## CHAPTER I

## INTRODUCTION

### 1.1 General Background of the Study

In this globalized world, the economy is changing very rapidly. Nepal is a small country which is still in its developing phase. Although it is granted with diversified geography and bio-diversity, it is not being able to take the full advantages of its resources. The economy of the company fully depends upon the utilization and proper mobilization of the resources. The mobilization of the capital is an important tool to utilize the resources and hence it affects the overall economy directly and indirectly. For mobilization of capital, investment plays a crucial role.

Investment has significant role for the proper development of the country, which is the final result of the income, expenditure of the saving. Saving is not possible in absence of earning, earning is not possible without investment and investment is completely depends upon the mobilization of savings either directly by savers or indirectly through the financial intermediaries.

Investment can be sub divided into two categories, real investment and financial investment. Real investment deals with investment in real assets such as land, building or in the fixed property whereas financial investment deals with the investment in financial markets such as securities.

Financial Market is the place where the financial instruments like share, bond and debenture are traded. "A financial market is a market for creation and exchange of financial assets if you buy or sell financial assets, you will participate in financial market in some way or other." (Pradhan, 2002:24). Financial market is divided into different types of markets, which serve a different set of customers or deal with different types of security. Transfer of capital between savers and those who need capital take place in different ways like direct transfer, indirect transfer through investment banks and indirect transfer through financial intermediaries. Financial markets actually refer to the money
market and capital market which facilitates the transfer of funds from the savers to those who really need it.

### 1.1.1 Money Market

Money markets are the markets for debt security with maturities of less than one year. It basically involve the trading the short term securities. Sometimes, money market is classified as organized and unorganized markets. The organized or formal money markets an institutional mechanism for the transaction of short-term securities and commercial banks, finance companies and other savings/credit unions are the players in the money markets. Local merchants, indigenous bankers and relatives come under the informal sector or unorganized sector. In 1992, Nepal Rastra bank conducted a survey and revealed that the formal sector market provides only 20 percent of the total credit demand of the rural sector, which implies that the financial markets of the country are yet to develop.

### 1.1.2 Capital Market

Capital markets are the markets that deal with long term financial market facilitating the allocation of funds between savers and borrowers. Capital markets are also classified as primary markets and secondary markets. Primary markets deals with selling of new securities so that the companies can meet their financial requirements. Primary markets denote the market mechanism for the original sale of securities by an issuer to the public. It is the market for a newly issued securities time of their initial issuance. "Corporate bodies issue new securities in the primary market. Securities available for the first time are offered through the primary securities market. The issuer may be a brand new company or one that has been in business for many years." (Gitman; 2000: 33-34)

Secondary market is the place where previously issued shares are traded. In order words, secondary markets or more popularly known as stock markets are the markets in which existing outstanding securities are traded between the investors i.e. buyers and sellers. "Once investors have purchased securities in the primary markets, they need a place to sell those securities. Without the liquidity of the secondary market, firms would have
difficulty in raising funds for productive propose in the primary markets." (Cheney and Moses; 1996:72). Therefore, once the transaction of securities is done in primary market, it's further trading takes place in secondary market. Secondary market not only facilitates investors to buy or sell securities such as shares, bonds and debentures, but also it is a mechanism for bringing together the buyer and seller of financial assets in order to ease trading.

## Classification of Financial Markets

| 1. Nature of claim | a. Debt Market |
| :--- | :--- |
| b. Equity Market |  |


| 2. Maturity of claim | a. Money Market |
| :--- | :--- |
| b. Capital Market |  |

3. Seasoning of claim
a. Primary Market
b. Secondary Market
4. Timing of deliver
a. Cash or spot Market
b. Forward or future Market
5. Organizational structure a. Exchange traded Market
b. Over the counter Market

### 1.1.3 Security Market

Securities market is the place where people buy and sell financial instruments. Securities market is an important constituent of capital market. Security market has a wide term embracing the buyers and sellers and all the agencies and institutions that assist the sale and resale of corporate securities. Although securities are concerned in few locations, they refer more to mechanism rather than to pace designed to facilitate the exchange of securities. This security market can be designed as a mechanism for bringing together buyers and sellers of financial assets in order to facilitate trading. In order to allocate capital efficiently and maintain higher degree of liquidity in securities, the securities
market should be efficient enough in pricing the shares solely by economic considerations based on publicly available information.

The history of securities market in Nepali is not too long. The history of the security market began with the flotation of shares by Biratnagar Jute Mills Ltd. \& Nepal Bank Ltd. in 1937. Establishment of Security Market Center (SMC) was another important dimension for the growth of security market in Nepal, which was later on restructured \& renamed as Security Exchange Center (SEC). But after the first amendment to securities exchange act in 1993, SEC restructured into present form of Nepal Stock Exchange Ltd. (NEPSE) to act as a market operator \& Security Board of Nepal (SEBON) was established as the separate government regulating body. NEPSE is working under SEBON.

### 1.1.4 Constituents of Capital Market in Nepal

## Securities Board, Nepal (SEBON)

On $26^{\text {th }}$ May 1993, Security Board, Nepal, regulator of Nepalese Security market, was established under the provision of the Securities Exchange Act, 1983. Nepal Security Board promotes and protects the interest of the investors by regulating the issuance, sale and distribution of securities and purchase, sale and exchange of securities, to supervise, look after and monitor the activities of the stock exchange and the other related firms on securities business, and to render contribution to the development of the capital market by making securities transactions fair, healthy, efficient and responsible (SEBO/N; 2004:3).

It was established with the objective of promoting and protecting the interest of the investors by regulating the securities market and it also assumes the responsibility of development of securities market in the country, besides regulatory role. Board has identified the policy development, legal and regulatory reform, standardizing disclosures, bringing enforcement to ensure compliance and promoting board based market as a priority area to reform.

The private sector has also taking part equally in establishment of sound system in securities exchange. In private sector- investors, listed companies, financial and market intermediaries and in government sector- Ministry of Finance, registrar of companies (Ministry of Industry, Commerce and Supply), Nepal Rastra Bank, Nepal Stock Exchange, Federation of Nepalese Chamber of Commerce and Industries (FNCCI), Institute of Chartered Accountants of Nepal (ICAN) and Association of Chartered Accountants have been playing vital role in promoting the capital market in the country.

## Nepal Stock Exchange (NEPSE)

Nepal Stock Exchange was established on 1993 under Securities Exchange Act, 1983. Earlier, Nepal Stock Exchange was known as securities exchange centre. Securities exchange centre was established with an objective of facilitating and promoting the growth of capital markets. Nepal Stock Exchange is a nonprofit organization operating under Securities Exchange Act 1983. The objective behind its establishment is to impart free marketability and liquidity to the government and corporate securities by facilitation transactions on its trading floor through market intermediaries such as brokers, market makers etc.

Nepal Stock Exchange was established with joint effort of Nepal Development Corporation and Nepal Rastra Bank to mobilize the public saving for ensuring public ownership in the shares public limited companies. The Centre made a series of studies in the business, in order to promote the stock exchange business, regarding both the public limited companies and undertaking the business of buying and selling securities.

According to the Securities Act 2006, the board of directors of NEPSE consists of 7 members, 2 members including chairman from Nepal Government, 2 members from Nepal Rastra Bank, 1 member from NIDC, 1 member nominated by BOD as an expert in capital market and General Manager of NEPSE will also serve as a director on BOD. At present, there are 23 members brokers and 2 market makers who operate on the trading floor as per the Securities Exchange Act, 1983 rules and by-laws,; besides this, it has licensed both dealers as primary and secondary market. At present, 159 companies have
listed their securities in NEPSE. NEPSE has adopted an "Open Out Cry System" which means transactions of securities are conducted on the open auction principle on trading floor, where the price is determined after matching bid and offer price. It has fixed the board lot of 10 shares it the face value is Rs. 100 or 100 shares if the value is Rs.10. The opening price of the day shall not be more or less than $10 \%$ of the previous trading day's closing price. It can be changes within the limit of $5 \%$ in each consecutive transaction. It has adopted a $\mathrm{T}+3$ systems, which mean that settlement of transaction, should be done in 3 working days following the transaction per day.

Table 1.1
Trading Timing

| Trading Days | Trading Hours | Types of Trading |
| :--- | :--- | :--- |
| Sunday-Thursday | 12 a.m. -3 p.m. | Regular Trading |
| Friday | 12 a.m. -1 p.m. | Odd Lot Trading |

## Source: NEPSE annual report

Table 1.2
Board of Directors of NEPSE

| S.N | Sector of | No. <br> Directors | Designation |
| :--- | :--- | :--- | :--- |
| 1 | Nepal Government | 2 | Chairman, Director |
| 2 | Nepal Rastra Bank | 2 | Director |
| 3 | Nepal Industrial Development Corp. | 1 | Director |
| 4 | NEPSE General Manager | 1 | Director |
| 5 | Capital Market Expert | 1 | Director |

Source: www.nepalstock.com

Securities market in Nepal could not carry out well in initial days as it was a new practice and was affected from political interferences and handful of the investors. The big
challenges to domestic monetary policies is to separate the economics from the politics and these interferences.

In present days, securities market has attracted interest of both national and international investors, while raising a number of critical issues. Of these, listing, liquidity and pricing of securities market are very important. Listing of securities in both domestic and foreign market has become a common practice in developed countries. Foreign listing gives an international exposure to listed companies. With the development of the information technology and the spread of education in the country, many people have shown their interest in securities market. It is also revealed from the large number of applications in the initial public offerings (IPO) of the Nepalese companies.

Securities market may affect economic activity through the creation of liquidity which makes investments less risky and more attractive by allowing easy and quick trading. The role of organized exchange is very important in providing liquidity. Liquid market improves the allocation of capital and enhances the prospects for long -term economic growth. Further, by making investment less risky and more profitable, stock market liquidity can also lead to more investments (Levine, 1996: 7). Since, investor's activities are directed to maximizing profit and minimizing risk and liquidity is an issue of their interest so liquidity attracts the interest of investors by ensuring quick investment recovery and easy trading.

Most of the investors should not know the price formation system in NEPSE; perhaps, the reason could be poor understanding of securities market among Nepalese investors. It cannot attract the interest of the investors until $n$ unless it is properly understood. So, it is natural for the investors to seek investment opportunities in the fields other than securities. "The Nepalese stock market is characterized by a low trading volume, absence of professional brokers, early stage of growth, limited movement of share price and limited information to investors (Pradhan, 2002:42)." Because of this reality, in our country large amount of funds is poured into non-productive sectors. So, development of
securities market is necessary to divert the funds towards productive sectors then only economic development of our country is possible.

