus move randomly.

Economist would say that stocks and other security prices are the result of the equilibrium of supply and demand-however, it is actually the instaneous supply and demand that determines actual prices, and at any given time, the supply and demand will differ simply due to chance.

For instances, suppose, on a particular day, that you have 100 investors who want to buy a particular stock and 100 investors who want to sell the same stock, and suppose further that they believe, that the opening market price to
be a fair price, and they place market orders to effect their traders-and these traders and not aware of any news about the company during the course of the day. It can be agreed that there is very little chance that these traders will come market at the same, time, even on the same day, and if some of them do happen to trade at the same time, the number of buyers and sellers probably will not be equal and that whether there are more buyers then sellers vice versa will differ throughout the day. Hence, at most times of the day, there will be an instantaneous imbalance of supply and demand for the stock, which will cause the stock price to more seemingly randomly throughout the day. It cab be said seemingly, because even though the stock price is determined by the instantaneous supply and demand of the stock no one can know what that equilibrium price will be ahead of time.
The proof of this explanation can be observed by fact that even when there is no news about a particular company, its stocks will walk randomly throughout the day because the instaneous supply and demand will vary randomly throughout the day.
It is true that news moves the markets, and this news is mostly unpredictable, at least by most traders-hence, some randomness will be created by new events. But even when there is news about a particular company that will move its stock price significantly, the response will still have some randomness, because different traders with different amounts of capital will learn about it at different times, and there will probably be limit and stop-loss orders triggered as the stock price changes significantly, thereby causing the stock to zigzag up or down. Furthermore, how much will the price move because of the news? Different traders will have different opinions as to how much the news is worth. If the news was goods, for instance, then some traders will buy more because they believe that the stock price hasn't reached its top, others will sell because they believe that the price has overshot not its top, and these traders will trade at different times.

### 2.1.4 Evolution of the Capital Market in Nepal

The history of capital market in Nepal dates back to the era of Rana Prime Minister Juddha Shumser when Gunjaman Singh, the first secretary at Nepalese Embassy in England returned back to kathmandu and set up the "Industrial Council", The council drafted company act and Nepal Bank Act for the first time in 1936. Biratnagar Jute Mills Ltd. Initiated the first time in 1936. Biratnagar Jute Mills Ltd. Initiated the first public flotation of shares in the securities market in 1937. In the same year Nepal Ltd. Also issued the
shares. However at the time the participation on the ownership structure of the corporate sector was restricted mostly to the Rana family.
In 1951 the "Company Act 1951" was introduced and first issued of government bond in 1964 was other important developments relating to capital markets. The establishment of securities exchange center (SEC) in 1976 was the first and most important attempt by the government. After the establishment of SEC under Company Act, institutional development of securities market in Nepal was started.
The function of SEC was very limited on trading government bonds and national savings certificates only, which had predominantly held by Nepal Rastra Bank. SEC started secondary market for the corporate securities in 1984.

Securities Board Nepal (SEBON) was established on 26 May 1993 after the first amendment in the securities Exchange Act 1983 became effective. After eighteen years of incorporation, HMG Nepal converted security exchange center into Nepal Stock exchange (NEPSE) on 16 may 1993, under a program initiated to develop a competitive and efficient security market. Thus, Nepse has the basic objective to impact free marketability and liquidity to government bonds and cooperate securities by facilitating transaction in the trading floor through market intermediaries such as brokers and market makers. After the conversion of SEC into NEPSE, 25 brokers and 5 market makers were appointed. It started open out cry system of trading through brokers and market maker on $13^{\text {th }}$ January 1994 ( Kiran Thapa, 2008:47)

### 2.1.5 Nepal Stock Exchange

Nepal Stock Exchange, in short NEPSE is a non- profit organization operating under, Securities Exchange Act, 2040. The former Securities Exchange Centre was converted into NEPSE under the program initiated to reform the capital market. The basic objective of NEPSE is to arrange marketability and liquidity to the government and corporate securities by facilitating transactions in the trading floor through market intermediaries such as brokers, market makers and others.
The shareholders of the NEPSE are Nepal Rastra Bank, the central bank, his Majesty's Government of Nepal, Nepal Industrial Development Corporation and licensed numbers.
NEPSE has its own Board of directors to direct, control and monitor. It consists of 9 directors in accordance with the Securities Exchange Act, 2040.

HMG and difference institutional investors nominate six directors and two from the licensed members. The General Manager of the NEPSE in the Exofficio directors of the board. Difference companies are listed and sometimes de-listed in NEPSE. Presently NEPSE has 149 listed companies. This number can be increased and decreased by passage of time. (NEPSE, Trading Report 2008/09).

### 2.1.5.1 Present Status of Stock Market in Nepal

In Nepalese context, history of stock market is a recent phenomenon and early stage of growth than in developed countries. By analyzing investor's preferences awareness to market mechanism and attitude to investors, blind speculation about market and stock price are found in minimum level. The attraction of investors diverted into selected profitable and higher return sectors.

Table 2.1
Present Position of Stock Market for the year 2008/09

| Description | Shares Units (In '000') | Rs <br> Million | $\%$ |
| :--- | :--- | :--- | :--- |
| 1. Turnover | 30547.16 | 21681.14 | 100 |
| a) Commercial Banks | 13301.43 | 12406.45 | 57.22 |
| b) Finance | 3552.01 | 2615.40 | 12.06 |
| c) Hotel | 95.89 | 18.69 | 0.09 |
| d) Manufactuirng\& Processing | 95.12 | 26.08 | 012 |
| e) Other | 630.82 | 494.39 | 2.28 |
| f) Hydro Power | 3612.12 | 890.30 | 4.11 |
| g) Trading | 14.65 | 33.49 | 0.15 |
| h) Insurance | 418.49 | 212.80 | 0.98 |
| i) Development Banking | 3631.81 | 2740.36 | 12.64 |
| j) Mutual Fund | 758.50 | 22.40 | 0.10 |
| k) Preferred Stock | 74.43 | 74.05 | 0.34 |
| 1 Promoter Share | 4361.90 | 2146.73 | 9.90 |
| 2 Market days | 234 |  | 0.00 |
| 3 Average daily turnover | 130.54 | 92.65 |  |
| 4 Number of Transactions | 209091 |  |  |
| 5 Number of companies traded | 170 |  |  |
| 6 Number of companies Listed | 149 | 61140 |  |
| 7 Total paid up value of listed share |  | 512939.07 |  |
| 8 Number of listed securities | 637868 |  |  |
| 9 Market capitalization |  |  |  |


| 10 Percent of turnover to Market <br> Capatilization |  |  | 4.23 |
| :--- | :--- | :--- | :--- |
| 11 Percent of Turn Over to Paid up <br> Value |  | 35.46 |  |
| 12 Percent of Turn Over Of <br> commercial Banks to Total Turnover |  | 57.22 |  |

Sources: www.nepalstock.com
According to the annual report of NEPSE in the year 2008/09, 170 companies are traded but the listed companies were 149 in secondary market. Out of them Commercial bank have the higher position than others .Besides that, finance and insurance, development banking, trading, hotels, manufacturing and processing sectors are in the declining stage. The number of company listed were increased from 96, in the year 2001/02, to 149 in the year 2008/09.The numbers of company traded as well as number of transactions were increased from 69 and 42028, in the year 2001/02, to 170 and 209091 in the year 2002/03. Market capitalization was also increased from Rs. 34704 million in the year 2001/02 to Rs 51293.07 million in the year 2008/09. Percentage turnover of commercial bank to total turnover is 57.22 , which shows the dependence of stock market on commercial bank.

Generally, transactions of banking sector were higher level in primary as well as secondary market rather than other sectors because banking sector provides safe and higher return than others. Though manufacturing companies play significant role in the development of the economy but they could not attract the investors in primary as well as secondary market. Due to lack of public interest, they were not able to collect enough funds from primary and secondary market. Recently, people are going to invest in capital market due to low interest rate in fixed deposit; however, these sectors are not able to take advantage from the secondary market.

### 2.2 Review From International Research Studies

Vast numbers of research studies have performed internationally on the stock market. The findings of some of the research studies are as follows: In 1963, Granger and Morgenstern applied spectral method of analysis to a number of prices series from NYSE. They found that short run movements in stock prices followed a simple random walk model. However, they reported that this model was not adequately explain the long run movements (C.W. Granger and O. Morgenstern , 1963:127).
"The indicators of stock market development reflects the development of an economy. It is important to predict the course of the national economy because economic activity affects corporate profits, investors attitudes and expectations and ultimately security prices. The key for the analyst is that overall economic activity manifest itself in the behaviour of stock prices- or the stock market. This linkage between economic activity and the stock market is critical."(Fisher, D.E., Jordan, R.J.: 1990; 57-59)

Roberto Barrow (1990) reported that in the case of US, stock market is variables and stock returns can largely explains the subsequent aggregate investments. On the contrary, Mork et al (1990) suggested that in the US, the stock market on an aggregate level is not much of a predicator of future investment .Meanwhile, a study by Galeotti and Schiantarelli (1994), based on quarterly aggregate data from the non- financial corporate sector in the US, revealed that investment decision are significantly affected by stock price fluctuations, regardless whether the variation is due to fads or due to change in fundamentals. On the other hand, firm- level studies typically showed that there is a very limited effect of the stock market on investment (Abel and Blanchard, 1986; Morck, Shleifer, and Vishny, 1990; Blanchard, Rhee, and Summers, 1993).
"The study conducted by the U.S Department of commerce on stock prices and the business cycle, 1948-84 has found that the general correspondence between stock prices and the business cycle, where weighted moving average of a stock price index is mapped against the peak and troughs of business cycle since 1948."(Kimpton M.H, 1985:105-107).

Ross Levine, a Senior Economist in the Finance and Private Sector Department Division of the World Bank's Policy Research Development, has mentioned in his article that stock markets may affect economic activity through the creation of liquidity. Many profitable investments require a long-term commitment of capital, but investors are often reluctant to relinquish control of their savings for long periods liquid equity markets make investment less risky- and cheaper if they need access to their savings or want $t$ alter their portfolios. At the same time, companies enjoy permanent access to capital raised through equity isssues. By facilitating long-term, more profitable investments, liquid market improves the allocation of capital and enhances prospects for long term economic growth. Further, by making investment less risky and more profitable, stock market liquidity can also lead to more investment (Levine, 1996:35)
"There are two important aspects of capital market, the raising of funds in the form of shares and debentures and trading in the securities already issued by the companies. While the first aspect is obviously most important from the point of view of economic growth, the second aspect is also for considerable importance. In fact, if facilities for transfer of existing securities are abundant, the raising of new capital is considered assisted for the buyer of new issue of security is confident that whenever he wants to get cash he can find buyer without much difficulty. Thus, the liquidity of the stock market affects the raising of new capital from the market." (Kunt A and Levin, 1996:224)

### 2.3 Review of Nepalese Research Studies

The stock market of Nepal has been less subjected to investment research than their counterparts elsewhere. In Nepalese context, there is little study available about stock behavior in small capital markets.
Mr. Radhe Shayam Pradhan (1993) has conducted a research, "Stock Market Behaviors in Small Capital Market: A case of Nepal." For the study, he collected the data of 17 enterprises from the year 1986 to 1990. His research study was carried out to meet the following objectives.
$>$ To assess the stock market behavior in Nepal.
> To examine the relationship of market equity, market value to book value, price earnings and dividends with liquidity, profitability, leverage, assets turnover and interest coverage.

After using statistical tools like regression models, he presented the followings findings:
$>$ The stock with larger ratio of dividend per share to market price per share have lower leverage ratio.
$>$ The leverage ratio of dividend per share to market price per share has higher liquidity.
$>$ The liquidity position of stock paying lower dividends is also more variable as compared to the stock paying higher dividends.
$>$ The stock with larger ratio of dividend per share to marker price per share has higher earnings.
$>$ There is positive relationship between the ratio of dividends per share and interest coverage.
$>$ The dividend per share and market price per share are positively correlated.
> The dividend payout and profitability has positive relationships.
$>$ There is a positive relationship between dividend payout and turnover ratios.
$>$ Assets turnover, earnings and interest coverage are more variable for the stocks paying higher dividends.

Mr. Mukti Aryal (1995) has conducted research 'The General Behavior of stock market prices'. The main objectives of this study were to discuss the movement of stock markets prices and develop the empirical probability distribution of successive price change of an individual common stock and a stock market as whole .This study is based on secondary information obtained from Nepal Stock Exchange .This study covers almost 8 months period (13 Jan 1994 to 13 Sept 19940 and about 21 stocks listed in NEPSE. He has applied run test as statical tools to analyze the data and get results. He has concluded that the assumption of independence, as predicted by random- walk model of security price behavior, has been refused at least for Nepalese context as the first approximation even in the rough way for early days of stock market operation. This rejection of hypothesis made clear that the knowledge of past and present becomes useful in predicting the future movements of stock market prices. The investors, on the floor of stock exchanges for securities, can make higher expected profits in the future based on these historical price series. In other words, the dependence nature of price series produced by general marker fluctuation statistically implied, today's price change is positively depending upon yesterday's price change. This implied that there is a sufficient lack of financial and market analysis who are sophisticated and superior in analyzing the general market fluctuations, predicting the occurrence of future potential and economic events that eventually affects the price series (Aryal, 1995:100-105)
Mr. Sadakar Timilsina (1997) has conducted research "Dividend and Stock Price." For the study Timilsina collected data of 16 enterprises from 1990 to 1994.