Therefore, development of vibrant and dynamic securities market is a pre-requisite for the development of an efficient economy. But, in the present Nepalese scenario, there is a lack of pertinent studies exploring the current drawbacks and suggestion for the further improvement. In such situation, studies in securities market in Nepalese perspective would be benefit and could provide a solid feedback for further improvement. With a view to contributing towards this avenue, this study on Determinants of Stock Price of companies listed in Nepal Stock Exchange is expected to be useful and worthwhile.

### 1.2 Statement of the Problem

In Nepal, only a few investors of Nepalese share market may be aware of the factors affecting the share price. Investors may be unknown about the financial performance of the company but tends to invest in the company without proper financial analysis. Capital market investment is a major factor for the economic development of the country in this present context. The stage of development of capital market in any country and its effective growth depends upon the aggregate economic condition, saving and investment opportunities etc.

There are various institutions involved in the capital market but they are not showing positive and good performance as per the investor's expectations. On the other hand, the investors are responsible for not having self control, self judgment in the choice of the securities for investment. Besides that price earnings are not made available to the investors cannot identify good and bad stocks. Thus having lack of adequate information and knowledge about the certain companies, investors are unsystematically investing in sticks.

The problem of Nepali stock market have not been diagnosed and identified. The policy makers are unable to make the appropriate policy for the development of the stock market. Even most of the efforts from government level have poor contribution regarding this problem. Existing economic imbalance, political instability, ineffective
implementation of the liberal economic policy of the country have generated negative symbols in the economy. The price of the securities especially common stocks have been randomly fluctuating and declining over the past years. Consequently, some companies were liquidated and some are operating hardly in the market.

There are two approaches regarding the share price movement in the market. The first approach assumes that the market is inefficient in pricing of shares, in which the technical analysis theory argues that the analysis of the historical prices and trading of stocks provide meaningful information and which also provide the idea of future price movements to the investors. It attempts to explain and forecast changes in security price by studying the market data rather than information about a company or its prospects.

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

The present study will try to examine the weak form of efficient market by hypothesis. It will also find out whether the price fluctuation is significantly correlated with past price movements. It also intends to explore ideas as to whether the stock market is efficient in pricing of shares or not.

More specifically, this study is expected to answer the following research questions:
$>$ What are the major determinants of the stock price in NEPSE?
$>$ How earning and book value affect the stock price?
$>$ What is the effect of the dividend to the stock price?

### 1.3 Objectives of the Study

The study is conducted to fulfill its objective, as every study has its own objectives. Investors require proper knowledge of share price i.e. how it is formed, why does it fluctuate, what factors are responsible for the determination of its price and so on. Furthermore, this study is proposed to meet the following objective:
> To study and analyze the major financial indicators (DPS, EPS, BVPS) which have major influence on stock price.
$>$ To evaluate the relation of stock price with major financial indicators.
$>$ To examine the level of influence of those financial indicators on the stock price.
> To study and evaluate whether stocks of the sampled companies are over-priced, underpriced or equilibrium price.
$>$ To assess different people's response regarding the change of stock price.
> To suggest concerned organizations and sector on the basis of major findings of the study.

### 1.4 Significance of the study

There is no logical or scientific reason behind the determination of share price in Nepalese share market. But it is determined in assumption or say in bidding procedure, may be cause of failure of the investors, shareholders, government body and other related party. So, this research paper could be fruitful to all concerned parties as it provides the insights on the determination of market value of stock. In Nepalese context, it has been graced that the major determinant of stock price is decided by the political situation of the country. The poor state of development of financial market in Nepal can be attributed to its financial system, which is basically bank dominated. Point wise the significance of research are as follows:
> The study may draw the attraction from every corner of entrepreneurs and investors and other academicians and also other interested parties.
> This study is extremely helpful to the financial managers of corporate firms to know about the movement and price formation of stock price with respect to change in financial position of the firms.
> This study is very useful to potentials investors who are interested to know the effect of price trend, volume of stock and impact of signaling factors in NEPSE index.

### 1.5 Limitation of the Study

As every study has to be in some sort of limitations, this study has some limitations too. Basically the study is for the partial fulfillment of Masters of Business Studies.

Time constraint, financial problem and lack of research experience are the primary limitation and other limitations are as follows:
$>$ The study is confined only to listed companies of Nepal Stock Exchange and its members.
> This research is mainly based on secondary data, which have been collected from books, financial statement and report of the Security Board of Nepal (SEBON) and Nepal Stock Exchange and selected company's annual reports, company's web site and other publications. The study covers the information of only few fiscal years data.
$>$ This study covers only the relevant data of five years i.e. from Fiscal Year 2004/05 to 2008/09.
$>$ Foreign information and rules affecting the share market is ignored.
> Studies and reference were also extremely limited in the prospective of Nepalese Stock Market.

### 1.6 Organization of the Study

This study has been organized over altogether five chapters. The brief outline of the chapters has been outlined as under:

## Chapter I (Introduction)

The first chapter introduces the subject, presents the research problem, reason and objective for studying, along with limitation and rationale behind the study.

## Chapter II (Literature Review)

The second chapter contains the review and conceptual framework and past research literature on the subject matter. It presents the analysis of related studies which include different books article, previous thesis reports various published and unpublished documents. This chapter is mainly related to the theoretical analysis and brief review of
related and pertinent literature available. This chapter is concerned with the study of Corporate Performance and Stock Price have been reviewed and presented.

## Chapter III (Research Methodology)

This chapter deals with various methods used to conduct the study. It consists of research design, nature and source of data, methods used for data analysis and presentation, tools of analysis and lastly it define the key terms used in this study.

## Chapter IV (Presentation and Analysis of Data)

This chapter contains the presentation, analysis and interpretation of primary and secondary data to indicate quantitative facts of the Stock price behavior of the listed companies. It contains testing of hypothesis, analysis of questionnaire, analysis of openend.

## Chapter V (Summary, Conclusion and Recommendations)

The last chapter covers summary, conclusion and recommendations for the further research. This chapter tries to fetch out a conclusion of the study and attempts to offer various suggestions and recommendation for the improvement of the future performance.

The Bibliography and Appendix are presented at the end of the study.

## CHAPTER - II <br> REVIEW OF LITERATURE

### 2.1 Introduction

The basic concern of the study is to focus on the pricing behavior of the stocks of the companies listed in Nepalese Stock Exchange. So, in this chapter, an attempt is made to review some of the literature concerning the stock market in Nepal and abroad as well as the market price behavior. The price behavior of the stock and its trading activity has got the tremendous concentration in security investment. So, a better understanding of these determinants may increase investor's confidence in the stock market and thereby enhance the effectiveness of corporate resource allocation. Hence more and more concerns over pricing behavior are arising and most of the concerned books bear some paragraph on this issue.

### 2.2 Conceptual Framework of Financial Market

### 2.2.1 Capital Market

Capital market consists of the various suppliers and users of long-term finance. As it is differentiated from the money market which embraces short-term finance the capital market serves as a link between suppliers and user and canalizing them in productive investment. In this way, an important constituent of the capital market is the securities market. It has a wide term embracing the buyers and sellers of securities all those agencies and institutions, which assist the sale and resale of corporate securities. Therefore, the capital market is the market for long term borrowing and lending. The primary instruments of the capital market are stocks and bonds (Equity and debt). (Gupta, 1994: 325)

Capital market is a financial relationship created by a number of long-term funds to make transactions. Included are securities issues of business and government. The backbone of capital market is formed by the various securities exchange that provides a forum for bond and stock transaction.

In Capital market long term borrowing take place. The primary instruments of the capital market are equity share, bond and debt. Therefore it includes both the new issue market and the old market. Capital market is concerned with long term finance: widely it consists of series of channels through which the saving of the community are made available for industrial and commercial enterprises and authorities. It is concerned with that private saving, individual as well as corporate, that are turned into investment through new capital issue and also new public loan floated by government and semi government bodies. In capital market demands for fund comes from agriculture, industry, trade and government while the supply of funds comes from individual or corporate savings, institutional investors and surplus of government.

The history of capital market is not so old for Nepalese context. The Capital Market was developed by the establishment of Security Exchange Center on 2033 B.S. the number or listed companies and their trading were very negligible until the government of Nepal has made economic reforms along with broad financial policy in the process of economic liberalization. The privatization of public entities has been started and various banking and finance companies as well as other companies in the private sector are being established with local and foreign investments. As they were established as public companies, these companies have to issue some of their share of the general public. So, the development of this security market in Nepal takes its pace only after the establishment of these banking and finance companies.

### 2.2.2 Security Market

Security Market interchangeably known as the integral part of capital market is in fact basis of the economy of country. The most effective use of idle and surplus resources can be brought into practice only by means of market mechanism. Security market, a structural network of savers and users of fund, is such a market mechanism which mobilized the fund of savers to the users and thus this boosts the industrialization and trading activities, which will bring the positive result to the economy as a whole. (Sharma, 2002: 16)

There are two important functions of securities market, namely the raising of funds in form of shares and debentures and trading in the securities already issues by companies. While the finest aspect is obviously much more important from the point of view of economic growth, the second aspects is also considerably important. In fact, if facilities for transferring of existing securities are abundant, the raising of new capital is considered assisted as the buyer of a new issue of security become confident that whenever he wants to get cash he can find a buyer of the security without much difficulty. This aspect is called the liquidity of the stock market. Thus the liquidity of the stock market affects the raising of new capital from the market (Levine, 1996:33).

Security market sets a price for the securities it trades and makes it easy for people to trade them. Securities market facilitates the sale and resale of transferrable securities. The security market can be defined as a mechanism for bringing together buyer and sellers of financial assets to facilitate trading. Securities market is classified into two: the market in which new securities are sold is called the primary market and the market in which existing securities are resold is called the secondary market. Secondary markets are created by brokers, dealers and market makers. Brokers bring buyer and seller together with themselves actually buying or selling: dealers set price at which they themselves are ready to buy and sell (bid and ask price respectively). Broker and dealer come together organized market or in stock exchange (Gitman, 2000: 457).

### 2.2.3 Stock Exchange

The stock exchange is an institution where quoted securities are exchanged between buyers and sellers. In stock exchange, the main operators are the market makers who trade in a group of share, and the stock brokers who act as agents for their clients, who are the investors who are actually buying and selling shares (Fama \& Miller; 2002:225). Most of the investors are attracted to the equity share because of its marketability and liquidity. One may like to buy more shares or selling existing shares from time to time when he is in need of money or when he wants to shuffle his portfolio. Since the stock exchange is a place where a large number of buyers and sellers congregate, one can, by and large, easily find his counterpart for sale or purchase of shares. The investor can
convert his shares into cash at the prevailing market price readily. The existence of stock exchange facilitates all these functions without which it is almost impossible to do so. The key function of securities exchange is to create a continuous market for securities at a price that is not very different from the price at which they were previously sold. The continuity of securities market provides the liquidity necessary to attract investor's funds. Without exchanges, investors might have to hold debt securities to maturity and equity securities indefinitely. It is doubtful that many people would be willing to invest under such conditions. A continuous market also reduces the volatility of security prices further enhancing liquidity (Gitman, 2000: 458)

The securities exchanges help to allocate scarce fund to the best uses. That is by disclosing the price behavior of securities and requiring the disclosure of certain corporate financial data; they allow investors to access the securities risk and return and to move their fund into the promising investments. An efficient market is one that allocates fund to most productive uses. Along with this, there is lot of functions of security exchange such as ready market and continuous market, evaluation of securities, safety of transactions, and canalization of savings and widening the share ownership etc. however, besides these functions, there are three things as security exchange must do:
$>$ Determine a fair price for the securities it trades or price discovery function
> Enable transaction to be made at as low cost as possible or minimization of transaction cost.
$>$ Enable transaction to be made at this price quickly and easily or provision for liquidity.

## Main function of Stock Exchange: Price Discovery

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

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

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

The stock exchange produces through its continuous process of evaluation, prices of securities as close as possible to investment value based on present and future income yielding prospects of various enterprises, capitalized at notional rate of interest the rate which will prevail if and when all the liquid savings are employed into productive purposes (Gupta, 1994: 148)

### 2.2.4 Price Determination

The share price is determined in the floor by the interaction of market forces i.e. demand and supply. The price is determined by the point of equilibrium between supply and demand, the shifting of this balance results in incessant adjusting of price in search of the ever changing new equilibrium. Then market price moves
upward and downward. There are many other reasons that causes the stock price fluctuation major of them are economics, non economic and market factors.

Dividend is the most important factors on the determination of stock price. Dividends are strongly influenced by the earnings power of the firm. There is a very close correlation between corporate earnings and dividends. Earning power, in turn, is strongly influenced by interest rates. In this way, the most fundamental factor in stock price fluctuation lies in changes in corporate earnings, which together with interest rates and business cycle trends, contribute to making up the economic factors influencing stock price.

The next influencing factor are non economic factors including changes in political conditions, such as administrative changes, change in the weather and other natural conditions, and changes in cultural conditions, such as technological advance and the like. Similarly the other influencing factors are market factors, or internal factors of the market, considering to the tone of the market and supply demand relations, may be cited as the third category, that influences the stock prices. Besides these factors the stock prices are influenced by the corporate performance of the company, company's policy regarding the capitalization of earnings as well as government rules and signaling effect of the market.

### 2.2.5 Theory of Price Behavior

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

## i. Inefficient Market Theory <br> ii. Efficient Market Theory

### 2.2.5.1 Inefficient Market Theory

Conventional approach has considered that market in inefficient, which includes technical analysis theory. "Prior to the development of the efficient market theory investors were generally divided into two groups, Fundamentalists Technicians". (Reilly, 1994: 347) the two groups are analyzed as follows:

## Technical Analysis

Technical analysis is based on the widely accepted premise that security prices are determined by the supply of and demand for securities. The tools of technical analysis are therefore designed to measure supply and demand. Typically, technical analysts record historical financial data on charts, study these charts in an effort to find meaningful patterns to predict future prices. Some charting techniques are used to predict the movements of a singles security; some are used to predict the movements of a market index; and some are used to predict both the action of individual securities and the market action. The basic assumptions underlying technical analysis are listed below:
> Market value is determined solely by the interaction of supply and demand.
$>$ Supply and demand is governed by numerous factors, both rational and irrational.
$>$ Aside from the effected of minor fluctuations in the market, stock prices tends to move in trends that persist for appreciable lengths of time.
$>$ Changes in trends are caused by shifts in supply and demand.
> Shifts in supply and demand, no matter why they occur, can be detected sooner or later in charts of market action.
> Some chart patterns tend to recur and these recurring patterns can be used to forecast price movements.

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

Stock prices always move in trends because of an imbalance between supply and demand. When the supply of a stock is greater than the demand the trend will be down as there are more sellers than buyers; when demand exceeds supply the trend will be up as buyers "bid up" the price; and if the forces of supply and demand are nearly equal, the market will move sideways in what is called a "trading range". Eventually, new information will enter the market and the market will began to trend again either up or down, depending on whether the new information is taken as positive or negative. Trend which are very brief are called minor trends; and trends lasting for a period of months are major trends. By analyzing trend lines we can determine what trend is in force. It helps us to act safe in market both in bullish and bearish market. Price moves in trends. A trend indicates, there exist an inequality between the forces of supply and demand. Such changes in the forces of supply and demand are usually readily identifiable by the action of the market itself as displayed in the prices. Certain patterns or formations that appear on the charts have a meaning and can be interpreted in terms of probable future trend development.

## Dow Theory

The Dow Theory is one of the oldest and most famous technical tools and was originated by Charles Dow, who founded the Dow Jones Company and was the editor of The Wall Street Journal around 1900. The Dow Theory is used to predict traversal and trends in the market as a whole or for individual securities. According to Charles Dow, the market is always considered as having three movements, all going at the same time. The first is the narrow movement from day to day. The second is the short-swing, running from two
weeks to a month or more; the third is the main movement covering at least four years in duration.

Dow Theory practitioners refer to these components as:

## 1) Primary Trends

They are commonly called bear or bull markets. Delineating primary trends is the primary goal of the Dow theorists.

## 2) Secondary Movements

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

## 3) Tertiary Movements

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

## Fundamental Analysis

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

Fundamentalists forecast stock price on the basis of economic, industry and company statistic. The principal decision variables ultimately take form of earning and value with as risk-return framework based upon earning power and the economic environment. "Fundamental analysts believe in companies’ earnings, their management, economic outlook, firms' competitor's market conditions and many other factors". (Francis; 1986:624)

The objective of fundamental security analysis is to appraise the intrinsic value of a security. The intrinsic value is the true economic work of financial assets. "The Fundamentalists maintain that any point of time every stock has an intrinsic value, which should in principal equal to the present value of the future stream of income from that stock discounted at an appropriate risk related rate of interest" (Bhalla, 1983:283). Therefore the actual price of security is considered to be a function of a set of anticipation. Price changes as anticipation changes which in turn change, as a result of new information. In other words: a new piece of news released, securities market prices will adjust towards the new values. "The value of common stock is simply the present value of all the future income, which the owner or the share holder received." (Francis; 1986:398) and the actual price should reflect intrinsic value of the stock i.e. good anticipation of cash flows and capitalization rate corresponding to future time period. But in practice, first it is not known in advance what the appropriate discount rate should be for a particular stock. Therefore fundamentalists estimate their intrinsic value by studying in detail of all the matters that is relevant to company. There are various models developed by fundamentalists to reflect the piece of the securities. Some of them are as follows:

## Capital Assets Pricing Model (CAPM)

The basic foundation of the theory was laid down in the microeconomics studies of mean variance choice by Markowitz (1959) and Tobin (1958). The critical extension to equilibrium in the capital market, and the development of the CAPM, was accomplished by Sharpe (1964) and Lintner (1965) (Stephen, 1978:886). Like the portfolio models of Markowitz and Tobin, the Sharpe-Lintner asset pricing model assumes a market of risk averse consumers who can make portfolio decisions on the basis of the means and standard deviations of one period portfolio returns, implicitly assuming that these standard deviations of one period portfolio returns, implicitly assuming that these standard deviations exist (Fama, 2002:30).

The CAPM substantiated the idea that, in competitive equilibrium, assets earn premium over the risk less rate that increase with their risk, by showing that the determining
influence on risk premium is the co-variance between the assets and the market portfolio rather than own or intrinsic risk of the assets. (Stephen; 1978:886) CAPM is concerned with two key questions:

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

The CAPM is based on the following assumptions:

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


## Gorden's Model

As per the Gorden's model about relationship of dividend policy and stock price, investors are no indifferent between current dividends and retention of earnings. An increase in dividend payout ratio leads to increase in the stock prices for the reason that investors consider the dividend yield is less risky than the expected capital gain. Similarly investors required rate of return increases as the amount of dividend decreases. This means that there exists a positive relationship between the amount of dividend and the stock prices.

The model is based on the following assumptions:

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

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

## a) Growth Firm (r>k)

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

## b) Normal Firm (r=k)

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

## c) Declining Firm ( $\mathbf{r}<\mathbf{k}$ )

The share price tends to rise in correspondence with rise in dividend payout ratio. It means dividend and stock prices are positively correlated with each other in declining firm (Gordon; 1962:187).

## J.E. Walter's Model

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

Assumptions of Walter's Model:
$>$ Retained earnings constitute the exclusive sources of financing. The firm does resort to debt or equity financing.
$>$ The firm's internal rate of return and its cost of capital are constant.
> Value of earning per share (EPS) and dividend per share (DPS) are remaining constant.
$>$ The firm has perpetual life.
$>$ The firm distributes its entire earnings or retains it for immediate reinvestment.

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

## a) Growth Firm (r>k)

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

## b) Normal Firm (r=k)

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

## c) Declining Firm ( $\mathbf{r}<\mathbf{k}$ )

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

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

### 2.2.5.2 Efficient Market Theory

In a competitive market, the equilibrium price of any goods or services at particular movement in time is such that the available supply is equated to the aggregate demand. This price represents a consensus of the members trading in the market about the true worth of the good or service, based on all publicly available information. As soon as a new piece of relevant information becomes available, it is analyzed and interpreted by the market. The result is a possible change in the existing equilibrium price. The new equilibrium price will hold until yet another bit of information is available for analysis and interpretation. "The role of information is two folds : a) to aid in establishing a set of security prices, such that there exist an optimal allocation of securities among investors and b) to aid the individual investor, who faces a given set of prices in the selection of an optimal portfolio of securities". (Sharma, 2002: 27)

The word "Efficiency" as applied to securities market has unfortunately been used to represent a variety of logically distinct concepts. In particular it means: A) exchange efficiently B) production efficiency and C) information efficiency. In this study, it is concerned only with informal efficiency. In an efficient market security price, fully reflect "available information" (Fama, 2002:133).

Regardless of the form of information, it is the key to the determination of stock prices; therefore it is the central issue of the efficient market concept.