The objectives of the study were as follows:
$>$ To test the difference between dividends per share and stock prices.
$>$ To determine the impact of dividend policy on stock price.
$>$ To identify whether it is possible to increase the market value of stock by changing dividends policy or payout ratio.
To explain the price behavior, used simultaneous equation model as developed by Friend and Puckett (1964). The main findings of the study were as follows:
$>$ The difference between dividends per share and stock prices is positive in the sample companies.
$>$ Dividend per share affects the share prices variedly in different sectors.
$>$ Changing the dividend policy or dividend per share might help to increase the market price of share.
$>$ The difference between stock prices and retained earnings per share is not prominent.
> The difference between stock prices and lagged earnings ratio in negative.
$>$ Timilsina's study was based on 45 observations. The number of companies included in the sample was only 16 , which is quite low. Studies on dividends conducted in the context of Nepal are based on secondary data only. No study has been conducted on dividends by using primary data on yet. There is a need to conduct a survey of financial executive in order to find out more qualitative facts on dividends which can not be determined through the use of secondary data(Timilsina, 1997:80-92)

Mr. Surya Chadra Shrestha (1999) has conducted research on "Stock Price Behavior in Nepal." The main objectives of the research was to examine the efficiency of the stock market in Nepal.
For the study, he analyzed the stock price of 30 listed companies in NEPSE during the period of 13 January 1994 to mid- January 1998. Shrestha used serial correlation and run test to detect the dependence among the stock price series and funds that the successive price changes are dependent. He also concluded that the Nepalese stock market is not efficient in pricing shares even in its weak form.
However, since his studies did not adjust necessary information in the price series, the findings of this study would be used with caution.
Mrs. Rekha Panta(2000) has analyzed in her thesis "Current Problems and Prospects of Securities Market in Nepal" the trend of the Nepalese stock market and present state of primary and secondary market as well as problems and prospectus of Nepalese stock market.
The main findings of her study were:
> The development of stock market primarily depends on programs and their implementation.
> In Nepal, the overall policy- environment has not been conducive to the development of stock market. Therefore, it is difficult to develop more
efficient secondary market, trading system for both equity and debt security.
$>$ Restriction and Foreign portfolio investment hindered market development.
$>$ NEPSE does not have appropriate policies, membership and fee structure to attract member outside the kathmandu.
$>$ In Nepal, banks dominate primary market in government debt instruments, OTC trading is not permitted; therefore, secondary market is totally inactive.

Rishi Khanal (2002) in his study "Growth and Prospects of Stock Markets" has concluded that the transparency and openers of transaction, quality professional services, adequate corporate finance disclosures and improved legal, regulatory and Supervisory framework are the urgent need for the Nepalese Stock Market.
Pramila Subedi (2005) has also performed study on a stock price behavior in Nepal. She has analyzed the various factors of affecting the share price of companies taking 10 companies are sample listed in NEPSE. The statistical tools, used for the study are mean, standard deviation, coefficient of variation, correlation coefficient, regression hypothesis etc. The major findings were: Nepalese investors have not adequate education about the capital market thus stock prices in NEPSE shows rather irrational behavior. Commercial banking sector has dominated the overall performance of NEPSE. Manufacturing and processing, trading and hotel sectors have weak performance .Since NEPSE is in a increasing trend, in spite of unfavorable environment for investment, Nepalese citizens have a huge amount of scattered fund remained idle.
Dr. Manohar K. Shrestha has indicated why the share market is inactive and what problems are the main causes of inactiveness and what measures should be taken. Similarly, how the securities frauds and manipulation have occurred and to what extent they can be overcome.

The downfall of share market is mainly due to the unfair share market practice that went indicated for a long period in Nepal's share market. There has been a growing tendency to sell worthless and fraudulent securities since promoters were not questioned regarding their moral standing and honest integrity of professionalism. In practice, a handful of Banniya traders (Canny People) began to dominate the share market as they are very little exposed to the managerial and institutional culture of managing share market activities by honest and fair dealing.

Overall, the previous studies in stock market support the ideas that Nepalese stock market is not efficient even in the weak form hypothesis .Nepalese investors are not efficient enough to recognize potential for excess them.

## Research Gap

There have been several researches done before on Stock Market. All of those researches have their own significance and limitations. For example, Mr. Mukti Aryal conducted a study in 1995 on share price behaviors based on twenty-one sample stocks. The time period was only eight months from the beginning day of organized stock market. Now it is out of date. Till date market has experienced many ups and downs. Likewise, Shrestha in 1999 carried out a study based on date of randomly selected thirty stocks out of all listed securities mostly started from the commencing day of organized trading system on NEPSE. His study covers the period from the $13^{\text {th }}$ January 1994 to Mid July 1998. However, this study implies technical concept but not emphasis had been given on fundamentalism. His study remains silent to say whether the trading with the help of past information could earn profit on both bull and bear market. Likewise, Upadhaya has carried out another study in share price behavior in 2001. Though his study attempted to cover the limitations of previous studies but yet it is not enough to say whether DPS or EPS influence market price of stocks i.e. which of the variables (DPS and EPS) has more effect on share prices. EPS and DPS hit the psychology of investors in greater extent and hence they are the most important factors so as to attract public interest Shrestha conducted another study on "Role of SMC in Economic Development of Nepal" in 1981. He arrives at the conclusion that the performance of existing companies is not satisfactory; thus, the potential investors are not willing to invest in the present securities. Again he failed to highlight the problems of the research work. The correct study is a supplement to overcome the weakness and limitations of previous studies.
The findings of previous researches are equally important. Similarly, this research is also important in different area. The focus of the research will be to analyze the performance, growth and downfalls of the stock market. This will help to analyze whether the stock market is in increasing or in decreasing trend. We can also know the major factors that cause the fluctuation in stock price.

## CHAPTER- THREE

## RESEARCH METHODOLOGY

This chapter deals with the methodology of research. An attempt is made to present a basic frame of methodology with in which the research will be conducted. This chapter simply deals with short introduction, to financial parameters used in this study and short description of techniques that are used in the time of research and also about Research design, Sources and Nature of Data, Sampling Methods used, and financial and Statistical tools used for the data analysis.

### 3.1 Research Design

An architect prepares a blueprint before he/she approves a construction. An army prepares strategy before launching an attack. An artist makes a design before he/ she executes his/ her ideas. So also the researcher makes a plan of his/ her study before undertaking the research work. This will enable to save time and resources. Such a plan of study or blue print for study is called a research design (Strategy).
By research design we mean an overall frameworks or plan for the activities to be undertaken during the course of the study. The research design serves as a framework for the study, guiding the collection and analysis of the data, the research instruments to be utilized, and the sampling plan to be followed. Specifically speaking research design describes the general plan for Collecting, analyzing and evaluating data after identifying:

- What the researcher wants to know?
- What has to be deal with in order to obtain the required information?

The research design is an organized approaches and not a collecting of loose, unrelated parts. It is an integrated system that guides the researcher in formulating, implementing and controlling the study. Useful research design can produce the answers to the proposed research questions. The research design is thus an integrated frame that guides the researcher in planning and executing the research works.
A research design is a plan of action. It is plan for collecting and analyzing, data in a economic efficient and relevant manner. It is blue print and therefore as its best only tentative. Changes in the design are permitted and are dictated by considerations during the operations of the projects. In other
words, a research design is not highly specific plan to be followed without deviation but rather a series a series of guideposts to keep one headed the right direction.
A research design will always help a researcher in knowing successive stages. A good and properly prepared research design will have logical sequences of steps to be taken one after the other and in that stages will scientifically and logically follow. Thus, it will help in identifying the importance of each step in the whole research scheme .The design will thus help in making the researcher known as to why he/she is studying and what type of data will be needed, how his/her data will be collected i.e. what will be the sources of his data collection. It is important because if the data is not available, it is no use in undertaking research work on that subject. Then design will also help in finding out what total time the study is likely to take and what time each step in the study is likely to consume. The design will also discuss about the universe of the study i.e. how many cases will be covered in the study and in what manner will these cases be picked up and identified. Then as is well known in research different techniques are used for the collection of material and the design will give an idea as to what techniques will be used and that once the data through different techniques has been collected how will that be analyzed. Then how best will, the decisions arrived at, be articulated in a manner that research purpose can be achieved.
The formidable problem that follows the task of defining the research problem is the preparation of the design of the research project, popularly known as "research design" .Decisions regarding what, where, how much, by what means concerning an inquiry or a research study constitute a research design. A research design is the arrangement of the conditions for collection and analysis of data in a manner that aims to combine relevant to the research purpose with economy in procedure. In fact, the research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection; measurement and analysis of data. As such the design includes an outline of what the researcher will do from writing the hypothesis and its operational implications to the final analysis of data. More explications to the final analysis of data. More explicitly, the design decisions happens to be in respect of

- What is the study about?
- Why the study is being made?
- Where will the study be carried out?
- What type of data is required?
- Where can the required data are found?
- What periods of time will the study include?
- What will be the sample design?
- In what style will the report be prepared?

In brief, research design must, at least, contain- al a clear statement of the research problem :( b) producers and techniques to be used for gathering information :(c) the population to be studied: and (d) methods to be used in processing and analyzing data.
For carrying out the study of different data for the purpose of analyzing the problem, the research design consists specified methods of purposed study and plan .The relationship between MPS and selected financial indicators (i.e. EPS, DPS ,NWPS and CG) should be analyzed for identifying the major influencing factors of price of common stock. Regression analysis measures the degree of influence on MPS by selected indicators where as correlation analysis measures the relationship between selected indicators and MPS. The calculations and computations required for this analysis, historical data of sampled companies are used. So it falls under historical research design. The official website of NEPSE (www. Nepal stock.com) will be used for data required in this study. Other websites will also be used whenever necessary. All the major activities that are to be performed in this study like data collection, tabulation, computation, analysis, findings, conclusion, recommendations etc will be arranged according to the model prescribed by Tribhuvan University (T.U), faculty of management .The technique of descriptive analysis will be used whenever necessary and numerical analysis will be carried as far as practical.

### 3.2 Population and Sample

There are various segments stock listed in the stock market such as commercial banks, insurance, finance, hotels, trading, manufacturing and processing and others. This study includes only the commercial banks stocks listed in stock market because of the huge influence of these stocks in the stock market. Among the listed banks five banks are taken as sample to represent the performance of the capital market.

The sample banks are as follows:

## 1. Everest Bank Limited

Everest Bank Limited (EBL) started its operations in 1994 with a view and objective of extending professionalized and efficient banking services to various segments of the society. The bank is providing customer- friendly services through its Branch Network. With an aim to help Nepalese citizens working abroad, the bank has entered into arrangements with banks and finance companies in different countries, which enable quick remittance of funds by the Nepalese citizens in countries like UAE, Kuwait, Bahrain, Quarter, Saudi Arabia, Malaysia, Singapore and UK. EBL is the first bank that has launched e-ticketing system in Nepal. EBL customer can buy yeti airlines ticket through internet .EBL was one of the first bank to introduce Any Branch Banking System (ABBS) in Nepal. EBL has introduced Mobile Vehicle Banking system to serve the segments deprived of proper banking facilities through its Birtamod Branch, which is the first of its kind .EBL has introduced branchless banking system first time in Nepal to cover un banked sector of Nepalese Society.

## 2. Bank of Kathmandu (BOK)

Bok started its operation in March 1995 with the objective to stimulate the Nepalese economy and take it to newer heights. BOK also aims to facilitate the nation's economy and to become more competitive globally. Banks of Kathmadu limited has become a prominent name in the Nepalese banking sector. Bank of Kathmandu limited (BOK) has today become a land mark in the Nepalese banking sector by being among the few commercial banks which is entirely managed by Nepalese professionals and owned by the general public.

## 3. Himalayan Bank Limited

Himalayan Bank was established in 1993 in joint venture with Habib Bank Limited of Pakistan. Despite the cut- throat, competition in the Nepalese Banking Sector, Himalayan Bank has been able to maintain a lead in the primary banking activities - loans and Deposits. Legacy of Himalayan lives on in an institution that's known through out Nepal for its innovative approaches to merchandising and customers service. Products such as Premium Savings Accounts, HBL Proprietary card and Millionaire Deposit Scheme besides services such as ATM's and Tele banking were first introduced by HBL.

## 4. Nepal Investment Bank Limited

Nepal Investment Bank Ltd. (NBIL), previously Nepal Indosuez Bank Ltd., was established in 1986 as a joint venture between Nepalese and French partner. The French partner (holding $50 \%$ of the capital of NIBL) was credit Agricole Indosuez, a subsidiary of one of the largest banking group in the world. With the decision of Credit Agricole Indosuez to divest, a group of companies comprising of bankers, professionals, industrialists and businessman, has acquired on April 2002 the $50 \%$ shareholding of Credit Agricole Indosuez in Nepal Indosuez Bank Ltd. The name of the bank has been changed to Nepal Investment Bank Ltd upon approval of bank's Annual General Meeting, Nepal Rastrya Bank and Company Registrar's office with the following shareholding structure.

## 5. Nepal SBI Bank Limited

Nepal SBI Bank Ltd. (NSBL) is the first Indo- Nepal joint venture in the financial sector sponsored by three institutional promoters, namely State Bank of India, Employees Provident Fund and Agricultural Development Bank of Nepal through a Memorandum of understanding signed on $17^{\text {th }}$ July 1992. Fifty five percentage of the total share capital of the Bank is hold by the State Bank of India, fifteen percentage is hold by the Employees Provident Fund and thirty percentage is hold by the general public.

### 3.3 Nature and Sources of Data

This research study is primarily based on secondary data. Most of the data related to economic growth and stock market development will be collected from annual report and official report of concerned organization. The required information will be supplemented by Ministry of Finance, Department of Industries, Commerce and Supplies, economic Survey published by Nepal Government, quarterly economic bulletin published by Nepal Rastrya Bank (NRB), National Planning Commission and Security Board of Nepal (SEBON) as well as internet websites (www.nepalstock.com). Primarily data have also been used where secondary sources are inadequate.