An efficient market can exist if the following events occur:

1) A large number of rational, profit maximizing investors exist who actively participate in the market by analyzing, valuing and trading stocks theses investors are price takers: that is one participant alone cannot affect the price of security.
2) Information is free of cost and widely available to market participant at approximately the same time.
3) Information is generated in a random fashion such that announcements are basically independent of one another.
4) Investors react quickly and accurately to the new information, causing stock prices to adjust accordingly. (Jones, 2003:425)

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

In an efficient market, market participants, acting in their own self interest, use available information to attempt to secure more desirable portfolio position. In doing so they collectively ensure that price movements in response to new information are instantaneous and unbiased and will fully reflect all relevant information. Competition among participants to secure useful information will drive security prices from one equilibrium level to another so that the change in price in response to new information will be independent of the prior change in price. Price change will be random walk in response to the information.
"In an idle efficient market, everyone knows all possible to know information simultaneously, interprets it similarly, and behaves rationally." (Bhalla, 1983:2). In such a world, the only price change that would occur is due to the result from new information. "An initial and very important premise of an efficient market is that there are large numbers of knowledgeable and profit maximizing investors adjust the information rapidly." (Reilly, 1994:166) "The degree of market efficiency has important implications for the economy and for the investment decision makers. In an economic sense, it is important that security prices provide accurate signals that can be used to allocate capital resources correctly. Mis-priced security results in incorrect allocation of capital." (Cheney, 1996:746)

In such a market, all prices are correctly states and there is no "bargain" in the stock market. "Efficiency in this context means the ability of the capital markets to function so that prices of securities react rapidly to new information. Such efficiency will produce prices that are appropriate in terms of current knowledge and investors will be less likely
to make unwise investments. A corollary is that investors will also be less likely to discover great bargains and thereby earn extraordinary high rates of return." (Bhalla, 1983:3)

The conclusion is that -"In an efficient market, there is neither free lunch nor expensive diner. It is not possible to systematically gain or lose abnormal profits from trading on the basis of available information." (Weston and Copland, 1996:93). No one can consistently do better than the average. "Efficient market theorists believe that some do better than average because of luck. In fact they suggest that the traders those who buy and sell their stock frequently- do less well than the stock market averages by an amount equal to the commissions they pay." (Rubinstein, 1975:815)

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

## a) Weak Form Market Efficiency

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

## b) Semi-strong Form Market Efficiency

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

## c) Strong Form Market Efficiency

"The most stringent form of market efficiency is the strong form, which asserts that price fully reflect all information, public and non public" (Jones, 2003:29). In such kind of market, no group or investors should be able to earn, over a reasonable period of time, excess rates of return by using publicly available information in a superior manner. An extreme version of the strong form holds that all non public information, including information that may be restricted to certain groups such as corporate insiders and specialists on the exchanges, is immediately reflected in prices. In effect, this version refers to monopolistic access to information by certain market participants.

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

### 2.3 Review of Journal and Article

Articles, journal and bulletins are of great significances for thesis writing. So in order to make this study more comprehensive some articles, books etc related to stock price are consulted and reviewed.

A study conducted by Michele, Thaler and Wamack on "Price Reactions to Dividend Initiations and Omissions: Overreaction or Drift", found out that the short run price impact of dividend omissions is negative and that of initiation is positive, that there are long term drift in prices following announcements of initiations and especially omissions and that there is no evidence of important change in volume or clientele, which mitigates
price pressure as a potential explanation for the anomalous drift. (Michele, et al.; 1995:217)

In the journal of Financial Economics(1996)Vol.II, entitled "Commonality in the Determinants of Expected Stock Returns", by Robert A.Haugen and Nardin L.Baker, they presented with evidence that the determinants of the cross section of expects stock return were stable in their identify and influence from period to period and from country. The determinants were related to risk, liquidity, price level, growth potential and stock price history. Out of sample predications of expected returns, using moving averages values for the pay-offs to these firm characteristics were strongly and consistently accurate. Two findings, however, distinguished their paper from others in the contemporary literature; first, the stock with higher expected and realized rate of return was unambiguously of lower risk than the stocks with lower returns. Second, they found that the important determinants of expected stock returns were strikingly common to the major equity markets of the world. Given the nature of the texts, it was highly unlikely that those results may be attributed to bias or data snooping. Consequently, the result seems to reveal a major failure in the efficient market hypotheses.

Fama's (1965) on the random walk model was one of the best definitive and comprehensive studies ever conducted. He observed the daily proportionate prices of 30 individual stocks of the Dow Jones Industrial Average Index (DJIAI) for the period of 1957 to 1962. He employed the statically tools such as serial correlation and runs test to draw inferences about depended of the price series. He calculated auto-correlation coefficient for daily changes in $\log$ prices for lag from 1 to 30 and found that the coefficient were almost close to zero in overall. The correlation coefficient for daily changes in averages was +0.03 , which is near to zero. But on the daily price changes, 11 out of 30 stocks has correlation coefficient more than twice their computed standard errors. The coefficient ranged from smallest 0.06 to largest 0.123 . However Fama concluded, "Dependence as such a small order of magnitude is, from a practical point of view, probably unimportant for both the statistician and the investor." Fama also calculated serial correlation for lag from 1 to 10 for no-overlapping differencing intervals
of four, nine and sixteen days to examine the possibility if price change across longer interval shows dependence. All the results are again not significantly different from zero.

International Monetary Fund (IMF; 1997:17), Policy Development and Review Development Division published a working paper entitled "Determinants of Stock Prices: The case of Zimbabwe". The working paper examined the general relationship between stock price and macroeconomic variables in Zimbabwe, using the revised DDM, errorcorrection model and multi factor return generating model. Despite the large fluctuation in stock prices since 1991, the analysts indicated that the Zimbabwe Stock Exchange functioned quite constituently during the period. Whereas, sharp increases in the share prices in stock prices during 1993-94 were mainly due to the shift of the risk premium that was caused by partial capital account liberalization, the monetary.

Prof.Dr.Rahde Shyam Pradhan (2008) studied the market behavior in Nepal and concluded that large stocks have large PE ratios; large ratios of the market value to book of equity and smaller dividends. PE ratios and dividend ration are more variable for smaller stocks where as market value to book value of equity is more variable for the large stocks.

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

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

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

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

In Business age (2004:10), Panta, Rekha analyzed in her study, "Current status of share market in Nepal," the trend of Nepalese stock market and present state of primary and secondary market was found satisfactory. According to her study, the development of stock market primarily depends on program and their implementation. In Nepal, the overall policy environment has not been conducted to the development of stock market. Therefore, it is difficult to develop more efficient secondary market, trading system for both equity and debt securities.

Capital Market is a crucial element in the national economy. Its role in reinvigorating and boosting the economic activity in the country holds significant. The strategic plan released by securities board can, to a great extent, energize the investors, dealers by increasing investor interest in it. Security market experiences both boom and boast soon after the beginning of securities trading through broker's member in the stock exchange floor. Through the market started to function quickly boosting the price of share to an unexpected level, it could not sustained.

In Business age (2005:20), "Return from investment in stock is not short run phenomenon. Investors have to learn few things before they make investment on stock. First of all they should know the financial health of that company. For example; if somebody want to invest in the share of Standard Chartered Bank, he/she must see its balance sheet or at least paid-up capital, last year's net profit, current year's anticipated profit and calculate earnings per share and price earning per share and price earning ratio. These two numbers would give a fair idea about company's wealth and then market price would judged through the discount factors based upon one of the sound company's data. Market price is equal to earning per share divided by discount factor. EPS can be derived by dividing total net profit after tax by total number of share and price earning ratio by dividing market price per share by EPS. Lower the P/E ratio higher the chance of profit with capital gain and others." In Business Age (July 2005:53), Nepal stock exchange's securities price index (NEPSE Index) during the month of June remained fluctuating. It remained bullish till June 10 reaching 216.75 and then it turned bearish continuously reaching the level of 211.31 on June 15 . The rise was started with the appointment of new government and the main leader was commercial bank group the market dominating sector in the exchange understandable enough, the increase in the price was fueled by the expectation for early end of conflict between government and political parties, after the appointment of Deuba as a Prime Minister. But the publication of the third quarter financial result was no way less important factor for such positive impact on commercial bank sector has been in June 2005.

NEPSE index fell after reaching 216.75 on June 10 and plummeted to 211.31 over a short span of three days. This fall was however caused by notices published by some companies inviting application for their new issues as well possible strike of the NEPSE employees and the wrangle among the political parties that delayed the formation of coalition of government.

Since June 16, the index turned bullish again till the end of the month. Despite the strike of employees of NEPSE, the market increased on June 16, one day before the strike and continues to increase during and after the strike till the end of the month. There were no
any major events to cause the price of share goes up. However, the expectation of fewer disturbances after the four parties suspended the outgoing demonstration and the Maoist, student union called off the education strike, the country budget and positive development reported for the formation of coalition government etc increase the expectation of investors.

The NEPSE index seems sensitive to political economical and financial sectors developments it has raised after the disclosure of financial situation by the companies and when there were positive signs of political stability and it decreased for some company shares. It shows that the investors are becoming aware about when to buy and sell the securities.

The Rising Nepal (Jan 20 2006:6), "ADB experts have seen many obstacles to the growth of the capital market. This includes low level of investors' confidence, disclosure of poor and manipulated financial information week enforcement of regulation, absence of instructional investors, lack of diversity in range of financial instrument and the scope of active participation for the various intermediaries."
"Investors were enlightened and they stated inquiring about company's financial health and future prospect before buying and selling shares. People turned to price earning multiples: NEPSE indexes informed trading became sort of a norm when stock market entered 2003. Many who could not cope with the system of intelligent speculation left the ground. As a result, the numbers of buyers gradually came down and so did the prices." (The Kathmandu Post, May 18, 2007:6)

### 2.4 Review of Master's Thesis

Under this section various master's level dissertation related to this study have been reviewed.

Madan Paudyal (2009) has conducted research on "Determinants of Stock Price in Nepal" The main objectives of his research are:
$>$ To identify the major determinants of the stock price of listed companies in NEPSE.
$>$ To identify the relationship between performance and market price of the selected companies.
$>$ To identify whether Nepalese securities market is efficient or not.
$>$ To identify important factors related with the secondary market in Nepal.

The major findings of Paudyal are as follows:
> Studying the annual trend analysis of Nepalese stock price market, it was found that stock price trend is decreasing from many years as smoothly but from one year price of stock is decreasing as rapidly.
$>$ Pricing behavior differs from company to company. Even though, DPS, BVPS and EPS jointly have significant effect on the share price, individually they do not have consistent relationship with MPS. It means there are some other factors that have been influencing and determining the share price significantly.
$>$ Company performance (EPS, BVPS, DPS, risk), information disclosed, change in management, timely AGM, other political and economic factors such as political stability, national economy, peace, strikes, demand and supply situation of the share are some factor they have direct impact on share prices.

Mina Devi Bhatta (2008) studied on the topic "Determinants of Share price in Nepal Stock Exchange" with the major objective of identifying the price determining factors of share price determinants of Commercial Banks, which are as follows:
$>$ To identify the prime determining factors of Share Price determination of Nepalese Commercial Banks.
$>$ To examine and evaluate the relationship between MPS with the various Financial indicators like EPS, BPS, DPS etc.
$>$ To analyze the market trends of MPS with financial indicators.
$>$ To conduct the opinion survey of potential investors regarding various aspects of share behaviors in Nepal.