### 3.4 Data Analysis Tool

Once the data have been collected from various sources, it needs to be analyzed properly, to get solution to the research problem .The collected data has no meaning, if they are not properly analyzed. So, to have analyze the data, different statistical and financial tools have been used in this research. The can be explained below:

### 3.4.1 Financial Tools

The financial tools used in this research are

## 1. Earning Price Per Share (EPS)

Earning per share measures the profit available to the equity shareholders on a per share basis. i.e., the amount that they get on every share hold by them.

$$
\text { EPS }=\frac{\text { Net Profit after tax- Preference dividend }}{\text { No of share outstanding }}
$$

## 2. Dividend Per Share (DPS)

The dividend per share is the amount paid as dividend to the holders of one share of the stock.

$$
\text { DPS }=\frac{\text { Total dividend paid }}{\text { No of share outstanding }}
$$

## 3. Return on Total Assets (ROA)

An indicator of how profitable a company is relative to its total assets. At this moment, the profitability ratio is measured in terms of the relationship between the net profits and assets calculated by dividing a company's annual earning by its total assets, ROA is displayed as a percentage.

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

## 4. Return on Common Equity

The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. The return on common equity measures the return earned on the common stock holder's investment in the firm. Generally, the higher this return, the better off are the owners.

$$
\text { Return on Common Equity }=\frac{\text { Net Profit after Tax }}{\text { Share holders equity }}
$$

## 5. Price Earning Multiple

A valuation ratio of a company's current Share price compared to its pershare earning's. Price earnings multiple is the relationship between earnings per share and market price of the stock. Earning per share shows the companies performance in the sense that how well the company has managed its material as well as human resources to satisfy the interest of stockholders. So, P/E multiple reflects the price currently being paid by the market for each rupee of currently reported EPS

$$
\text { P/E ratio }=\frac{\text { Market Price Per Share }}{\text { Earning per share }}
$$

## 6. Dividend Yield

Dividend yield is a way to measure how much cash flow you are getting for each dollar invested in a equity position- in other words, how much "bang for your buck" you are getting from dividends .Dividends yields shows the relationship between dividend per share and market price per share. Investors who require a minimum stream of cash flow from their investment portfolio can secure this cash flow by investing in stocks paying relatively high, stable dividend yields. The dividend yield is calculated by dividing the cash dividend per share by the market value per share.
Dividend Yield = Annual Dividends Per Share
Price per share

## 7. Earning Yield

The earnings per share for the most recent -12 -month period dividend by the current market price per share. The earnings yield (which is the inverse of the $\mathrm{P} / \mathrm{E}$ ratio) shows the percentage of each dollar invested in the stock that was earned by the company .The earning yield be defined as the ratio of earning per share to the market value per ordinary share.

Earning Yield $(E Y)=$ Earnings Per Share
Market value per share

## 8. Market Value to Book Value Ratio

Market value to book value ratio shows the ratio of market value to book value of share. It is the ratio of the share price of book value per share.

$$
\text { MV/BV Ratio }=\frac{\text { Market value per share }}{\text { Book value pre share }}
$$

## 9. Liquidity Ratio

A class of financial metrics that it is used to determine a company's ability to pay off its short-term debts obligations .Generally, the higher the value of the ratio, the larger the margin of safety that the company possesses to cover short- term debts. Liquidity is the pre-requisite for the very survival of the firm. The liquidity ratio measures the ability of a firm to meet short-term obligations and reflects the short- term financial strength of the firm. Thus, current ratio has been used to measure liquidity.

$$
\text { Current Ratio }=\frac{\text { Current Assets }}{\text { Current liabilities }}
$$

### 3.4.2 Statistical tools

1. Arithmetic Mean

The arithmetic mean is the simple and commonly used statistical tool. It defines the average value of distribution. It gives us clear figure about the analysis. It can be expressed symbolically as:

$$
\bar{X}=\frac{\sum x}{N}
$$

Where,

$$
\begin{aligned}
& \bar{X}=\text { Mean or average } \\
& \sum x=\text { Sum of var iables } \\
& N=\text { Number of values }
\end{aligned}
$$

## 2. Correlation Coefficient

It is statistical relationships between two or more random variables or observed data values. Correlation analysis is necessary in ordet to find out whether the selected variables in time series have any relation or not. Correlation analysis establishes the closeness of relationship between the two or more variables. It measures the degree of relationship or association between variables. Karl Pearson's coefficient or correlation is used to measures the degree of association among the variables. The formula used to calculate the co-efficient of correlation is as:

$$
r(x, y)=\frac{\sum(X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum(X-\bar{X})^{2}} \sqrt{\left.\sum Y-\bar{Y}\right)^{2}}}
$$

The value of correlation coefficient ranges between -1 and +1 . Following rules are available in interpreting the value of correlation coefficient :

- When $\mathrm{r}=0$, then variables are uncorrelated.
- When r falls between 0 to +1 , two variables are increasing or decreasing to the same direction.
- When r ranges between 0 to -1 , two variables are increasing or decreasing in the opposite, direction.
- When $\mathrm{r}=+1$, it indicates there is perfect positive relationship between the variables.
When $\mathrm{r}=-1$, it means there is perfect negative correlation between the two variables.


## CHAPTER-FOUR

## DATA PRESENTATION AND ANALYSIS

This chapter is the heart of the study. This chapter will be of great for the study as all the conclusions and recommendations are going to be delivered from the calculation done in this chapter. The presentation and analysis of data is the foundation of this study, which consists three chapter i.e., the state and growth of stock market, comparative analysis of financial performance of the companies and analysis of market price of stock with respect to dividend and earning

### 4.1 State and growth of stock market

A stock market is a public market (a loose network of economic transactions not a physical facility or discrete entity) for the trading of company stock and derivatives at an agreed price; these are securities listed on a stock exchange as well as those only traded privately .The stocks are listed and traded on stock exchanges which are entities of a corporation or mutual organization specialized in the business of bringing buyers and sellers of the organization to a listing of stocks and securities together.
The history of securities market began with the floatation of shares by Biratnagar Jute Mills Ltd. And Nepal Bank Ltd. In 1937 .The first issue of government bonds was in 1964, under the Company Act. It assisted public limited companies to raise the capital through issue of shares and debentures and also provide a market place for trading the securities .Although the purpose of the establishment was to assist the public limited companies, but it was only concerned with dealing the government bonds and the treasury bills in the beginning phase of establishment. After the Securities Exchange Act in 1983, the Security Marketing Centre was changed to security Exchange Centre and it opened the floor for security trading of shares to provide liquidity and marketability of new issued securities. His Majesty's Government under a program initiated to reform capital market and in the process Securities Exchange Centre was converted into Nepal Stock Exchange in 1993. After opening the floor for secondary trading of shares in 1984, 16 companies were listed with paid-up capital and market capital of Rs. 307.32 million and 318.67 million respectively in fiscal year 1985/86. Security Exchange Centre was new concept of that time, to work the new environment, the existing laws and regulations from the government side
and also the awareness of the people to security exchange activities were essential .However, Nepalese economy is weak than industrial developed country, gross domestic saving (GDS) and gross domestic product(GDP) is very low. People have tendency to invest in unproductive sector, rather than productive activities, regarding it the pace of development of stock market activities was very slow in corresponding years. The following table shows the fiscal year wise development of stock market.
The adhoc policy and negligible participation from government side and also low public response were main cause to slow development of stock market. It also failed to chanalized the response to the productive sectors. On the other hand, due to lack of large projects people have not been able to get opportunity to invest their savings, so the surplus and savings were diverted to invest in unproductive sectors and real estate due to lack of mobilization of savings. As a result, people were discouraged to utilize savings in productive sectors and there was no return for savers. The existence of all these conditions was caused due to slow growth of economic activities before establishment of Nepal Stock Exchange Limited.
After the restoration of democracy government followed liberalization policy and also opened the domestic market for foreign investors. It was positive sign to the development of stock market. Nepal Stock Exchange opened its trading floor from $13^{\text {th }}$ January 1994 for its newly appointed brokers and market makers. The extended structural adjustment programs in fiscal year 1993/94. had significantly positive impact on stock market development. Higher liquidity and market price of stock were observed in stock market, which increasing by drew the attention of public in the ownership structure of the corporate sectors.
In the beginning of the 2007/08 fiscal year NEPSE replaced the old open-out-cry system of securities trading, which was in place since the beginning of secondary trading in 1994, with the automated trading system (ATS). The ATS has not only mechanized securities trading, but also reduced the manipulation of prices and human errors. NEPSE has also reformed its organizational structure, right sized its human resources, outsourced its cleaning and security services started online trading through WAN disseminated real- time information and extended the trading hours to make stock exchanges efficient. The Securities Exchange Act- 2063 and new regulations formulated under the act have further ensured the efficiency of trading. NEPSE is bringing this newsletter out to reduce uncertainty in the market and to make the market more efficient by providing information about secondary market activities and by carrying market reviews.

The Government of Nepal has issued three new Regulations, namely, Securities Businessperson (Stock Broke, Dealer and Market Maker) Regulation -2007, Securities Board Regulation-2007, Securities Board Regulation-2007 and Stock Exchange Licensing Regulation-2007. These Regulations which came into effects from 4 November 2007, among other things pared the way for opening a new stock exchange, increase the number of stock brokers and reduce the brokerage commission.
NEPSE extended the trading hours by one hour from 19 December 2007 due to an increasing trading pressure. The increase in trading hours will benefit small and big investors alike. NEPSE has also started providing real time information such as top gainers and losers, imposition of a trading halt resumption of trading and even place orders without being present in the trading hours. The security Board of Nepal has registered capital mobilization of Rs.4.05billion by 20different companies in the first six months of the current fiscal year. Eight of these companies have issued ordinary shares worth Rs.1.77 billion and the remaining 12 companies have issued rights share worth Rs. 2.28 billion.

### 4.1.1 Present Status of Stock Market in Nepal

At present the stock market in Nepal has witnessed its strength surprisingly and has raised hopes for sustainer growth of corporate undertakings.
Stock market in Nepal has been growing gradually both in terms of turnover as well as the capital investment from 16 listed companies in 1986 they grew to 110 in 2000 and 115 and declined in the year to 6 and rise to 149 in 2009. During this period their paid up capital surged up from 341 million to 61140 million. The number of listed companies increased tremendously. Market capitalization of listed shaes has been raising continually except with few cases of vitality .It has reached to Rs 512939.07 million in 2009 from 548 million in 1986. The details of development of stock market in Nepal is shown in the below table.

## Table 4.1

The development of stock market in Nepal

| Description | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ |
| :--- | :--- | :--- | :--- | :--- |
| Paid up value of Listed <br> share(Rs.) | 19958 | 21746 | 29465 | 61140 |
| Market Capitalization (Rs.) | 96763.74 | 186301.28 | 366247.56 | 512939.07 |
| Turn Over(Rs.) | 3451.43 | 8360.07 | 22820.76 | 21681.07 |
| Market Days | 228 | 232 | 235 | 234 |
| Number of company Listed | 125 | 135 | 142 | 149 |
| Number of company Traded | 110 | 116 | 136 | 170 |
| Number of share Traded <br> \% of Turn over to market <br> capitalization | 12221930 | 18147250 | 28599770 | 30547160 |
| \% of Turn over to paid up <br> value | 26.88 | 4.49 | 6.23 | 4.23 |
| \% of Turn over of <br> commercial banks to total <br> turnover | 78.12 | 70.04 | 60.57 | 57.22 |

Sources: www.nepalstock.com
The above table clearly shows the main deposit indicators of stock market have decreased recently. The paid up value of listed shares was Rs 19958.00 million in the year 2005/06, which is in the increasing trend and was 61140 million in 2008/09. It is mainly due to the issuance of bonus shares ,rights share and it is mainly due to the issuance of bonus shares, right shares and some initial public offerings. In the year 2008/09, the turnover has decreased sharply and registered to Rs21681.07 million however the market capitalization is increased than the previous year and is Rs51239.07 million. The number of listed company has also increased but the rate of growth is very slow. The number of shares traded in the floor has increased slowly in current year with compared to previous year growth rate from 28599770 to 30547160 over the period of $2007 / 08$ to $2008 / 09$. There is sharp decline in \% of turnover to market capitalization $\& \%$ turnover to paid up value. The percentage of turnover commercial banks on percentage turnover of stock market is in decreasing tend it was $57.22 \%$ in period 2008/09.
The market sharply decreased over the period of study, the possible reasons for decline may be due to world over recession \&also due to international and national reasons. The world economy is going through the recession
phase that made severe affect on world stock market and Nepalese stock market is not isolated. The increasing level of internal conflict and political instability is badly hampering the stock market and economy as whole.

### 4.2 Analysis of Financial Performance of the Companies

The performances of individual companies that are listed in the stock exchange have direct impact on capital market. A company having a good performance has highest market price, high volume of transaction, higher demand of stocks, lower risk and low cost of capital.
Various indicators are used to analyze the company performances. The used indicators are earnings per share, market price per share, dividend price per share, book value per share, price earining multiple,dividend payout ratio, market price to book value ratio, dividend yield, liquidity ratio, return on assets and return on equity.

### 4.2.1 Earning Price Per Share

The profitability of a firm from the point of view of the ordinary shareholders in the EPS.

EPS $=$ Net profit after tax- preference dividend/no. of shares outstanding.

Table 4.2.1
EPS of the sample banks

| Banks/Years | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 54.22 | 62.78 | 78.42 | 91.82 | 99.99 | 77.45 |
| BOK | 30.10 | 43.67 | 43.50 | 59.94 | 54.68 | 46.38 |
| HBL | 47.91 | 59.24 | 60.66 | 62.74 | 61.90 | 58.49 |
| NIBL | 39.50 | 59.35 | 62.57 | 57.87 | 37.42 | 51.34 |
| NSBL | 13.29 | 18.27 | 39.35 | 28.33 | 36.18 | 27.08 |

Sources: Annul Report of Sample Banks
The average EPS of all sample banks are more than Rs40 except of the NSBL. The market leader in this segment is EBL with the average EPS of Rs.77.45. The lowest average EPS is Rs27.08 of NSBL. The EBL has the highest EPS, as Rs. 99.99 in the year 2008/09 and this was the single EPS with more than Rs.13.29 of NSBL in the year 2004/05.The reasons of this low EPS was due to the fact that the earning declined sharply in the year.