The researcher studied the share price behavior of 15 Commercial Banks which are listed in NEPSE. 50 Respondents were given questionnaire for getting the primary data. The main findings of this study are:
> Market Price per Share of Most of the Bank is insignificantly correlated with all the indicators (DPS, BPS and EPS) in most of the cases. This implies that they individually don't influence the share price. There can be other factors which influence the share price.
> EPS and DPS are the major influencer of the Share Price. Besides this, political situation, annual general meeting, assets structure and capital structure of the organization also influence the share price of the company.
$>$ The investors generally tend to earn profit from share and they think that EPS and DPS are prime factor to be analyzed and to be considered on investing their savings on Share Price.

Aparna Giri (2007) studied "Stock Price Behavior in Nepal." The main objectives of the study were to identify the relationship between stock price and other variables. The basic objectives of this research are as follows:
> To analyze the effect of book value to stock price in securities market.
$>$ To evaluate the effect of earning to stock price in securities market and to show the relationship effect of market variables in securities market.
$>$ To analyze the effect of dividend to stock price in Nepalese stock market.
$>$ To analyze the listing of new companies and volume of share traded.
> To access the effect and efficient qualitative factors in the opinion of the employees of A grade listed companies.

For the above objective, she also concludes the following findings:
> In NEPSE, EPS, DPS \& BPS individually do not have consistent relationship with the market price of shares, among the listed companies, the pricing behavior, varies from one company to other.
$>$ But EPS, DPS and BPS jointly have significant effect in market prices of share. So, there may be other major factor affecting the share price significantly.
> All of the Nepalese share investors have not found adequate knowledge to analyze the share price behavior.
$>$ There is difference of proper laws and policy regarding the capital market, share holders are feeling unsecured to invest in security market due to poor regulatory mechanism to protect shareholders interest.

Saroj Gyawali (2010) has conducted a research on "Determinants of Stock Price in Nepalese Capital Market." The objectives of his research are as follow:
$>$ To identify financial indicators, which have major influence in determining stock price.
$>$ To identify the major determinants of the stock price in NEPSE.
> To identify whether stocks of the sampled companies are over-priced, under priced or at equilibrium price
$>$ To identify qualitative as well as quantitative factors affecting the stock price in NEPSE with focus to listed company to analyze investors response regarding on the change of stock price.

From his study, he concluded that,
> The market price per share i.e. stock price is affected by the dividend related financial variables such as DPS and DPR either positively or negatively. The changes in DPS affect the stock price differently in different banks.
$>$ The dividend per share is affected by earning per share, retention ratio, net profit and net worth per share differently in different banks.
> Stock price or market price of the listed commercial banks under study is higher than net worth per share. There exists vast difference between MPS and NWPS. This situation clearly indicates that the investors are not comparing book value and market value of shares. They are investing in stocks to gain advantage from capital appreciation rather than dividends.

Prakriti Bhattarai (2008) has conducted research on "Share Price Behavior of Commercial Banks Listed in NEPSE." The main objectives of his research are as follows:
$>$ To analyze the stock price movement of the NEPSE market.
$>$ To test the random walk or weak efficient market hypothesis.
$>$ To test whether the successive price changes are independent or dependent with the price of historical change.

The major findings of Bhattrai are as follows:
$>$ The total numbers of actual and expected runs are statistically significant for most of the equity shares, which implies that their price changes are significantly different from random series. Result of run test also supports the result of autocorrelation. Therefore, today's price change is dependent on the information of yesterday's price.
> The mean absolute values of the autocorrelation coefficients are lower when the lag days are increases. This means the information of past price change have little role to predict the future price changes for longer days.
> Because the persistence hypothesis has been supported by the result of autocorrelation and run test, professional investors either individual or institutional can beat the market. Therefore, to make greater profit than "naïve buy and hold strategy", acute fundamental or other analyses are required which accurately predict the appearance of the new information in the market that effects the price of shares.
> There exists a low order serial dependence, which helps in certain extent to increase investor's expected profit.

Maheshwor Poudel (2007) on "A Study on Share Price Behavior of Joint Venture Banks in Nepal" is undertaken by using financial and statistical tools and revealed that:
> The growth rate analysis as a stand, alone may not be adequate for the analysis of share prices behavior and may not represent the bank's performance in the secondary market.
> The ordinary least square equation of the book value per share on market value per share reveals that the independent variable does not fully explain the dependent variables on the basis of above mentioned two points; Nepal Stock

Exchange operated in a weak form of efficient market hypothesis, including that the market prices move randomly. The market value per share does not accommodate all the available historical information.
$>$ Having good track record of the financial position, the market potential investors buy the shares of joint venture commercial banks. Therefore, the shares of joint venture bans emerge as a blue chip in the Nepalese Stock Market.
$>$ The beta coefficient, which measures the riskiness of individual security in relative term, suggests that none of the shares of eight sampled banks are risky. Therefore, even a risk averter can go for making an investment in shares of these banks. The shares of publicly quoted joint venture commercial banks are less risky as compared to the other average stocks traded in the stock exchange.

Ram Hari Karki (2009) has conducted research on "Dividend and Stock Price". The study was carried out by the data for 12 enterprises from 2000 to 2005 . The main objectives of that study were as follows:
$>$ To test the difference between dividend 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 the stock changing dividend policy or payout ratio.

To explain the price behavior, the study used simultaneous equation model as developed by Friend and Puckett. The main findings of that study were as follows:
$>$ The difference between dividend 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 per share.
$>$ The difference between stock prices and retained earnings per share is not prominent.
$>$ The difference between stock prices and lagged earnings ratio is negative.
> Though there were above-mentioned studies in the context of Nepal, it has overcome necessary to find out whether their findings are still valid.

Chandra Prasad Khadka (2008), in his research work, "Dynamic of Stock Market in Nepal" Khadka set the following objectives as given below:
$>$ To analyze the trend of the Nepalese stock market.
$>$ To diagnose and compare the sectorial financial status of the stock in Nepalese stock market.
> To analyze the market share prices of the Nepalese stock market.
$>$ To find out the impact of the secondary or primary market and vice versa.

According to the above objectives Khadka recommended the following points by his recommendation and conclusion section:
$>$ The government should make not only policies for the capital market development but also implement these policies appropriately.
$>$ Investment in corporate sector should be encouraged and their share should be listed in the stock exchange.
$>$ The regulatory authorities of the stock should create an environment to rise the trading of share in the stock exchange.
> The government should make appropriate policies and programs for the enhancement of the entrepreneurship development in the Nepalese economy. In his conclusion he try to show that although it has become late to take steps to overcome such problems of the Nepalese stock market in order to make it active and supportive, the stock market has a good prospect for the resource mobilization to finance the productive enterprises in the Nepalese economy.

### 2.5 Research Gap

Various studies conducted on this topic in the context of Nepal but, it has now become necessary to find out whether their findings are still valid or the ground has been changed. There are many changes in stock market inside and outside Nepal after 1990. Like other countries, Nepal has also
followed a policy of liberalization, privatization and globalization. Considering all these facts, it is necessary to carry out a fresh research to fulfill the gap between past studies and present condition. Thus, this study tries to meet the following gaps:
$>$ There is a need to conduct a survey of general investor in order to find general perception toward stock pricing. All the previous researchers have included mostly the opinion of company executives only but this study is also based on general investors and different level of concerned authorities.
$>$ The earlier studies on "Determinants of Stock Price of Listed Companies in Nepal Stock Exchange" have become older and need to be updated and validated because of the rapid changes taking place in financial market of Nepal.
$>$ In the last couple of year, Nepalese security market has drawn interest of significant number of new investors, new companies with IPO and new investment companies. In broader sense, Nepalese market has grown up. So, the study in this context is very necessary to reflect the significant drift of stock market assumptions

## CHAPTER - III RESEARCH METHODOLOGY

### 3.1 Introduction

Research methodology is a way to systematically solve the research problem. It refers to the various sequential steps that are to be adopted by a researcher during the course of studying the problem with creating objectives. This chapter refers to the overall research method from the theoretical aspects to the collection and analysis of data. This study covers quantitative methodology in a greater extent and also uses the descriptive part based on both technical aspects and logical aspect. This research tries to perform a welldesigned quantitative and qualitative research in a very clear and direct way using both financial and statistical tools. Detail research methods are described in the following headings;

### 3.2 Research Design

In order to make any type of research a well-set research design is necessary to fulfill the objectives of the study. Generally, research design means definite procedure and techniques which guides to study and provide ways for research viability. It is arrangements for collection and analysis of data. To achieve the objective of this study, descriptive and analytical research design has been used. Some financial and statistical tools have been applied to examine facts and descriptive techniques have been adopted to determine the relation between corporate performance and stock price of listed companies in the NEPSE.

### 3.3 Variables

A variable is a symbol to which numerals or values are assigned. So, the variables can take on values. This research intends to identify the factors that affect share price in NEPSE. So, the market price of the share is the dependent variable, which is affected by
many variables, such variables are regarded as the independent variables in the study. The entire factors that affects the market price of shares, such as, earnings, dividends, interest rate, liquidity, book value of share, economy of the nation, peace \& prosperity, rumors and whims etc. are the independent variables.

### 3.4 Population and Sample

This study has been totally confined to the institutions listed in the Nepal Stock Exchange. Total numbers of organization listed are 159. These listed organizations according to their nature of business are categorized into nine groups also called sectors. These sectors are;

## 1. Commercial Bank

2. Finance
3. Insurance
4. Hotels
5. Manufacturing and Processing
6. Trading
7. Development Bank

## 8. Hydropower

9. Others

This study has been limited to 2 commercial banks, 2 finance companies and 2 development bank sectors. The purposive sampling method is applied in the study to select the listed stocks of the NEPSE. Purposive sampling is a sampling method in which elements are chosen based on purpose of the study. Purposive sampling may involve studying the entire population of some limited group or a subset of a population. It is a non-probability sampling method.

In this study, six organizations have been selected from the population of 159 listed stocks. The selected stocks are as follows:

## Commercial Bank Sector

1. NABIL Bank Ltd.
2. Bank of Kathmandu

## Finance Sector

3. National Finance
4. Lalitpur Finance

## Development Bank Sector

5. Siddhartha Development Bank
6. Ace Development Bank

### 3.5 Sources of Data

To fulfill the objective of the study primary as well as secondary sources of data have been used. The sources of secondary data are AGM reports of listed companies, SEBO/N, NEPSE and other concerned organizations, bulletins, publications, researches, journals, unpublished thesis reports, newspapers, journals and internet. The sample period cover the period of five years commencing from 2004/05 to 2008/09. Primary data are collected using questionnaire techniques from survey and field work. Questionnaires are distributed to 31 respondents concerned to different companies and security broker agencies to elicit some valuable information required for the study.

### 3.6 Data Collection Techniques

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

### 3.7 Data Analysis Tools

The data collected from various sources leads to the logical conclusion, only if the appropriate tools and techniques are adapted to analyze such data. The collected data has been no meaning, if such data are not analyzed. To analyze the data in this research, the researcher has used some statistical and financial tools, which are explained here.