All the above banks EPS has increased from 2004/05 to 2007/08 but there is slight decrease in EPS in most banks in the year 2008/09. EPS plays single most important variable in determining the price of share.
The table can be presented in graph to understand the data more clearly. The following figure presents the average of EPS of sample banks during the period of 5 Years.

Fig. 4.2.1
EPS of Sample Banks


The figure clearly show that the average EPS of EBL is the highest among all selected samples. On the basis of EPS, the stock of EBL is the best one to invest. The higher level of EPS will generally increase the market price of stock.

### 4.2.2 Dividend Per Share

Dividend is the portion of profit that is ready to be available for shareholders or the amount paid as dividend to the holder of one share of the stock.

DPS $=$ Total dividend Paid/No. of shares outstanding

Table 4.2.2
DPS of the sample banks

| Banks/ <br> Years | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 20.00 | 25.00 | 30.00 | 30.00 | 30.00 | 27.00 |
| BOK | 15.00 | 48.00 | 20.00 | 42.11 | 47.37 | 34.50 |
| HBL | 31.58 | 35.00 | 40.00 | 45.00 | 43.56 | 39.03 |
| NIBL | 12.50 | 55.46 | 30.00 | 40.83 | 20.00 | 31.76 |
| NSBL | - | 5.00 | 47.59 | - | 42.11 | 18.94 |

Source: Annual Report of Sample Banks
Himalayan Bank Limited seems prominent in declaring large amount of dividend. The average dividend of HBL is Rs. 39.03 per share. The lowest dividend paying bank in Nepal SBI Bank Limited whose average is 18.94 . Only two banks HBL and BOK seems to be highest \& regular on offering dividend to share holders. Having a growing dividend per share can be a sign that the company's management believes that the growth can be sustained.

Fig. 4.2.2
DPS of Sample Banks


The figure clearly states that the HBL is the top on dividend per share .The BOK and NIBL are also good in paying dividends. It is believed that the declaration of dividend has positive impact on the price of share. In Nepalese context, only the banking sector is regular on paying dividend. This may be one of the reasons of such high prices of banking sector in stock market.

### 4.2.3 Return On Total Assets

Here, the profitability ratio is measured in terms of the relationship between the net profit and assets. The ROA may also be called profit- to- assets ratio.

Return On Total Assets $($ ROA $)=$ Net profit after tax/ Total assets
Table 4.2.3
ROA of Sample Banks

| Banks/Years | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 1.40 | 1.50 | 1.40 | 1.70 | 1.73 | 1.55 |
| BOK | 1.42 | 1.65 | 1.80 | 2.04 | 2.25 | 1.83 |
| HBL | 1.11 | 1.55 | 1.47 | 1.76 | 1.91 | 1.56 |
| NIBL | 1.42 | 1.61 | 1.79 | 1.77 | 1.68 | 1.65 |
| NSBL | 0.55 | 0.0 | 1.83 | 1.44 | 1.02 | 1.15 |

Sources: Annual Report of Sample Banks
The ROA of Banks of Kathmandu is the highest with $1.83 \%$ while the lowest ROA is $1.15 \%$ of Nepal SBI Bank Limited. All the banks' ROA is more than $1 \%$ which is acceptable. The NSBL is the only bank that has poor ROA for the period of five years.
The ROA figure gives investors an idea of how effectively the company is converting the money it has to invest into net income. The higher the ROA number, the better, because the company is earning more money on less investment. When you really think about it, management's most important job is to make wise choices in allocating its resources. Anybody can make a profit by throwing a ton of money at a problem, but very few manager excel at making large profits with little investment .Higher ROA generally push the market price upward.

Fig 4.2.3
ROA of Sample Banks


The above figure shows the average ROA for all sample banks for the given period of study.

### 4.2.4. Return on Common Equity

The return on common equity measures the return earned on the common stockholder's investment in the firm. Generally, the higher this return, the better off are the owners. The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporations profitability by revealing how much profit a company generates with the money shareholders have invested.

Return on common Equity = Net Profit after tax/Shares holders equity

Table 4.2.4
ROE of Sample Banks

| Banks/Years | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 24.65 | 28.84 | 27.92 | 28.53 | 31.88 | 28.36 |
| BOK | 14.09 | 18.93 | 26.41 | 26.94 | 26.51 | 22.58 |
| HBL | 19.99 | 25.90 | 22.91 | 25.30 | 24.13 | 23.65 |
| NIBL | 19.65 | 24.73 | 26.74 | 25.95 | 23.10 | 24.03 |
| NSBL | 8.33 | 12.04 | 22.10 | 17.64 | 18.58 | 15.74 |

Source: Annual Report of Sample Banks

The ROE of Everest Bank Limited is the highest among all selected banks. EBL'S average ROE is $28.36 \%$. The lowest ROE is $15.74 \%$ of Nepal SBI Bank Limited. Investors seek higher ROE for investment. In this regard, the EBL'S stock is excellent while the stock of NIBL and HBL are also good. The following figure present the average ROE for 5 years of study.

Fig 4.2.4
ROE of Sample Banks


The above figure shows the average ROE for all sample banks for the given period of study.

### 4.2.5 Market Price Per Share

The market price per share is very important for all stakeholders. Generally, good market price per share is the fate of a company. If the market price is well high, the investors perceive it very positively disregarding the other factors. Any decrease in the market price will adversely affect the company. If the market price of a particular company decrease very sharply and consistently, it may lead to bankruptcy. The market price of share is the most important factor from the view of investors, who firstly look for the higher market price rather than the indicators.

Table 4.2.5
MPS of the selected banks

| Banks/ <br> Years | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 870.00 | 1379.00 | 2430.00 | 3132.00 | 2455.00 | 2053.20 |
| BOK | 430.00 | 850.00 | 1375.00 | 2350.00 | 1825.00 | 1366.00 |
| HBL | 920.00 | 1100.00 | 1740.00 | 1980.00 | 1760.00 | 1500.00 |
| NIBL | 800.00 | 1260.00 | 1729.00 | 2450.00 | 1388.00 | 1525.00 |
| NSBL | 335.00 | 612.00 | 1176.00 | 1511.00 | 1900.00 | 1106.80 |

Source: Annual Report of Sample Banks
Market price per share shows the value of each share at a glance. From the above table, the average MPS of EBS has the highest value in comparison of other banks. It has the average value of Rs 2053.20. That means EBL is showing good performance over this period than the other banks. The lowest of all bank is the HBL, which average MPS is Rs 1106.80 . All the banks MPS has decreased in the year 2008/09 except the MPS of NSBL has increased despite the global recession.

Figure 4.2.5
Market Price of Sample Banks


The above figure clearly shows that market price of EBL has the highest value whereas Nepal SBI Bank Limited has the lowest market price

### 4.2.6 Price Earning Ratio

Price earning multiple is the relationship between earning per share and market price of the stock. Earning per share shows the company performance in the sense that how well the company has managed its material as well as human resources to satisfy the interest of stockholders. The P/E is sometimes referred to as the "multiple", because it shows how much investors are willing to pay per dollars of earnings. As a general rule, the higher the P/E ratio, the better it is for the owners. Security analyst to assess a firm's performance as expected by the investors popularly uses this ratio. It is the most important and useful tools to compare one company to other company in same industry.
$\mathrm{P} / \mathrm{E}$ ratio $=$ Market price per share/Earning per share
Table 4.2.6
Price earning ratio of sample banks

| Banks/Years | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 16.06 | 21.97 | 30.99 | 34.11 | 24.25 | 25.47 |
| BOK | 14.29 | 19.46 | 31.61 | 39.21 | 33.37 | 27.59 |
| HBL | 19.20 | 18.57 | 28.69 | 31.56 | 28.43 | 25.29 |
| NIBL | 20.25 | 21.23 | 27.63 | 42.33 | 36.10 | 29.51 |
| NSBL | 25.11 | 33.49 | 26.89 | 53.34 | 52.52 | 38.27 |

Sources: Annual Report of Sample Banks
The P/E ratio of an important indicators of the performance of stock in stock market. In this criterion, the NSBL has the highest average P/E ratio among all samples. It has 38.27 average $\mathrm{P} / \mathrm{E}$ ratio during the period of study. Himalayan Bank Limited has the lowest average P/E ratio of 25.29. The consistency in $\mathrm{P} / \mathrm{E}$ ratio is important than having higher $\mathrm{P} / \mathrm{E}$ ratio with high degree of volatility. The consistency in P/E ratio will have positive impact on the price of share in the market. A rational investors will look for the consistency than high but fluctuating P/E ratio.

The figure below presents the average $\mathrm{P} / \mathrm{E}$ ratio of selected sample between the period 2004/05 and 2008/09.

Figure 4.2.6
P/E ratio of Sample Banks


The above figures shows the average P/E ratio of Nepal SBI Bank Limited's highest from all sample banks for the given period of study.

### 4.2.7 Dividend Payout Ratio

It is also known as payout ratio. It measure the relationship between the earnings belonging to the ordinary shareholders and the dividend paid to them. In other words, the D/P ratio shows what percentage share of the net profits after tax and preference dividend is paid out as dividend to the equity share holders.

## D/P Ratio= DPS/EPS

Table 4.2.7
Dividend Payout Ratio of Sample Banks

| Banks/ <br> Years | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 36.89 | 39.82 | 38.26 | 32.67 | 30.00 | 35.53 |
| BOK | 49.83 | 109.92 | 45.98 | 70.25 | 86.63 | 72.52 |
| HBL | 65.92 | 59.08 | 65.94 | 71.72 | 70.37 | 66.67 |
| NIBL | 31.65 | 93.45 | 47.95 | 70.55 | 53.45 | 59.41 |
| NSBL | - | 27.37 | 120.94 | - | 116.39 | 52.94 |

Source: Annual Report of Sample Banks

On average, the Bank of Kathmandu has the highest rate of payout among all selected samples. The table shows the highest average payout ratio of BOK is $72.52 \%$. While the second highest payout ratio is 66.61 of Himalayan Bank Limited. The highest payout ratio among all samples during the period of study was 120.94 of NSBL in the year 2006/07. Such a high payout ratio due to huge dividend paid in that year. The HBL is consistent in paying dividends. The consistency in payout is not consistent as HBL and EBL. Generally, the high and consistent payout ratio has positive impact on the behavior of market price of stock. A good payout ratio helps the stock price to move upwards. The following tables shows the average payout ratio of selected sample between the period 2004/05 and 2008/09.

Figure: 4.2.7
DPR of Sample Banks


The above table clearly shows that BOK has the highest and EBL has the lowest average DPR.

### 4.2.8 Dividend Yield

Dividend Yield is a way to measure how much cash flow you are getting for each dollar invested in an equity position- in other words, how much "bang for your buck" you are getting from dividends. Dividend yield shows the relationship between dividend per share and market price per share.

Dividend Yield = Annual dividend per share/Price per share

Table 4.2.8
Dividend Yield of Sample Banks

| Banks/ <br> Years | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 2.30 | 1.81 | 1.23 | 0.96 | 1.22 | 1.51 |
| BOK | 3.49 | 5.65 | 1.45 | 1.76 | 2.60 | 3.00 |
| HBL | 3.43 | 3.81 | 2.30 | 2.27 | 2.48 | 2.73 |
| NIBL | 1.56 | 4.40 | 1.74 | 1.67 | 1.44 | 2.16 |
| NSBL | - | 0.82 | 4.05 | - | 2.22 | 1.42 |

Source: Annual Report of Sample Banks
The dividend yield is another major factor that affects the behaviours of stock price in market. A high and consistent yield generally increases the market price of stock. In this parameter, the BOK is again the best among the selected banks. Its share is earning a good average return. The yielding rate of Everest Bank \& NSBL is irregular and very low comparatively to other banks. Its share are yielding less than $1.50 \%$ on average and these banks have lowest DY among all banks. Investors who require a minimum stream of cash flow from their investment portfolio can secure this cash flow by investing in stocks paying relatively high, stable dividend yields. The average dividend yield can also be presented in graph as well. The following figure shows the average dividend yield rate:

Figure 4.2.8
DY of Sample Banks


The above figures that BOK has the highest average DY among all the banks.

### 4.2.9. Earning Yield

The earning yield may be defined as the ratio of earning per share to the market value per ordinary share.

EY=Earning per share/ Market value per share
Table. 4.2.9
Earning yield of Sample Banks

| Banks <br> Years | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 6.23 | 4.55 | 3.23 | 2.93 | 4.07 | 4.20 |
| BOK | 7.00 | 5.14 | 3.16 | 2.55 | 3.00 | 4.17 |
| HBL | 5.21 | 5.39 | 3.49 | 3.17 | 3.52 | 4.15 |
| NIBL | 4.94 | 4.71 | 3.62 | 2.36 | 2.70 | 3.66 |
| NSBL | 3.97 | 2.99 | 3.35 | 1.87 | 1.90 | 2.82 |

Source: Annual Report of Sample Banks
The earnings yield is another phenomenon that has impact on the behaviors of stock price. Generally, a high and consistent yield is considered good among all stakeholders. In this parameter, the Everest Bank is best among the selected banks. Its share is earning a good return in each of the year with steady rate. The yielding rate of NSBL is irregular and very low comparatively to other banks .Its share is yielding only $2.82 \%$ on average and is the lowest among all banks. Classical theory suggest that investors in equities should demand an extra risk premium of several percentage points prevailing risk free rates (such as T-bills) in their earning yield to compensate them for the higher risk of owing stock over bonds and other assets classes. The average earning yield is presented in the following figures.

Fig: 4.2.9
EY of Sample Banks


In the above figures, the earning of Everest Bank, Bank of Kathmandu \& Himalayan Bank is the peak and is above $4 \%$. The lowest yield can be seen of NSBL in range of $2 \%$ to $3 \%$. Despite of all insurgencies and chaos in national economy, all the banks have the average earnings yield. This indicates that the investors generally believe in banking sector rather than other sector.

### 4.2.10 Market Price to Book value ratio

Market value to book value ratio is the ratio of the share price to book valueper share.

MV/BV Ratio= MPS/ Book value per share
Table 4.2.10
MP/BV Ratio of Sample Banks

| Banks/ <br> Years | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 3.96 | 6.34 | 8.65 | 9.73 | 7.83 | 7.30 |
| BOK | 2.01 | 3.69 | 8.35 | 10.56 | 8.85 | 6.69 |
| HBL | 3.84 | 4.81 | 6.57 | 7.99 | 6.86 | 6.01 |
| NIBL | 3.98 | 5.25 | 7.39 | 10.99 | 8.57 | 7.23 |
| NSBL | 2.10 | 4.03 | 6.61 | 9.41 | 9.7 | 6.38 |

Source: Annual Report of Sample Banks
The book value to market value ratio is another parameter that affects the behaviours of stock price in market. Generally, a high ratio is considered to be good. In this criterion, the Everest Bank, on average, seems the best among all selected samples. The Everest Bank has the ratio of 7.30 while the lowest ratio of 6.01 of Himalayan Bank. The following figures illustrate the average market value to book value ratio.

Figure 4.2.10
MP/BV Ratio of Samples Banks


The above figures shows that EBL has the highest MP/BV Ratio among all other banks.

### 4.2.11 Liquidity Ratio

Liquidity is the pre-requisites for the very survival of the firm. The liquidity ratio measures the ability of a firm to meet short- term obligations and reflects the short-term financial strength of the firm. Thus, current ratio has been used to measure liquidity.

Current Ratio $=$ Current Assets/Current Liabilities
Table 4.2.11
Liquidity Ratio of Sample Banks

| Banks/ <br> Years | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 0.98 | 1.04 | 1.04 | 1.05 | 1.11 | 1.04 |
| BOK | 1.02 | 1.04 | 1.03 | 1.06 | 1.10 | 1.05 |
| HBL | 1.03 | 1.02 | 0.99 | 0.85 | 1.02 | 0.98 |
| NIBL | 1.13 | 1.11 | 0.74 | 0.76 | 0.99 | 0.95 |
| NSBL | 1.05 | 1.02 | 1.02 | 1.05 | 1.11 | 1.05 |

Source: Annul Report of Sample Banks The liquidity position of Bank of Kathmandu \& NSBL shows the highest of 1.05. The lowest liquidity ratio is 0.95 of NIBL. In banking sectors, a ratio of $1: 1$ is considered to be good and in this regarded all sample banks are more or less equal to 1 . The following figures shows the liquidity ratios of all selected banks.

Figure 4.2.11
Liquidity ratio of Sample Banks


The above figures shows that Bank of Kathmandu \& NSBL has the highest liquidity ratio among all the banks.

### 4.3 Analysis of relationship of price with earnings and dividend

It can be attempted to analyze whether earnings and dividends are directly affected or not with the rise and fall of prices. In other words, this study tries to know that if the earning per share raises the price of share also rises and if there is an increment in dividend per share of a certain company, the share price also increases. The relationship can be measured through various statistical tools. Amongst them, coefficient of correlation (Karl Pearson's) is widely used.

### 4.3.1 Coefficient of Correlation between Price and Earning

Correlation analysis establishes the closeness of relationship between two or more variables. It measures the degree of relationship or association between variables. Karl Person's Coefficient of correlation is used to measure the degree of association among the variables. Correlations are useful because they can indicate a predictive relationship that can be exploited in Practice. Correlations can also suggest possible causal, or mechanistic relationships .The formula used to calculate the coefficient of correlation is as :

## A. Everest Bank Limited

Table 4.3.1 (a)
Correlation between EPS and MPS of Everest Bank Limited.

| Year | EPS | MPS |
| :--- | :--- | :--- |
| $2004 / 05$ | 54.22 | 8.70 |
| $2005 / 06$ | 62.78 | 1379 |
| $2006 / 07$ | 78.42 | 2430 |
| $2007 / 08$ | 91.82 | 3132 |
| $2008 / 09$ | 99.99 | 2455 |
| Average | 77.44 | 2053.20 |
| Standard Deviation | 17.14836 | 815.0753 |
| Coefficient of Correlation | 0.89 |  |

Source: Annual Report of Sample Banks
The table shows the earnings per share and market price per share of Everest Bank Limited from the year 2004/05 to 2008/09. The average of earning per share is Rs77.44 and the average market price per share is Rs2053.20. The standard deviation of earning per share and market price per share is
17.14836 and 815.0753 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earnings per share and market price per share is 0.89 . This shows that EPS and MPS are positively correlated.

## B. Bank of Kathmandu

Table 4.3.1 (b)
Correlation between EPS and MPS of Bank of Kathmandu

| Year | EPS | MPS |
| :--- | :--- | :--- |
| $2004 / 05$ | 30.1 | 430 |
| $2005 / 06$ | 43.67 | 850 |
| $2006 / 07$ | 43.5 | 1375 |
| $2007 / 08$ | 59.94 | 2350 |
| $2008 / 09$ | 54.68 | 1825 |
| Average | 46.37 | 1366 |
| Standard Deviation | 10.32899 | 681.3765 |
| Coefficient of Correlation | 0.96 |  |

Source: Annual Report of Sample Banks The table shows the earnings per share and market price per share of Bank of Kathmandu from the year 2004/05 to 2008/09. The average of earning per share is Rs. 46.37 and the average market price per share is Rs1366. The standard deviation of earning per share and market price per share is 10.32899 and 681.3765. respectively. The standard deviation shows the volatility of EPS and MPS .The coefficient of correlation between earning per share and market price per share is 0.96 . This shows that EPS and MPS are positively correlated.

## C. Himalayan Bank Limited

Table 4.3.1 99(c)
Correlation between EPS and MPS of Himalayan Bank Limited.

| Year | EPS | MPS |
| :--- | :--- | :--- |
| $2004 / 05$ | 47.91 | 920 |
| $2005 / 06$ | 59.24 | 1100 |
| $2006 / 07$ | 60.66 | 1740 |
| $2007 / 08$ | 62.74 | 1980 |
| $2008 / 09$ | 61.9 | 1760 |
| Average | 58.49 | 1500 |
| Standard Deviation | 5.4203 | 412.795 |
| Coefficient of Correlation | 0.83 |  |

Source: Annual Report of Sample Banks.
The table shows the earning per share and market price per share of Himalayan Bank limited from the year 2004/05 to 2008/09. The average of earnings per share is Rs58.49 and average market price per share is 1500 . The standard deviation of earning per share and market per share is 5.4203 and 412.795 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.83 . This shows that EPS and MPS are positively correlated.

## D. Nepal Investment Bank

Table 4.3.1 (d)
Correlation between EPS and MPS of Nepal Invest Bank

| Year | EPS | MPS |
| :--- | :--- | :--- |
| $2004 / 05$ | 39.5 | 800 |
| $2005 / 06$ | 59.35 | 1260 |
| $2006 / 07$ | 62.57 | 1729 |
| $2007 / 08$ | 57.87 | 2450 |
| $2008 / 09$ | 37.42 | 1388 |
| Average | 51.34 | 1525.4 |
| Standard Deviation | 10.65 | 549.88 |
| Coefficient of Correlation | 0.57 |  |

Source: Annual Report of Sample Bank
The table shows the earning per share and market price per share of Nepal Investment Bank from the year 2004/05 to 2008/09.The average of earning per share is Rs1525.40. The standard deviation of earning per share and market price per share is 10.65 and 549.88 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.57 . This shows that EPS and MPS are positively correlated.

## E. Nepal SBI Bank Limited

Table 4.3.1(e)
Correlation between EPS and MPS of Nepal SBI Bank Limited.

| Year | EPS | MPS |
| :--- | :--- | :--- |
| $2004 / 05$ | 13.29 | 335 |
| $2005 / 06$ | 18.27 | 612 |
| $2006 / 07$ | 39.35 | 1176 |
| $2007 / 08$ | 28.33 | 1511 |
| $2008 / 09$ | 36.18 | 1900 |
| Average | 27.08 | 1106.80 |
| Standard Deviation | 10.03 | 572.33 |
| Coefficient of Correlation | 0.82 |  |

Source: Annual Report of Sample Banks
The table shows the earning per share and market price per share of Nepal SBI Bank Limited from the year 2004/05 to 2008/09. The average of earning per share is Rs27.08 and the average market price per share is Rs1106.80. The standard deviation of earning per share and market price per share is 10.03 . and 572.33 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earnings per share and market price per share is 0.82 . This shows that EPS and MPS are positively correlated.

### 4.3.2 Coefficient of Correlation between Price with Dividend

A correlation between price and dividend measures the relationship between these two important financial indicators. A rational investors looks for the high dividend and rather than high market price in long term investment. For short-term investment, high market price is more preferable than high dividend. A positive degree of correlation between these two variables shows that any increase in one variables increases the other and vice-versa. In this section of the study, it is attempted to find out the relationship between these two variables for each and sample banks during the period of five years.
a) Everest Bank Limited

Table 4.3.2 (a)
Correlation between DPS and MPS of Everest Bank Ltd.

| Year | DPS | MPS |
| :--- | :--- | :--- |
| $2004 / 05$ | 20 | 870 |
| $2005 / 06$ | 25 | 1379 |
| $2006 / 07$ | 30 | 2430 |
| $2007 / 08$ | 30 | 3132 |
| $2008 / 09$ | 30 | 2455 |
| Average | 27.00 | 2053.20 |
| Standard Deviation | 4.00 | 815.08 |
| Coefficient of Correlation | 0.93 |  |

Source: Annual Report of Sample Banks
The table shows the dividend per share and market price per share from the year 2004/05 to 2008/09. The average of DPS and MPS is Rs27 and 2053.20 .The standard deviation of dividend per share and market price is 4 and 815.08. The coefficient of correlation between dividend per share and market price per share is 0.93 . This shows that DPS and MPS are positively correlated.
b) Bank of Kathmandu(BOK)

Table 4.3.2 (b)
Correlation between DPS and MPS of BOK.

| Year | DPS | MPS |
| :--- | :--- | :--- |
| $2004 / 05$ | 15 | 430 |
| $2005 / 06$ | 48 | 850 |
| $2006 / 07$ | 20 | 1375 |
| $2007 / 08$ | 42.11 | 2350 |
| $2008 / 09$ | 47.37 | 1825 |
| Average | 34.50 | 1366 |
| Standard Deviation | 14.12 | 681.38 |
| Coefficient of Correlation | 0.51 |  |

Source: Annual Report of Sample Banks

The table shows the dividend per share and market price per share from the year 2004/05 to 2008/09. The average of DPS and MPS is Rs 34.50 and

RS1366. The standard deviation of dividend per share and market price per share is 0.51 .This shows that DPS and MPS are positively correlated.
c) Himalayan Bank Limited

Table 4.3.2 (c)
Correlation between DPS and MPS of Himalayan Bank Ltd.

| Year | DPS | MPS |
| :--- | :--- | :--- |
| $2004 / 05$ | 31.58 | 920 |
| $2005 / 06$ | 35 | 1100 |
| $2006 / 07$ | 40 | 1740 |
| $2007 / 08$ | 45 | 1980 |
| $2008 / 09$ | 43.56 | 1760 |
| Average | 39.03 | 1500.00 |
| Standard Deviation | 5.08 | 412.80 |
| Coefficient of Correlation | 0.97 |  |

Source: Annual Report of Sample Banks
The table shows the dividend per share and market price per share from the year 2004/05 to 2008/09. The average of DPS and MPS is Rs39.03 and Rs 1500 . The standard deviation of dividend per share and market price is 5.08 and 412.80 . The coefficient of correlation between dividend per share and market price per share is 0.97 . This shows that DPS and MPS are positively correlated.

## d) Nepal Investment Bank

Table 4.3.2(d)
Correlation between DPS and MPS of Nepal Investment Bank

| Year | DPS | MPS |
| :--- | :--- | :--- |
| $2004 / 05$ | 12.5 | 800 |
| $2005 / 06$ | 55.46 | 1260 |
| $2006 / 07$ | 30 | 1729 |
| $2007 / 08$ | 40.83 | 2450 |
| $2008 / 09$ | 20 | 1388 |
| Average | 31.76 | 1525.40 |
| Standard Deviation | 15.21 | 549.88 |
| Coefficient of Correlation | 0.41 |  |

Source: Annual Report of Sample Banks
The table shows the dividend per share and market price per share from the year 2004/05 to 2008/09 .The average of DPS and MPS is Rs31.76 and

Rs1525.40. The standard deviation of dividend per share and market price is 15.21 and 549.88. The coefficient of correlation between dividend per share and market price per share is 0.41 . This shows that DPS and MPS are positively correlated.
e) Nepal SBI Bank Limited
f)

Table 4.3.2 (e)
Correlation between DPS and MPS of Nepal SBI Bank Limited

| Year | DPS | MPS |
| :--- | :--- | :--- |
| $2004 / 05$ | 0 | 335 |
| $2005 / 06$ | 5 | 612 |
| $2006 / 07$ | 47.59 | 1176 |
| $2007 / 08$ | 0 | 1511 |
| $2008 / 09$ | 42.11 | 1900 |
| Average | 18.94 | 1106.80 |
| Standard Deviation | 21.30 | 572.33 |
| Coefficient of Correlation | 0.56 |  |

Source: Annual Report of Sample Banks
The table shows the dividend per share and market price per share from the year 2004/05 to 2008/0. The average of DPS and MPS is Rs 18.94 and 1106.80. The standard deviation of dividend per share and market price is 21.30 and 572.33. The coefficient of correlation between dividend per share and market price per share is 0.56 . This shows that DPS and MPS are positively correlated.