### 3.7.1 Financial Tools

Some financial tools are also used in this research, except the statistical tools. The major financial tools used in this research are:

## Earning per share

It is earnings made by single units of a share and earning power of a company. It measures the profit availability to equity holders on a per share basis. It is the share of a stock on the earning of the company. It is calculated by dividing total earning available to the share holders by number of share outstanding. The earning available to the share holders is calculated by net profit after taxes and preference dividends.
EPS $=\frac{\text { Total Earning of Company }}{\text { No. of shares Outstanding }}$

## Dividend per Share

The DPS is the amount paid as dividend to the holder of one share of the stock. The market value of share is depending on the dividend distribution to equity holders. Only financial strong companies call distributes dividends. It attracts to investors to invest in shares of stock and maintain goodwill. A part of profit belonging to equity share holders are retained in the business and balance is paid to them as dividend. It is calculated as following.

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

Total Dividend = Cash Dividend + Stock Dividend

## Market Price per Share

The MPS is amount in which a share of the stock is traded in the market. In other word it is a trading price of a stock in the market.

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

## Book Value per Share

The sum of the cumulative retained earnings and other entries (such as common stocks and contributed on excess of par value) under stockholder's equity is the book value of the equity. It represents the real net worth per share. It is simply the ratio of net worth (share capital plus retained earnings i.e. ownership capital) and the number of existing shares. The investors could not purchase the shares with this price at the secondary market.

BPS $=\frac{\text { Net Worth }}{\text { No. of shares Outstanding }}$

## Holding Period Return

Rate of return gained in a stock during the holding of certain period is called Holding Period Return. Generally, single period return or holding period return is represented by R and expressed in terms of percentage basis. It is calculated as

HPR $=\frac{\text { Ending Price-Beginning Price }+ \text { Cash Dividend }}{\text { Beginning Price }}$
Symbolically,
HPR $=\frac{\mathrm{P}_{\mathrm{t}}-\mathrm{P}_{\mathrm{t}+1}+\mathrm{D}_{\mathrm{t}}}{\mathrm{P}_{\mathrm{t}+1}}=$ Capital Gain + Dividend Yield
Where, $\mathrm{P}_{\mathrm{t}}=$ Price of stock at time t
$\mathrm{P}_{\mathrm{t}+1}=$ Price of stock at time $\mathrm{t}+1$
$\mathrm{D}_{\mathrm{t}}=$ Dividend per share at time t

## Risk and Return Analysis of Market

## Return on Market

Annual return on market is the average return of market based on the index of market. $\mathrm{R}_{\mathrm{m}}$ denoted it. Under this study, NEPSE index will be used. It is a value weighted index and comprises of all the stocks listed in NEPSE. The NEPSE index is used for the study.

Annual Market Return $\left(\mathrm{R}_{\mathrm{m}}\right)=\frac{\text { Ending NEPSE Index-Beginning NEPSE Index }}{\text { Beginning NEPSE Index }}$
Average Market Return $\left(\overline{\mathrm{R}}_{\mathrm{m}}\right)=\frac{\sum \mathrm{R}_{\mathrm{m}}}{\mathrm{N}}$
$\sum \mathrm{R}_{\mathrm{m}}=$ Summation of Annual Market Return
$\mathrm{N}=$ Number of observations

## Risk of Market Return

Risk of market return is also measured by the standard deviation of the returns of market. The standard deviation of market returns is computed as
Standard Deviation $\left(\sigma_{\mathrm{m}}\right)=\sqrt{\frac{\sum\left(\mathrm{R}_{\mathrm{m}}-\overline{\mathrm{R}}_{\mathrm{m}}\right)^{2}}{\mathrm{~N}-1}}$

## Market Sensitivity Analysis

## Covariance

The covariance measures how two variables co-vary. It is a measure of the absolute association between two variables. Here, how the returns of individual stocks and the market return co-vary will be measured by covariance between the return of individual stocks and market return. It is computed as:
$\operatorname{Cov} . \mathrm{R}_{\mathrm{j}}, \mathrm{R}_{\mathrm{m}}=\frac{\left(\sum \mathrm{R}_{\mathrm{j}}-\overline{\mathrm{R}}_{\mathrm{j}}\right)\left(\mathrm{R}_{\mathrm{m}}-\bar{R}_{\mathrm{m}}\right)}{\mathrm{N}-1}$
If two variables are independent, their covariance is zero.

## Beta Coefficient

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

$$
\mathrm{B}_{\mathrm{j}}=\frac{\operatorname{Cov}\left(\mathrm{R}_{\mathrm{j}}, \mathrm{R}_{\mathrm{m}}\right)}{\sigma_{\mathrm{m}}^{2}}
$$

Where,
$B_{j}=$ Beta coefficient of stock $\mathbf{j}$.
$\operatorname{COV}\left(\mathrm{R}_{\mathrm{j}}, \mathrm{R}_{\mathrm{m}}\right)=$ Co-variance of the returns of stock j and market.

## Capital Assets Pricing Model

The basic theory links together risk and return for all assets are commonly called the capital assets pricing model (CAPM). Using the beta coefficient, to measure nondiversifiable risk,

CAPM is given as:
$\mathrm{Kj}=\mathrm{R}_{\mathrm{f}}+\left[\mathrm{R}_{\mathrm{m}}-\mathrm{R}_{\mathrm{f}}\right] \mathrm{Bj}$

Where,
$\mathrm{K}_{\mathrm{j}}=$ Required rate of return on assets j .
$\mathrm{R}_{\mathrm{f}}=$ Risk free rate of return or short term t-bill rate.
$\mathrm{Bj}=$ Beta coefficient/index of non-diversifiable risk for assets j
$\mathrm{R}_{\mathrm{m}}=$ Market returns (the return on market portfolio of assets)

### 3.7.2 Statistical Tools

Statistical tools are the measures or the instruments to analyze the collected data from different sources. In statistics, there are numerous statistical tools to analyze data of various natures. In this study, the researcher has used the following statistical tools to analyze the data.

## Correlation Coefficient

Correlation is defined as the relationship between the one dependent variable and one or more than independent variables. When the relationship is of quantity nature, correlation coefficient is the appropriate statistical tool for discovering and measuring the relationship and expressing it in a brief formula. Correlation is a statistical technique which measures the degree and direction of relationship among the variables. If, the two or more than two variables are so associated that the change in the value of one independent variable results the change in the value of dependent variable then they are said to have "correlation".

## a. Simple Correlation

The relationship between two variables is studied (one independent and one independent variable) in simple correlation analysis. If the values of the variables are directly proportional then the correlation is said to be positive. On the other hand, if the values of the variables are inversely proportional, the correlation is said to be negative, but the correlation is said to be negative, but the correlation coefficient always remains within the limit of +1 to -1 . By Karl Pearson, the simple correlation coefficient (between two variables say X and Y ) is given by:
$r=\frac{N \sum X Y-\sum X \sum Y}{\sqrt{N \sum X^{2}}-(X)^{2} \sqrt{N \sum Y^{2}-(Y)^{2}}}$

Where,
$\mathrm{r}_{\mathrm{xy}}=$ is the correlation coefficient between two variables $\mathrm{x} \& \mathrm{y}$
" r " lies between +1 to -1
When, $\mathrm{r}=+1$, there is perfect positive correlation
When, $r=-1$, there is perfect negative correlation
When, $r=0$, there is no correlation.
When r lies between 0.7 to 0.9999 (or -0.7 to -0.999 ), there is high degree of positive or negative correlation.
When $r$ lies between 0.5 and 0.699 , there is moderate degree of correlation

When $r$ is less than 0.5 , there is low degree of correlation

## b. Partial Correlation:

The relationship between one independent and one dependent variable is studied by keeping other independent variables constant is the partial correlation.

## c. Multiple Correlations:

The study of relationship among the three or more variables simultaneously (at the same time) is the multiple correlations. In multiple correlation, all the give variables are studied at one time by taking one variables as dependent and all the remaining variables as independent and the effect of all the independent variables on a dependent variable is studied.

## Coefficient of Determination

The coefficient of determination gives the percentage variation in the dependent variables that is accounted for by the dependent variables/s. In other words, the coefficient of determination gives the ratio of expected variance to the total variance. The coefficient of determination is given by the square of the correlation coefficient, i.e. $\mathrm{r}^{2}$.
Coefficient of Determination $\left(\mathrm{r}^{2}\right)=\frac{\text { Expected Variance }}{\text { Total Variance }}$

## Coefficient of Regression

The coefficient "b", which is the slope of line of regression of $Y$ on $X$, is called the coefficient of regression of $Y$ on $X$. It represents the increment in the value of the independent $Y$ for a unit change in the value of the independent variables $X$. In other words, it represents the rate of change.

## Regression Equation of $\mathbf{X}$ on $\mathbf{Y}$

The regression equation is expressed as;
$Y=a+b x$
We shall get the normal equation for estimating " $a$ " and " $b$ " as
$\sum \mathrm{Y}=\mathrm{na}+\mathrm{b} \sum \mathrm{X}$
$\sum X Y=a \sum X+b \sum X^{2}$

Where,
$\mathrm{Y}=$ the value of dependent variable
$\mathrm{a}=\mathrm{Y}$-intercept
$\mathrm{b}=$ slope of the trend line/coefficient of regression
$\mathrm{X}=$ value of independent variable

## T-test for Significance of Correlation coefficient

It was developed for the significant contribution in the theory of sampling applicable in case of small samples. When population variance is not known, the test is commonly known as student's t-test and is based on the t-distribution. As the sample size gets larger, the shape of the t-distribution loses its flatness and becomes approximately equal to the normal distribution.

For applying $t$-test in context of small samples, the $t$-value is calculated first of all and then compared with table value " t " at certain level of significance for given degree of freedom. If the calculated value of " t " exceeds the table value (say, $\mathrm{t}_{0.05}$ )

It infers that the difference is significant at $5 \%$ level but if " t " is less than the concerning table value of " t ", the difference is not treated as significant.

The test is used when two condition are fulfilled;
> The sample size is less than 30
$>$ The population standard deviation must be unknown

Let ' $r$ ' be the observe sample correlation coefficient a sample of ' $n$ ' pairs of observations from bi-variate normal population. In order to test whether the sample correlation coefficient is significant of any correlation between the variables in the population, t -test
for significance of an observed sample correlation coefficient is applied. The steps for testing of significance of an observed sample correlation coefficient are as follows:

## Null Hypothesis

$\mathrm{H}_{0}: \rho=0$ that is population correlation coefficient is zero. In other words, the variables are insignificantly correlated in the population i.e. " r " is not significant of correlation in the population.

## Alternative Hypothesis

$\mathrm{H}_{1:} \rho \neq 0$ that is population correlation coefficient is not zero. In other words, the variables are significantly correlated in the population i.e. "r" is significant of correlation in the population.

Test Statistic for significance of correlation under null hypothesis is given by
$\mathrm{t}=\frac{\mathrm{r} \sqrt{\mathrm{n}-2}}{\sqrt{1-\mathrm{r}^{2}}}$
i.e. " t " follows t -distribution with ( $\mathrm{n}-2$ ) degree of freedom (d.f.) where n being the sample size.

## CHAPTER - IV <br> DATA PRESENTATION AND ANALYSIS

### 4.1 Introduction

This chapter is the backbone of the research. In this chapter, both the primary and secondary data are presented in systematic manner. The sources of date were company, brochure, annual reports, NEPSE website, SEBO/N website and library and different companies and stockholders (questionnaire). Those collected data are presented in systematic formats and analyzed using different appropriate tools and techniques. In this chapter, in addition to that the relationship of the variables is presented in graphs and figures. The analysis of data consists of organizing, tabulating and performing statistical analysis. In this chapter, the secondary as well as primary data, collected from different sources are presented in understandable form and analyzed separately using both qualitative and quantitative measures whichever is appropriate.

Table 4.1
Listed Companies by the End of the Fiscal Year 2008/09

| S.No. | Sectors | No. of Listed <br> Companies | Company Percent |
| :--- | :--- | :--- | :--- |
| 1 | Commercial Bank | 21 | $13 \%$ |
| 2 | Development Bank | 29 | $18 \%$ |
| 3 | Finance Company | 61 | $38.5 \%$ |
| 4 | Insurance Company | 17 | $11 \%$ |
| 5 | Hotel | 4 | $2.5 \%$ |
| 6 | Mfg. and Processing Company | 18 | $11.5 \%$ |
| 7 | Trading Company | 4 | $2.5 \%$ |
| 8 | Hydro Power | 3 | $2 \%$ |
| 9 | Others | $\mathbf{1 5 9}$ | $1 \%$ |
|  | Total | $\mathbf{1 0 0}$ |  |

Source: NEPSE Annual Report 2008/09

Figure 4.1
No. of listed companies in NEPSE:


## Source: Table 4.1

## Classification of Listed Companies

Out of 159 listed companies, NEPSE classified 21 commercial banks, 29 development banks, 61 finance companies, 17 insurance companies, 4 hotels, 18 manufacturing and processing companies, 4 trading companies, 3 hydro power companies and 2 other companies are listed in the NEPSE, only 6 companies are taken for the study.

Table 4.2
Listed Companies under Study

| S. No. | Name of the Companies under Study | Sector |
| :--- | :--- | :--- |
| 1 | NABIL Bank Ltd. | Commercial Bank |
| 2 | Bank of Kathmandu | Commercial Bank |
| 3 | National Finance | Finance Company |
| 4 | Lalitpur Finance | Finance Company |
| 5 | Siddhartha Development Bank | Development Bank |
| 6 | Ace Development Bank | Development Bank |

### 4.1.1 Analysis of Individual Company

From among the listed companies, the researcher has chosen 6 private companies. The summary of the financial data of the sample listed companies of the study are presented with five years data (from fiscal year 2004/05 to 2008/09) including Market Price of Share (MVPS), Earning Per Share (EPS), Dividend Per Share (DPS) and Book Value Per Share (BVPS) in the table 4.3.

## Table 4.3

## Analysis of Individual Company

| Companies | Fiscal Year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2004/05 | 2005/06 | 2006/07 | 2007/08 | 2008/09 |
| NABIL Bank (NABIL) |  |  |  |  |  |
| DPS | 70 | 85 | 140 | 100 | 85 |
| EPS | 105.49 | 129.21 | 137.08 | 108.31 | 106.76 |
| MVPS | 1505 | 2240 | 5050 | 5275 | 4899 |
| BVPS | 337 | 381 | 418 | 354 | 324 |
| Bank of Kathmandu (BOK) |  |  |  |  |  |
| DPS | 15 | 48 | 20 | 42.11 | 47.37 |
| EPS | 30.10 | 43.67 | 43.50 | 59.94 | 54.68 |
| MVPS | 430 | 850 | 1375 | 2350 | 1825 |
| BVPS | 213.6 | 230.67 | 164.68 | 222.51 | 206.25 |


| National Finance (NFC) |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| DPS | 10 | 10 | 50 | 16 | 13.68 |
| EPS | 69.12 | 17.37 | 25.36 | 14.62 | 19.44 |
| MVPS | 295 | 263 | 460 | 1050 | 1050 |
| BVPS | 271.94 | 184.65 | 199.89 | 136.03 | 131.75 |

## Lalitpur Finance (LFC)

| DPS | 50 | 0 | 50 | 50 | 0 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| EPS | 50.36 | 37.53 | 92.24 | 61.49 | 57.85 |
| MVPS | 250 | 245 | 330 | 860 | 810 |
| BVPS | 227 | 190.80 | 238.93 | 218.15 | 201.03 |

## Siddhartha Development Bank (SDBL)

| DPS | 0 | 10 | 15 | 10 | 5 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| EPS | 17.04 | 6.25 | 25.50 | 15.79 | 5.46 |
| MVPS | 100 | 10 | 310 | 1525 | 253 |
| BVPS | 134.37 | 105.22 | 155.35 | 133.2 | 102.69 |


| Ace Development Bank (ACEDBL) |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| DPS | 0 | 42.11 | 5.26 | 10.53 | 5.5 |
| EPS | 18 | 27.94 | 6.71 | 12.96 | 6.92 |
| MVPS | 251 | 320 | 459 | 856 | 588 |
| BVPS | 179 | 201 | 112 | 122 | 108 |

(Source: AGM reports of the listed companies, NEPSE \& SEBON)

The table 4.3 shows that, among the 6 sample companies, NABIL paid highest dividend in each year compared to the other sample companies. The DPS of NABIL ranged from Rs. 70 in the fiscal year 2004/05 to Rs. 140 in the fiscal year 2006/07. However the DPS of BOK ranged from Rs. 15 in the fiscal year 2004/05 to Rs. 47.37 in the fiscal year 2008/09. Similarly, DPS on NFC ranged from Rs. 10 in the fiscal year 2004/05 to Rs. 50 in the fiscal year 2006/07. DPS of LFC ranged from 0 in the fiscal year 2005/06 to Rs. 50 in the fiscal year 2007/08. Likewise, SDBL has DPS ranged from 0 to Rs. 15 in the fiscal years 2004/05 and 2006/07 respectively. ACEDBL has DPS ranged from 0 in the fiscal year 2004/05 to Rs. 42.11 in the fiscal year 2005/06.

In EPS also NABIL has generating highest EPS every year in comparison to the other selected sample companies. NABIL has EPS ranged from Rs. 105.49 in the fiscal year 2004/05 to Rs. 137.08 in the fiscal year 2006/07. Similarly, BOK has EPS ranged from Rs. 30.10 to Rs. 59.94 in the fiscal year 2004/05 and 2007/08 respectively. In the same way, NFC has EPS ranged from Rs. 14.62 to Rs. 69.12 in the fiscal years 2007/08 and 2004/05 respectively. EPS of LFC ranged from Rs. 37.53 in the fiscal year 2005/06 to Rs.92.24 in the fiscal year 2006/07. Likewise, SDBL has EPS ranged from Rs. 5.46 to Rs. 25.50 in the fiscal years 2008/09 and 2006/07 respectively and EPS of ACEDBL ranged from Rs. 6.71 in the fiscal year 2006/07 to Rs.27.94 in the fiscal year 2005/06.

Similarly, MVPS also of NABIL remained highest in each fiscal year compared to that of other sample companies. The MVPS of NABIL was Rs. 105 in the fiscal year 2004/05 which reached to Rs. 5275 in the fiscal year 2007/08. BOK has lowest MVPS of Rs. 430 in the fiscal year 2004/05 and highest MVPS of Rs. 2350 in the fiscal year 2007/08. Likewise, NFC has MVPS ranged from Rs. 263 in the fiscal year 2005/06 to Rs. 1050 in the fiscal year 2008/09. MVPS of LFC ranged from Rs. 245 to Rs. 860 in the fiscal years 2005/06 and 2007/08 respectively. Similarly, SDBL has less MVPS of Rs. 100 in the fiscal year 2004/05 and highest MVPS of Rs. 125 in the fiscal year 2007/08. ACEDBL has low MVPS of Rs. 251 in the fiscal year 2004/05 and has highest MVPS of Rs. 856 in the fiscal year 2007/08.

NABIL has BVPS ranged from Rs. 324 in the fiscal year 2008/09 to Rs. 418 in the fiscal year 2006/07. BOK has lowest BVPS of Rs. 164.68 and highest BVPS of Rs. 230 in the fiscal years 2006/07 and 2005/06 respectively. Similarly, NFC has highest BVPS of Rs.271.94 and lowest BVPS of Rs.131.75 in the fiscal years 2004/05 and 2008/09 respectively. LFC has BVPS ranged from Rs. 190.80 in the fiscal year 2005/06 to Rs.238.93 in the fiscal year 2006/07. Likewise, BVPS of SDBL ranged from Rs.102.69 in the fiscal year 2008/09 to Rs. 155.35 in the fiscal year 2006/07 whereas, ACEDBL has highest BVPS of Rs. 201 in the fiscal year 2005/06 and lowest BVPS of Rs. 108 in the fiscal year 2008/09.

### 4.2 Relationship between EPS, DPS \& BVPS to MVPS

To analyze the relationship of EPS, DPS and BVPS to MVPS, it is assumed that the market price of share is influenced with the changes in EPS, DPS and BVPS. So, MVPS is the dependent variable; whereas EPS, DPS \& BVPS are independent variables. Here in this section, relationship of EPS, DPS \& BVPS with MVPS is determined separately to each of the sampled listed companies. The correlation analysis is performed to determine the relationship of EPS, DPS \& BVPS with MVPS. To determine the effect of EPS, DPS \& BVPS on MVPS, simple correlation as well as their coefficient of determination are calculated. For the test of hypothesis of simple and multiple coefficient; calculated tvalue are compared with the tabulated t -value at $5 \%$ level of significance, to determine the magnitude of the effects of the independent variables to the dependent variable, simple and multiple regression analysis are made and the magnitude is identified after determining the regression equations. In addition to that, multiple correlation coefficient, multiple coefficient of determination (MVPS being dependent variable and EPS, DPS \& BVPS being independent variables), Standard errors of estimate are analyzed during the correlation and regression analysis.

### 4.2.1 Correlation \& Regression Analysis of NABIL Bank (NABIL)

Table 4.4 summarizes the financial performances of NABIL over last five years and table 4.5 shows the relationship (correlation) of EPS, DPS \& BVPS to MVPS along with the significance of such relationship.