## CHAPTER-FIVE

## SUMMARY, CONCLUSION AND RECOMMENDATION

This research attempts to analyze the share price of behavior of listed companies in Nepal. This chapter deals with findings and conclusions derived from the study of share price behaviours of five commercial banks. The chapter consists of three section: the first section provides the summary of the study, the second section draws the conclusion of the study. Finally, the third section proposes recommendation to deal the observed on the basis of the findings.

## Summary

Security market is one of the components of capital market .It has wide implementation for the buyer and seller of all securities and all related agencies. It has a significant role to the development of capital market as well overall economy .Basically, it affects the economy through creation of liquidity, marketability, etc. Liquid equity markets make less expensive to trade equities., reduce disincentive to investing the lag duration projects because investors can easily sell. It also facilitates higher to choose and invest in higher return projects and best productivity growth. More liquidity makes easier to sell. Like liquidity, market efficiency is another most profound idea to affect the investment decision process in security market. This means that efficient proved markets in which this price of security do not depart for any length of time from justified \& economic values. The security values are also determined by investor's expectation about earning risk and so on. In efficient market values is going to be changed by reacting with new information. Thus securities are efficiently priced on a continuous basis.
The stock market of Nepal is still in preliminary stage \& it is developing in slow rate .It needs help from all concerned bodies to function properly. The government should formulate effective rules and regulations and implement properly to develop the stock market. The listed companies should always be ready to help the market by obeying the rules and regulations ,timely disclosing and submitting annual financial statements, avoiding rumors and not manipulating the price of stock.
The numbers of listed companies are increasing slowly over the study period. The number was 125 in 2005/06 \& just increased to 149 in 2008/09. The market capitalization has also increased from Rs366247.56 million in

2007/08 to Rs512939.07 million .The number and volume of transactions are also in increasing trend. The percentage of turnover to market capitalization has been decreasing trend it has decreased from 6.23 in 2007/08 to 4.23 in 2008/09 \& also percentage of turnover to paid up valuation has sharply decreased from 77.45 to 35.46 from 2007/08 to 2008/09. An alarming sign is that the turnover has also decreased from 22820.76 million in $2007 / 08$ to 21681.07 million in $2008 / 09$, the rate compared to past years.
Using different financial tools ,the company's performance has been analyzed to relate their market price with EPS ,DPS, Book Value, and liquidity, return on assets and return on equity. This analysis a mided behaviors in these relationships .Some companies having low EPS have high price and companies having high EPS have low price. The same fluctuating tend follows in the case of DPS also. The summary table presented below gives the exact idea about the company's performance in major aspects.

Table 5.1
Summarized table of Performance of different Banks

| Description | EBL | BOK | HBL | NIBL | NSBL |
| :--- | :--- | :--- | :--- | :--- | :--- |
| EPS | 77.45 | 46.38 | 58.49 | 51.34 | 27.08 |
| DPS | 27.00 | 34.50 | 39.03 | 31.76 | 18.94 |
| MPS | 2053.20 | 1366.00 | 1500.00 | 1525.40 | 1106.80 |
| DPR | 35.53 | 72.52 | 66.61 | 59.21 | 52.94 |
| DY | 1.51 | 3 | 2.73 | 2.16 | 1.42 |
| EY | 4.20 | 4.17 | 4.15 | 3.66 | 2.82 |
| P/E | 25.47 | 27.59 | 25.29 | 29.51 | 38.27 |
| MV/BV | 7.30 | 6.69 | 6.10 | 7.23 | 6.38 |
| ROA | 1.55 | 1.83 | 1.56 | 1.65 | 1.15 |
| ROE | 28.36 | 22.58 | 23.65 | 24.03 | 15.74 |
| LIQUIDITY | 1.04 | 1.05 | 0.98 | 0.95 | 1.05 |

The relationship between MPS and EPS, MPS and DPS has been found using the correlation techniques. The result of correlation study is tabulated below:

Table 5.2
Summarized table of EPS, DPS ,MPS and its correlation

| Banks | EPS | DPS | MPS | Correlation <br> between MPS <br> \&EPS | Correlation between <br> MPS and DPS |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1. EBL | 77.45 | 27 | 2053.20 | 0.89 | 0.92 |
| 2. Bok | 46.38 | 35.50 | 1336.00 | 0.96 | 0.51 |
| 3. HBL | 58.49 | 39.03 | 1500.00 | 0.83 | 0.97 |
| 4. NIBL | 51.34 | 31.76 | 1525.40 | 0.57 | 0.41 |
| 5. NSBL | 27.08 | 18.94 | 1106.80 | 0.82 | 0.56 |

## Conclusions

While assessing the performance of banking sector in stock market the following conclusions are drawn from the analysis.

1. The development of stock market is not in the satisfactory level. Only the banking sector having the high performance. The overall turnover and the growth have a decreasing tend whereas paid up \&market capitalization has the increasing trend.
2. The market price has the variability during study period. Everest Bank has high average. Price of Rs2053.20 and NSBL has the lowest markt price of Rs1106.80. The high market price shows the EBL has the better performance than others.
3. The return on common equity measures the return earned on the common stockholders' investment in the firm. Generally, it is be lived that high ROE will raise the market price per share. The ROE of EBL is the highest among all sample banks so does its market price of stock. The ROE of NSBL is the lowest among all banks and so its market price of stock. This shows that higher the return on equity higher the price of share.
4. The overall profit of the company from the view of ordinary shareholders is the EPS. The Everest Bank has the high EPS of Rs77.45 whereas NSBL has the low EPS of Rs.27.08. The better the earning, the better is the performance.
5. There is fluctuation in the dividend per share. Himalayan Banks shows high dividend of Rs39.03 whereas NSBL shows the lowest of all i.e. Rs 18.94. The investors who is eager to invest for the long term chooses the company with high dividend and one which provide high dividend has high price of share.
6. All the banks have the healthy and positive P/E multiples. Earning and price relation shows the mixed behaviours. Bank like NSBL has the highest $\mathrm{P} / \mathrm{E}$ multiple among the entire sample banks i.e38.27 which shows a good performance due to their managerial efficiency and professional management whereas Himalayan Bank has low P/E ratio with average P/E ratio of 25.29. P/E multiple always does not provide the clear picture for the price of stock. Investors should always look for consistent $\mathrm{P} / \mathrm{E}$ multiple rather than highest $\mathrm{P} / \mathrm{E}$ multiple.
7. Among the sample banks Bank of Kathmandu has the highest average dividend payout ratio of 72.52 . EBL has the least dividend payout ratio of 35.53 . The HBL and Bok are regular in paying dividend while other banks are irregular on paying dividend
8. The earning Yield, which measures the yield of outstanding stock of Everest Bank is the highest of all selected samples banks, which was $4.20 \%$.Similarly the lowest average earning yield was registered by NSBL with $2.82 \%$. However, each banks has good earning yield which is one of the reason why banking sectors is dominating the stock market. On the other hand, the dividend yield, which measures the return of each outstanding stock, is irregular. Although all the sample banks have satisfactory earning yield but the dividend yield is very low. All the Bank retained maximum or all amount of earning for future investment. The highest dividend yield is $3 \%$ of Bank of Kathmandu while the dividend yield of NSBL is the lowest with $1.42 \%$. The study found a mixed behaviours between price and dividend, price and earnings during the period of study.
9. The market value to book value that shows the efficiency of stock price in market than the book. In this regard, all the selected samples have ratio greater than 6.8 .This shows the market price of banks are exceeding their book values .Everest Banks seems best among all selected samples with 7.30 ratio and lowest ratio is of Himalayan Bank with 6.01 times which can be considered satisfactory.
10.The ROA shows the overall effectiveness of management in generating profits with its available assets. The management of Bank of Kathmandu has utilized its available assets more efficiently and effectively to generate profits than the other banks. The highest ROA generally push the market price upward. The ROA of NSBL is the lowest with 1.15 and its MPS is also low with a Rs1106.80. Although BOK has higher ROA than EBL, it has lower market price than EBL. It shows mixed relationship between ROA and Market price per share.
11.The Liquidity ratio measures the ability of a firm to meet short-term obligations. The relationship between liquidity position and market prices shows a mixed behaviors. Although BOK and NSBL has highest liquidity ratio of 1.05 then other sample banks but their MPS are lower than other banks. It also shows mixed relationship between liquidity ratio and market price per share.
12.The coefficient of correlation between DPS and MPS shows mixed pattern. The degree of correlation between the DPS and MPS of HBL is the highest with 0.97 that is if DPS increases by $100 \%$ the MPS also increases by $97 \%$. All the banks DPS and MPS is positively correlated.
13.The coefficient of correlation between EPS and MPS shows mixed equation.The degree of correlation between EPS and MPS of BOK is the highest with 0.96 . It indicates that if the EPS increases by $100 \%$, the MPS will also increases by $96 \%$ and vice- versa. All the sample banks have positive correlation.

## Recommendation

After analyzing the price behaviours of stock market with the help of various literatures, relevant data ,financial tools and techniques following recommendation can be outlined.
$>$ The price of stock widely depends upon EPS, DPS, ROE, ROA. The Nepalese stock market authorities take some effective initiative to control the random fluctuation of EPS and MPS and establish the system of regular monitoring and evaluation of stock price.
$>$ NEPSE has to ensure that all companies share all relevant information on a timely basis so that the stock price reflects company's status more accurately.
$>$ The government should regulate \& establish standard tools and techniques and all the public companies follow the same, so that genuine \& accurate evaluation can be made between companies.
$>$ The government should not only make policies for capital market development but also implement these policies timely and appropriately.
$>$ The investment decision of the individual is based to a large extent on signals they get from capital market. The market mechanism should be provide reliable information timely and widely .The listed company's data, their performance appraisal, their conduction of work ,their productivity, their commitment to NEPSE should be updated and analyzed again and again.
> Concrete steps should be undertaken to make all the public limited companies to disclosure of factual information about themselves and their financial performance in stipulated time.
$>$ There should be proper mechanism for evaluating \& reviewing the company's date and if any company is found with misappropriation against any law, proper action should be taken.
$>$ The stock exchange should be investors focused and market oriented along with strong operation with effective management.
$>$ There should be good coordination and cooperation between concerned regulatory bodies.
> The corporate securities that have dominant role in the market. So, more government securities should enlist in NEPSE to increase the breadth of market.
$>$ Buying and selling procedures of shares should be systematic, fast and less time consuming
$>$ The regulatory body should regulate and discourage any negative rumors that may affect the price of stock. The behaviours of stock price should be free and fair without any manipulation.
$>$ The concerned authority must monitor on the service provided by the market intermediaries to the investors. It should make strong rules and regulation for market intermediaries and should compel them to increase in the service facility of the investors.
$>$ Most of the companies are breaking standard norms of business. For example, data manipulations are being made by corporations $t$ show more profit. It encourages increasing in evil practice. So, the concerned authority should be alert about such works. It should take necessary steps to control such kind of negative work of the companies.
> The investors should analyze all the aspects \& factors that may affects the price of share before investing in any company's share. The government should make proper arrangement for general public so that they can get accurate and experts analysis the financial positions of any company and also risk involved. There, should be proper credit ratings agencies and investment banks to analyze the companies.
$>$ The company should have close monitoring system to check the behaviors of stock price and should make an effort to uplift the market price than its competitors.
$>$ The government should encourage and educate about the stock market so that more and more people can benefit and which eventually help in economic development of the country.

## APPENDIX- 1

## EPS OF THE SAMPLE BANKS

| Year/ <br> Banks | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 54.22 | 62.78 | 78.42 | 31.82 | 99.99 | 77.45 |
| BOK | 30.10 | 43.67 | 43.50 | 59.94 | 54.68 | 46.38 |
| HBL | 47.91 | 59.24 | 60.66 | 62.74 | 61.90 | 58.49 |
| NIBL | 39.50 | 59.35 | 62.57 | 57.87 | 37.42 | 51.34 |
| NSBL | 13.29 | 18.27 | 39.35 | 28.33 | 36.18 | 27.08 |

SOURCES: ANNUAL REPORT OF SAMPLE BANKS
$>$ APPENDIX- 2
DPS OF THE SAMPLE BANKS

| Year/ <br> Banks | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 20.00 | 25.00 | 30.00 | 30.00 | 30.00 | 27.00 |
| BOK | 15.00 | 48.00 | 20.00 | 42.11 | 47.37 | 34.50 |
| HBL | 31.58 | 35.00 | 40.00 | 45.00 | 43.56 | 39.03 |
| NIBL | 12.50 | 55.46 | 30.00 | 40.83 | 20.00 | 31.76 |
| NSBL | - | 5.00 | 47.59 | - | 42.11 | 18.94 |

$>$ SOURCES: ANNUAL REPORT OF SAMPLE BANKS
$>$ APPENDIX- 3
> MPS OF THE SAMPLE BANKS

| Year/ <br> Banks | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 870.00 | 1379.00 | 2430.00 | 3132.00 | 2455.00 | 2053.20 |
| BOK | 430.00 | 850.00 | 1375.00 | 2350.00 | 1825.00 | 1366.00 |
| HBL | 920.00 | 1100.00 | 1740.00 | 1980.00 | 1760.00 | 1500.00 |
| NIBL | 800.00 | 1260.00 | 1729.00 | 2450.00 | 1388.00 | 1525.40 |
| NSBL | 335.00 | 612.00 | 1176.00 | 1511.00 | 1900.00 | 1106.00 |

$>$ SOURCES: ANNUAL REPORT OF SAMPLE BANKS
$\stackrel{>}{>}$
$>$ APPENDIX- 4
P/E RATIO OF THE SAMPLE BANKS

| Year/ <br> Banks | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 16.04 | 21.97 | 30.99 | 34.11 | 24.25 | 25.47 |
| BOK | 14.29 | 19.46 | 31.61 | 39.21 | 33.37 | 27.59 |
| HBL | 19.20 | 18.57 | 28.69 | 31.56 | 28.43 | 25.29 |
| NIBL | 20.25 | 21.23 | 27.63 | 42.33 | 36.10 | 29.51 |
| NSBL | 25.11 | 33.49 | 26.89 | 53.34 | 52.52 | 38.27 |

> SOURCES: ANNUAL REPORT OF SAMPLE BANKS

## APPENDIX-5

DPR OF THE SAMPLE BANKS

| Year/ <br> Banks | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 36.89 | 39.82 | 38.26 | 32.67 | 30.00 | 35.53 |
| BOK | 49.83 | 109.92 | 45.98 | 70.25 | 86.63 | 72.52 |
| HBL | 65.92 | 59.08 | 65.94 | 71.72 | 70.37 | 66.61 |
| NIBL | 31.65 | 93.45 | 47.95 | 70.55 | 53.45 | 59.41 |
| NSBL | - | 27.37 | 120.94 | - | 116.39 | 52.94 |

> SOURCES: ANNUAL REPORT OF SAMPLE BANKS
$>$ APPENDIX- 6
DY OF THE SAMPLE BANKS

| Year/ <br> Banks | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 2.30 | 1.81 | 1.23 | 0.96 | 1.22 | 1.51 |
| BOK | 3.49 | 5.65 | 1.45 | 1.79 | 2.60 | 3.00 |
| HBL | 3.43 | 3.18 | 2.30 | 2.27 | 2.48 | 2.73 |
| NIBL | 1.56 | 4.40 | 1.74 | 1.67 | 1.44 | 2.16 |
| NSBL | - | 0.82 | 4.05 | - | 2.22 | 1.42 |

$>$ SOURCES: ANNUAL REPORT OF SAMPLE BANKS
$>$ APPENDIX-7
EY OF THE SAMPLE BANKS

| Year/ <br> Banks | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 6.23 | 4.55 | 3.23 | 2.93 | 4.07 | 4.20 |
| BOK | 7.00 | 5.14 | 3.16 | 2.55 | 3.00 | 4.17 |
| HBL | 5.21 | 5.39 | 3.49 | 3.17 | 3.52 | 4.15 |
| NIBL | 4.94 | 4.71 | 3.62 | 2.36 | 2.70 | 3.66 |
| NSBL | 3.97 | 2.99 | 3.35 | 1.87 | 1.90 | 2.82 |

$>$ SOURCES: ANNUAL REPORT OF SAMPLE BANKS
$>$ APPENDIX- 8
$>$ MARKET PRICE TO BOOK VALUE OF THE SAMPLE BANKS

| Year/ <br> Banks | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 3.96 | 6.34 | 8.65 | 9.73 | 7.83 | 7.30 |
| BOK | 2.01 | 3.69 | 8.35 | 10.56 | 8.85 | 6.69 |
| HBL | 3.84 | 4.81 | 6.57 | 7.99 | 6.86 | 6.01 |
| NIBL | 3.98 | 5.25 | 7.39 | 10.99 | 8.57 | 7.23 |
| NSBL | 2.10 | 4.03 | 6.61 | 9.41 | 9.76 | 6.38 |

SOURCES: ANNUAL REPORT OF SAMPLE BANKS
$>$ APPENDIX- 9

| LIQUIDITY RATIO OF THE SAMPLE BANKS |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Year/ <br> Banks | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| EBL | 0.98 | 1.04 | 1.04 | 1.05 | 1.11 | 1.04 |
| BOK | 1.02 | 1.04 | 1.03 | 1.06 | 1.10 | 1.05 |
| HBL | 1.03 | 1.02 | 0.99 | 0.85 | 1.02 | 0.98 |
| NIBL | 1.13 | 1.11 | 0.74 | 0.76 | 0.99 | 0.95 |
| NSBL | 1.05 | 1.02 | 1.02 | 1.05 | 1.11 | 1.05 |

$>$ SOURCES: ANNUAL REPORT OF SAMPLE BANKS
$\rangle \ggg \gg$ APPENDIX- 10
> RETURN TO TOTAL ASSETS OF THE SAMPLE BANKS

| Year/ <br> Banks | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 1.40 | 1.05 | 1.40 | 1.70 | 1.73 | 1.55 |
| BOK | 1.42 | 1.65 | 1.80 | 2.04 | 2.25 | 1.83 |
| HBL | 1.11 | 1.55 | 1.47 | 1.76 | 1.91 | 1.56 |
| NIBL | 1.42 | 1.61 | 1.79 | 1.77 | 1.68 | 1.65 |
| NSBL | 0.55 | 0.90 | 1.83 | 1.44 | 1.02 | 1.15 |

$>$ SOURCES: ANNUAL REPORT OF SAMPLE BANKS
$>$
$>$ APPENDIX-11
$>$ RETURN TO COMMON EQUITY OF THE SAMPLE BANKS

| Year/ <br> Banks | $2004 / 05$ | $2005 / 06$ | $2006 / 07$ | $2007 / 08$ | $2008 / 09$ | Average |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| EBL | 24.65 | 28.84 | 27.92 | 28.53 | 31.88 | 28.36 |
| BOK | 14.09 | 18.93 | 26.41 | 26.94 | 26.51 | 22.58 |
| HBL | 19.99 | 25.90 | 22.91 | 25.30 | 24.13 | 23.65 |
| NIBL | 19.65 | 24.73 | 26.74 | 25.95 | 23.10 | 24.03 |
| NSBL | 8.33 | 12.04 | 22.10 | 17.64 | 18.58 | 15.74 |

SOURCES: ANNUAL REPORT OF SAMPLE BANKS

## APPENDIX-12

$>$ Standard Coefficient \& Correlation between
$>$ Price and Dividend of the sample banks
$>$ APPENDIX-12A
BANK EBL

| Year | DPS $(\mathrm{X})$ | MPS (Y) | $X=(X-\bar{X})$ | $Y=(Y-\bar{Y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2004 / 05$ | 20.00 | 870.00 | -7 | -1183.2 | 49 | 1399962 | 8282.4 |
| $2005 / 06$ | 25.00 | 1379.00 | -2 | -674.2 | 4 | 454545.6 | 1348.4 |
| $2006 / 07$ | 30.00 | 2430.00 | 3 | 376.8 | 9 | 141978.2 | 1130.4 |
| $2007 / 08$ | 30.00 | 3132.00 | 3 | 1078.8 | 9 | 1163809 | 3236.0 |
| $2008 / 09$ | 30.00 | 2455.00 | 3 | 401.8 | 9 | 161443.2 | 1205.4 |
| Total | 135.00 | 10266.00 |  |  | 80 | 3321739 | 15203 |

$>$ We have,

$$
>\quad \text { Mean }(\bar{X})=\frac{\sum}{N}=\frac{135}{5}=27.0
$$

$$
>\quad \text { Mean }(Y)=\frac{\sum Y}{N}=\frac{10266}{5}=2053.20
$$

$>$ Standard Deviation $(X)=\frac{\sqrt{\sum(X-\bar{X})^{2}}}{\sqrt{N}}=\sqrt{\frac{x^{2}}{N}}=\sqrt{\frac{80}{5}}=4$
$>$ Standard Deviation $(Y)=\frac{\sqrt{\sum(Y-\bar{Y})^{2}}}{\sqrt{N}}=\sqrt{\frac{y^{2}}{N}}=\sqrt{\frac{3321739}{5}}=815.08$
$>$ Coefficient of Correlation $=\gamma(X, Y)=\frac{\sum(X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum(X-\bar{X})^{2}} \sqrt{\left.\sum Y-\bar{Y}\right)^{2}}}$

$$
=\frac{\sum x y}{\sqrt{x^{2}} \sqrt{y^{2}}}=\frac{15203.00}{\sqrt{80} \sqrt{3321739}}=0.93
$$

## - APPENDIX- 12B

## BANK BOK

| Year | DPS <br> $(\mathrm{X})$ | MPS <br> $(\mathrm{Y})$ | $X=(X-\bar{X})$ | $Y=(Y-\bar{Y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2004 / 05$ | 15 | 430.00 | -19.496 | -936 | 380.094 | 876096 | 18248.3 |
| $2005 / 06$ | 48 | 850.00 | 13.504 | -516 | 182.358 | 266256 | -6968.1 |
| $2006 / 07$ | 20 | 1375 | -14.496 | 9 | 210.134 | 81 | -130.46 |
| $2007 / 08$ | 42.11 | 2350.00 | 7.614 | 984 | 57.973 | 968256 | 7492.18 |
| $2008 / 09$ | 47.37 | 1825.00 | 12874 | 459 | 165.74 | 210681 | 59.09 .17 |
| Total | 172.48 | 6830.00 |  |  | 996.299 | 232170 | 24551.1 |

$>$ We have,
$>\quad$ Mean $(\bar{X})=\frac{\sum X}{N}=\frac{172.48}{5}=34.50$
Mean $(\bar{Y})=\frac{\sum Y}{N}=\frac{6830}{5}=1366.00$
$>$ Standard Deviation $(X)=\frac{\sqrt{\sum(X-\bar{X})^{2}}}{\sqrt{N}}=\sqrt{\frac{x^{2}}{N}}=\sqrt{\frac{996.299}{5}}=14.12$
$>$ Standard Deviation $(Y)=\frac{\sqrt{\sum(Y-\bar{Y})^{2}}}{\sqrt{N}}=\sqrt{\frac{y^{2}}{N}}=\sqrt{\frac{2321370}{5}}=681.38$
$>$ Coefficient of Correlation $=\gamma(X, Y)=\frac{\sum(X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum(X-\bar{X})^{2}} \sqrt{\left.\sum Y-\bar{Y}\right)^{2}}}$

$$
=\frac{\sum x y}{\sqrt{x^{2}} \sqrt{y^{2}}}=\frac{24551.1}{\sqrt{996.299} \sqrt{2321370}}=0.51
$$

## $>$ APPENDIX- 12C

BANK HBL

| Year | DPS <br> $(\mathrm{X})$ | MPS <br> $(\mathrm{Y})$ | $X=(X-\bar{X})$ | $Y=(Y-\bar{Y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | xy |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2004 / 05$ | 31.58 | 920.00 | -7.448 | -580 | 55.4727 | 336400 | 4319.84 |
| $2005 / 06$ | 35 | 1100.00 | -4.028 | -400 | 16.2248 | 160000 | 1611.2 |
| $2006 / 07$ | 40 | 1740.00 | 0.972 | 240 | 0.94478 | 57600 | 233.28 |
| $2007 / 08$ | 45 | 1980.00 | 5.972 | 480 | 35.6648 | 230400 | 2866.56 |
| $2008 / 09$ | 43.56 | 1760.00 | 4.532 | 260 | 20.539 | 67600 | 1178.32 |
| Total | 195.14 | 7500.00 |  |  | 128.846 | 852000 | 10209.2 |

$>$ We have,
$>\quad$ Mean $(\bar{X})=\frac{\sum X}{N}=\frac{195.14}{5}=39.03$
$\operatorname{Mean}(\bar{Y})=\frac{\sum Y}{N}=\frac{7500.00}{5}=1500.00$
$>$ Standard Deviation $(X)=\frac{\sqrt{\sum(X-\bar{X})^{2}}}{\sqrt{N}}=\sqrt{\frac{x^{2}}{N}}=\sqrt{\frac{128.846}{5}}=5.08$
$>$ Standard Deviation $(Y)=\frac{\sqrt{\sum(Y-\bar{Y})^{2}}}{\sqrt{N}}=\sqrt{\frac{y^{2}}{N}}=\sqrt{\frac{852000}{5}}=412.80$
$>$ Coefficient of Correlation $=\gamma(X, Y)=\frac{\sum(X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum(X-\bar{X})^{2}} \sqrt{\left.\sum Y-\bar{Y}\right)^{2}}}$

$$
=\frac{\sum x y}{\sqrt{x^{2}} \sqrt{y^{2}}}=\frac{10209.2}{\sqrt{128.846} \sqrt{852000}}=0.97
$$

## - APPENDIX- 12D

## BANK NIBL

| Year | DPS <br> $(\mathrm{X})$ | MPS <br> $(\mathrm{Y})$ | $X=(X-\bar{X})$ | $Y=(Y-\bar{Y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | x y |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2004 / 05$ | 12.5 | 800.00 | -19.258 | -725.4 | 370.871 | 523206 | 13939.8 |
| $2005 / 06$ | 55.46 | 1260.00 | 23.702 | 265.5 | 561.785 | 70437.2 | -6290.5 |
| $2006 / 07$ | 30 | 1729.00 | -1.758. | 203.6 | 3.09056 | 41453 | -357.93 |
| $2007 / 08$ | 40.83 | 2450.00 | 9.072 | 924.6 | 82.3012 | 854885 | 8387.97 |
| $2008 / 09$ | 20 | 1388.00 | -11.758 | -137.4 | 138.251 | 18878.8 | 1615.55 |
| Total | 158.79 | 7627 |  |  | 1156.3 | 1511859 | 17324.8 |

$>$ We have,
$>\quad$ Mean $(\bar{X})=\frac{\sum X}{N}=\frac{158.79}{5}=31.76$
$\operatorname{Mean}(\bar{Y})=\frac{\sum Y}{N}=\frac{7627.00}{5}=1525.40$
$>$ Standard Deviation $(X)=\frac{\sqrt{\sum(X-\bar{X})^{2}}}{\sqrt{N}}=\sqrt{\frac{x^{2}}{N}}=\sqrt{\frac{1156.30}{5}}=15.21$
Standard Deviation $(Y)=\frac{\sqrt{\sum(Y-\bar{Y})^{2}}}{\sqrt{N}}=\sqrt{\frac{y^{2}}{N}}=\sqrt{\frac{1511859}{5}}=549.88$
Coefficient of Correlation $=\gamma(X, Y)=\frac{\sum(X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum(X-\bar{X})^{2}} \sqrt{\left.\sum Y-\bar{Y}\right)^{2}}}$

$$
=\frac{\sum x y}{\sqrt{x^{2}} \sqrt{y^{2}}}=\frac{17324.8}{\sqrt{1156.3} \sqrt{1511859}}=0.41
$$

## $>$ APPENDIX- 12E

## BANK NSBL

| Year | DPS <br> $(\mathrm{X})$ | MPS <br> $(\mathrm{Y})$ | $X=(X-\bar{X})$ | $Y=(Y-\bar{Y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | x y |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2004 / 05$ | 0 | 335.00 | -18.94 | -771.8 | 358.724 | 595675 | 1461.9 |
| $2005 / 06$ | 5 | 612.00 | -13.94 | -494.8 | 194.324 | 244827 | 6897.51 |
| $2006 / 07$ | 4759 | 1176.00 | 28.65 | 69.2 | 820.823 | 4788.64 | 1982.58 |
| $2007 / 08$ | 0 | 1511.00 | -18.94 | 404.0 | 358.724 | 163378 | -7655.5 |
| $2008 / 09$ | 42.11 | 1900.00 | 23.17 | 793.2 | 536.44 | 629166 | 18378.4 |
| Total | 94.70 | 5534.00 |  |  | 8869.44 | 1637835 | 34220.9 |

$>$ We have,
$>\quad$ Mean $(\bar{X})=\frac{\sum X}{N}=\frac{94.70}{5}=18.94$
Mean $(\bar{Y})=\frac{\sum Y}{N}=\frac{5534.00}{5}=1106.8$
$>$ Standard Deviation $(X)=\frac{\sqrt{\sum(X-\bar{X})^{2}}}{\sqrt{N}}=\sqrt{\frac{x^{2}}{N}}=\sqrt{\frac{2269.44}{5}}=21.30$
$>$ Standard Deviation $(Y)=\frac{\sqrt{\sum(Y-\bar{Y})^{2}}}{\sqrt{N}}=\sqrt{\frac{y^{2}}{N}}=\sqrt{\frac{1637835}{5}}=572.33$
$>$ Coefficient of Correlation $=\gamma(X, Y)=\frac{\sum(X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum(X-\bar{X})^{2}} \sqrt{\left.\sum Y-\bar{Y}\right)^{2}}}$

$$
=\frac{\sum x y}{\sqrt{x^{2}} \sqrt{y^{2}}}=\frac{34220.9}{\sqrt{2269.44} \sqrt{1637835}}=0.56
$$

## $>$ APPENDIX 13A

$>$ Standard Coefficient \& Correlation between $>$ Price and Earning of sample Banks
$>$ APPENDIX-13A
BANK EBL

| Year | EPS(X) | MPS (Y) | $X=(X-\bar{X})$ | $Y=(Y-\bar{Y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | x y |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2004 / 05$ | 54.22 | 870.00 | -23.226 | -1183.2 | 539.447 | 1399962.2 | 27481 |
| $2005 / 06$ | 62.78 | 1379.00 | -14.666 | -674.2 | 215.192 | 454545.64 | 9887.82 |
| $2006 / 07$ | 78.42 | 2430.00 | 0.974 | 376.8 | 0.94868 | 141978.24 | 367.003 |
| $2007 / 08$ | 91.82 | 3132.00 | 14.374 | 1048.8 | 206.612 | 1163809.4 | 15506.7 |
| $2008 / 09$ | 99.99 | 2455.00 | 22.544 | 401.8 | 508.232 | 161443.24 | 9058.18 |
| Total | 387.23 | 10266.00 |  |  | 147.33 | 3321738.8 | 623.00 .7 |

$>$ We have,
$>\quad$ Mean $(\bar{X})=\frac{\sum X}{N}=\frac{387.23}{5}=77045$
Mean $(\bar{Y})=\frac{\sum Y}{N}=\frac{10266}{5}=2053.2$
$>$ Standard Deviation $(X)=\frac{\sqrt{\sum(X-\bar{X})^{2}}}{\sqrt{N}}=\sqrt{\frac{x^{2}}{N}}=\sqrt{\frac{1470.33}{5}}=17.15$
$>$ Standard Deviation $(Y)=\frac{\sqrt{\sum(Y-\bar{Y})^{2}}}{\sqrt{N}}=\sqrt{\frac{y^{2}}{N}}=\sqrt{\frac{3321738.8}{5}}=815.08$
Coefficient of Correlation $=\gamma(X, Y)=\frac{\sum(X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum(X-\bar{X})^{2}} \sqrt{\left.\sum Y-\bar{Y}\right)^{2}}}$
$=\frac{\sum x y}{\sqrt{x^{2}} \sqrt{y^{2}}}=\frac{62300.7}{\sqrt{1470.33} \sqrt{3321738.8}}=0.89$

## APPENDIX- 13B

$>$ BANK BOK

| Year | EPS(X) | MPS <br> $(\mathrm{Y})$ | $X=(X-\bar{X})$ | $Y=(Y-\bar{Y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | x y |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2004 / 05$ | 30.10 | 430.00 | -16.278 | -963 | 264.973 | 876096 | 15236.2 |
| $2005 / 06$ | 43.67 | 850.00 | -2.708 | -516 | 7.33326 | 266256 | 1397.33 |
| $2006 / 07$ | 43.50 | 1375.00 | -2.878 | 9 | 8.28288 | 81 | -25.902 |
| $2007 / 08$ | 59.94 | 2350.00 | 13.562 | 984 | 183.928 | 968256 | 13345 |
| $2008 / 09$ | 54.68 | 1825.00 | 8.302 | 459 | 68.9232 | 210681 | 3810.62 |
| Total | 231.89 | 6830.00 |  |  | 533.44 | 2321370 | 33763.3 |

$>$ We have,

$$
\begin{array}{ll}
> & \operatorname{Mean}(\bar{X})=\frac{\sum X}{N}=\frac{231.89}{5}=46.38 \\
> & \\
> & \operatorname{Mean}(\bar{Y})=\frac{\sum Y}{N}=\frac{6830.00}{5}=1366.00
\end{array}
$$

$>$ Standard Deviation $(X)=\frac{\sqrt{\sum(X-\bar{X})^{2}}}{\sqrt{N}}=\sqrt{\frac{x^{2}}{N}}=\sqrt{\frac{533.44}{5}}=10.33$
$>$ Standard Deviation $(Y)=\frac{\sqrt{\sum(Y-\bar{Y})^{2}}}{\sqrt{N}}=\sqrt{\frac{y^{2}}{N}}=\sqrt{\frac{2321370}{5}}=681.38$
Coefficient of Correlation $=\gamma(X, Y)=\frac{\sum(X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum(X-\bar{X})^{2}} \sqrt{\left.\sum Y-\bar{Y}\right)^{2}}}$

$$
=\frac{\sum x y}{\sqrt{x^{2}} \sqrt{y^{2}}}=\frac{33763.00}{\sqrt{533.44} \sqrt{2321370.70}}=0.96
$$

## APPENDIX- 13C

BANK HBL

| Year | EPS(X) | MPS <br> $(\mathrm{Y})$ | $X=(X-\bar{X})$ | $Y=(Y-\bar{Y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | x y |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2004 / 05$ | 47.91 | 923.00 | -10.58 | -580 | 111.963 | 336400 | 6136.4 |
| $2005 / 06$ | 59.24 | 1100.00 | 0.75 | -400 | 0.5625 | 160000 | -300 |
| $2006 / 07$ | 60.66 | 1740.00 | 2.17 | 240 | 407089 | 57600 | 520.8 |
| $2007 / 08$ | 62.74 | 1980.00 | 4.25 | 480 | 18.0625 | 230400 | 2040 |
| $2008 / 09$ | 61.90 | 1760.00 | 3.41 | 260 | 11.6281 | 67600 | 886.6 |
| Total | 292.45 | 7500.00 |  |  | 146.898 | 852000 | 9283.8 |

$>$ We have,

$$
\begin{array}{ll}
> & \operatorname{Mean}(\bar{X})=\frac{\sum X}{N}=\frac{292.45}{5}=58.49 \\
> & \\
> & \operatorname{Mean}(\bar{Y})=\frac{\sum Y}{N}=\frac{7500.00}{5}=1500.00
\end{array}
$$

$$
\text { Standard Deviation }(X)=\frac{\sqrt{\sum(X-\bar{X})^{2}}}{\sqrt{N}}=\sqrt{\frac{x^{2}}{N}}=\sqrt{\frac{146.898}{5}}=5.42
$$

$$
>\text { Standard Deviation }(Y)=\frac{\sqrt{\sum(Y-\bar{Y})^{2}}}{\sqrt{N}}=\sqrt{\frac{y^{2}}{N}}=\sqrt{\frac{852000}{5}}=412.80
$$

$$
>\text { Coefficient of Correlation }=\gamma(X, Y)=\frac{\sum(X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum(X-\bar{X})^{2}} \sqrt{\left.\sum Y-\bar{Y}\right)^{2}}}
$$

$$
=\frac{\sum x y}{\sqrt{x^{2}} \sqrt{y^{2}}}=\frac{9283.80}{\sqrt{146.898} \sqrt{852000}}=0.83
$$

## APPENDIX- 13D

BANK NIBL

| Year | EPS(X) | MPS <br> $(\mathrm{Y})$ | $X=(X-\bar{X})$ | $Y=(Y-\bar{Y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | x y |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2004 / 05$ | 39.50 | 800.00 | -11.842 | -728.4 | 140.233 | 526205.16 | 8590.19 |
| $2005 / 06$ | 59.35 | 1260.00 | 8.008 | -265.4 | 64.068 | 70437.16 | -2125.3 |


| $2006 / 07$ | 62.57 | 1829.00 | 11.228 | 203.6 | 126.068 | 41452.96 | 228.02 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2007 / 08$ | 57.87 | 2450.00 | 6.528 | 924.6 | 42.6148 | 854885.16 | 6035.79 |
| $2008 / 09$ | 37.42 | 1388.00 | -13.922 | -137.4 | 193.822 | 18878.76 | 1912.88 |
| Total | 256.71 | 7627.00 |  |  | 566.86 | 1511859.2 | 1669.6 |

$>$ We have,

$$
\begin{array}{ll}
> & \text { Mean }(\bar{X})=\frac{\sum X}{N}=\frac{256.71}{5}=51.34 \\
> & \\
> & \operatorname{Mean}(\bar{Y})=\frac{\sum Y}{N}=\frac{7627.00}{5}=1525.40
\end{array}
$$

$\Rightarrow$ Standard Deviation $(X)=\frac{\sqrt{\sum(X-\bar{X})^{2}}}{\sqrt{N}}=\sqrt{\frac{x^{2}}{N}}=\sqrt{\frac{566.86}{5}}=10.65$
$>$ Standard Deviation $(Y)=\frac{\sqrt{\sum(Y-\bar{Y})^{2}}}{\sqrt{N}}=\sqrt{\frac{y^{2}}{N}}=\sqrt{\frac{1511859.20}{5}}=549.88$
$>$ Coefficient of Correlation $=\gamma(X, Y)=\frac{\sum(X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum(X-\bar{X})^{2}} \sqrt{\left.\sum Y-\bar{Y}\right)^{2}}}$

$$
=\frac{\sum x y}{\sqrt{x^{2}} \sqrt{y^{2}}}=\frac{16699.60}{\sqrt{566.86} \sqrt{1511859.20}}=0.57
$$

## > APPENDIX- 13E

## BANK NSBL

| Year | EPS(X) | MPS <br> $(\mathrm{Y})$ | $X=(X-\bar{X})$ | $Y=(Y-\bar{Y})$ | $\mathrm{x}^{2}$ | $\mathrm{y}^{2}$ | x y |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2004 / 05$ | 13.29 | 335.00 | -13.794 | -771.8 | 190.274 | 595675.24 | 10646.2 |
| $2005 / 06$ | 18.27 | 612.00 | -8.814 | -494.8 | 77.6866 | 244827.04 | 4361.17 |
| $2006 / 07$ | 39.35 | 1176.00 | 12.266 | 69.2 | 150.455 | 4788.64 | 848.807 |
| $2007 / 08$ | 28.33 | 1511.00 | 1.246 | 404.2 | 1.55252 | 163377.64 | 503.633 |
| $2008 / 09$ | 36.18 | 1900.00 | 9.096 | 793.2 | 82.7372 | 629166.24 | 7214.95 |
| Total | 135.42 | 5534.00 |  |  | 502.706 | 1637834.8 | 23574.8 |

> We have,
$>\quad$ Mean $(\bar{X})=\frac{\sum X}{N}=\frac{135.42}{5}=27.08$
$>\quad$ Mean $(\bar{Y})=\frac{\sum Y}{N}=\frac{5534.00}{5}=1106.08$
$>$ Standard Deviation $(X)=\frac{\sqrt{\sum(X-\bar{X})^{2}}}{\sqrt{N}}=\sqrt{\frac{x^{2}}{N}}=\sqrt{\frac{502.706}{5}}=10.03$
$>$ Standard Deviation $(Y)=\frac{\sqrt{\sum(Y-\bar{Y})^{2}}}{\sqrt{N}}=\sqrt{\frac{y^{2}}{N}}=\sqrt{\frac{1637834.80}{5}}=572.33$
$\Rightarrow$ Coefficient of Correlation $=\gamma(X, Y)=\frac{\sum(X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum(X-\bar{X})^{2}} \sqrt{\left.\sum Y-\bar{Y}\right)^{2}}}$

$$
=\frac{\sum x y}{\sqrt{x^{2}} \sqrt{y^{2}}}=\frac{23574.80}{\sqrt{502.706} \sqrt{1637834.80}}=0.82
$$

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