## Table 4.4

Summary of the Financial Performance of NABIL Bank (NABIL)

| Year | MVPS(a) | EPS(b) | DPS(c) | BVPS(d) |
| :--- | :--- | :--- | :--- | :--- |
| $2004 / 05$ | 1505 | 105.49 | 70 | 337 |
| $2005 / 06$ | 2240 | 129.21 | 85 | 381 |
| $2006 / 07$ | 5050 | 137.08 | 140 | 418 |
| $2007 / 08$ | 5275 | 108.31 | 100 | 354 |
| $2008 / 09$ | 4899 | 106.76 | 85 | 324 |
| Total | $\mathbf{1 8 9 6 9}$ | $\mathbf{5 8 6 . 8 5}$ | $\mathbf{4 8 0}$ | $\mathbf{1 8 1 4}$ |
| Mean | $\mathbf{3 7 9 3 . 8 0}$ | $\mathbf{1 1 7 . 3 7}$ | $\mathbf{9 6}$ | $\mathbf{3 6 2 . 8 0}$ |
| SD | $\mathbf{1 5 9 0 . 3 7}$ | $\mathbf{1 3 . 1 5}$ | $\mathbf{2 3 . 9 6}$ | $\mathbf{3 3 . 5 5}$ |
| CV | $\mathbf{4 1 . 9 2}$ | $\mathbf{1 1 . 2 0}$ | $\mathbf{2 4 . 9 6}$ | $\mathbf{9 . 2 5}$ |
| Sourc: |  |  |  |  |

Source: Table 4.3 and Appendix 1

Table 4.5

## Relationship of EPS, DPS and BVPS with MVPS

| Variables | $\mathbf{r}$ | $\boldsymbol{r}^{\mathbf{2}}$ | $\mathbf{t}$-cal | t-table | Remarks |
| :---: | :--- | :--- | :--- | :--- | :--- |
| $\boldsymbol{r}_{\boldsymbol{a} \boldsymbol{b}}$ | 0.08 | 0.006 | 0.139 | 3.182 | Not Significant |
| $\boldsymbol{r}_{\boldsymbol{a} \boldsymbol{c}}$ | 0.66 | 0.43 | 1.522 | 3.182 | Not Significant |
| $\boldsymbol{r}_{\boldsymbol{a d}}$ | 0.16 | 0.03 | 0.230 | 3.182 | Not Significant |

## Source: Appendix 1

Where,

T-table value is at $5 \%$ level of significance ( $n-2=5-2=3$ degree of freedom)
$r_{a b}=$ Correlation coefficient of "a" \& "b"
$r^{2}=$ Coefficient of (simple) determination
$\mathrm{SD}=$ standard deviation
$\mathrm{CV}=$ Coefficient of Variation

Mean $=$ Arithmetic mean

For NABIL Bank BVPS and EPS are very less volatile with $9.25 \%$ and $11.23 \%$ of coefficient of variation (CV) respectively. In comparison to this DPS is little bit more volatile with coefficient of variation (CV) of $24.96 \%$ where as MVPS is highly volatile with CV of $41.92 \%$ in the last five years period.

Similarly, while comparing NABIL with industrial benchmark (i.e average performance of selected 15 companies- 5 commercial banks, 5 finance companies, 5 development banks) it is revealed that for MVPS the mean MVPS of NABIL is greater (3793.80) than industrial mean of MVPS (941.48). But standard deviation (SD) of MVPS is greater (1590.37) than industrial standard deviation (SD) of MVPS (1112.10) which shows that its total risk is greater than industrial average total risk. Its coefficient of variation is lesser (41.92) than industrial averaged CV (118.12) which means that it's per unit risk is lesser than of industrial average per unit risk of MVPS. This result shows that MVPS has satisfactory performance. For EPS mean EPS of NABIL is higher (117.37) than industrial mean of EPS (44.55) but standard deviation (13.15) and coefficient of variation (11.20) are lesser than industrial average of standard deviation and coefficient of variation (30.78), (69.08) respectively. It shows that EPS of NABIL has good performance comparison to the industrial benchmark. For DPS, NABIL mean is greater (96) than industrial average mean of DPS (28.91). But standard deviation (23.96) and coefficient of variation (24.96) are lesser than industrial average standard deviation (26.07) and coefficient of variation (90.20) of DPS, which shows that DPS of NABIL also has good performance. Finally for BVPS, NABIL mean of BVPS is greater (361.80) than the industrial average mean of BVPS (209.63) but standard deviation (33.55) is lesser than industrial average standard deviation (77.29) and coefficient of variation (9.25) is also lesser than industrial average coefficient of variation (36.87). It shows that BVPS has
also good performance. Thus, in overall NABIL has very good performance in last five years period.

From the simple correlation analysis, MVPS of NABIL is positively correlated with DPS with moderate degree of positive correlation which means that increasing in DPS increased MVPS and vice versa. On the other hand MVPS is also positively correlated with BVPS and EPS but with low degree of positive correlation. The coefficient of simple determination shows that $43 \%$ of change in the MVPS is explained by DPS where as $0.6 \%$ and $3 \%$ of change in the MVPS is explained by EPS and BVPS respectively.

The $t$-test analysis shows that the degree of correlations is not significant at $5 \%$ level of significance for all the three independent variables. It means that null hypothesis $\left(H_{0}\right)$ is accepted in all the three cases, that is MVPS is not correlated with all the three independent variables EPS, DPS and BVPS.

The linear relationship of EPS, DPS, BVPS and MVPS of NABIL is presented in the figure 4.2.

Figure 4.2
Relationship of EPS, DPS and BVPS with MVPS


Source: Table 4.4

From the simple regression analysis, the regression equations are found (MVPS) being dependent variable as:

## MVPS on EPS

MVPS $=2652.25+9.73$ EPS
The regression constant 2652.25 implies that when EPS is zero, MVPS is 2652.25. The constant for EPS 9.73 implies that when EPS increases by Rs.1, MVPS increases by Rs.9.73 and vice versa. The simple correlation coefficient is 0.08 .

## MVPS on DPS

MVPS $=-408.80+43.78$ DPS
The regression constant -408.82 implies that when DPS is zero, MVPS is -408.80 . The constant for DPS 43.78 implies that when DPS increases by Rs.1, MVPS increases by Rs.43.78 and vice versa. The simple correlation coefficient is 0.66 .

## MVPS on BVSP

MVPS $=945.82+7.85$ BVPS
The regression constant 945.82 implies that when BVPS is zero, MVPS is 945.82 . The constant for BVPS 7.85 implies that when DPS increases by Rs.1, MVPS increases by Rs.7.85 and vice versa. The simple correlation coefficient is 0.16 .

### 4.2.2 Correlation and Regression Analysis of Bank of Kathmandu (BOK)

Table 4.6 summarizes the financial performances of BOK over last five years and table 4.7 shows the relationship (correlation) of EPS, DPS \& BVPS to MVPS along with the significant of such relationship.

Table 4.6
Summary of the Financial Performance of Bank of Kathmandu (BOK)

| Year | MVPS(a) | EPS(b) | DPS(c) | BVPS(d) |
| :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 430 | 30.10 | 15 | 337 |
| $2005 / 06$ | 850 | 43.67 | 48 | 381 |
| $2006 / 07$ | 1375 | 43.50 | 20 | 418 |
| $2007 / 08$ | 2350 | 59.94 | 42.11 | 354 |
| $2008 / 09$ | 1825 | 54.68 | 47.37 | 324 |
| Total | $\mathbf{6 8 3 0}$ | $\mathbf{2 3 1 . 8 9}$ | $\mathbf{1 7 2 . 4 8}$ | $\mathbf{1 8 1 4}$ |
| Mean | $\mathbf{1 3 6 6}$ | $\mathbf{4 6 . 3 8}$ | $\mathbf{3 4 . 5 0}$ | $\mathbf{2 6 2 . 8 0}$ |
| SD | $\mathbf{6 8 1 . 3 8}$ | $\mathbf{1 0 . 3 3}$ | $\mathbf{1 4 . 1 1}$ | $\mathbf{3 3 . 5 5}$ |
| CV | $\mathbf{4 9 . 8 8}$ | $\mathbf{2 2 . 2 7}$ | $\mathbf{4 0 . 9 2}$ | $\mathbf{9 . 2 5}$ |

Source: Table 4.3 and Appendix 2

## Table 4.7

Relationship of BVPS, EPS and DPS with MVPS

| Variables | $\mathbf{r}$ | $\mathbf{r}^{\mathbf{2}}$ | t-cal | t-table | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $r_{a b}$ | 0.96 | 0.92 | 5.939 | 3.182 | Significant |
| $r_{a c}$ | 0.51 | 0.26 | 1.027 | 3.182 | Not Significant |
| $r_{a d}$ | -0.10 | 0.01 | 0.174 | 3.182 | Not Significant |

## Source: Appendix 2

For Bank of Kathmandu, from the above table 4.6 it is revealed that MVPS is highly volatile with $49.88 \%$ of CV. In comparison to this EPS and DPS are quite less volatile with CV of $22.27 \%$ and $40.92 \%$ respectively. BVPS has least volatility with $9.25 \%$ of CV in last year period.

Similarly while comparing BOK with industrial benchmark, mean MVPS of BOK is greater than industrial average mean of MVPS. Likewise SD and CV of MVPS is lesser than industrial average SD and CV of MVPS which shoes that it is less volatile than industrial average of MVPS. For EPS mean value of EPS of BOK is greater than industrial average mean value of EPS. But SD and CV are lesser than industrial average SD and CV of EPS. It shows that EPS has good performance in comparison to the industrial benchmark. For DPS mean value of DPS or BOK is greater than industrial average. SD of DPS is lesser than industrial average SD of DPS. CV of DPS is also lesser than industrial average shows that DPS of BOK has also quite good performance. Finally for BVPS, mean value of BVPS of BOK is greater than industrial average mean of

BVPS. Both SD and CV are lesser than industrial average which shows that BVPS also has good result in comparison to the industrial benchmark. Therefore, from the above analysis it is revealed that BOK has good performance in last five years period.

From the simple correlation analysis, MVPS is positively correlated with EPS and DPS. It means that increase in EPS and DPS increases in MVPS and vice versa. But MVPS is negatively correlated with BVPS with low degree of negative correlation. The coefficient of determination shows that $92 \%$ of change in MVPS is explained by EPS, $26 \%$ of change in MVPS is explained by DPS and this ratio to BVPS is only $1 \%$.

From the t-test analysis, the degree of correlation of MVPS with independent variables EPS is significant at $5 \%$ level of significance, which means that MVPS is correlated with EPS. But degree of correlation of MVPS with other independent variables DPS and BVPS is not significant at $5 \%$ level of significance, which means that MVPS is not correlated with DPS and BVPS. The linear relationship of EPS, DPS and BVPS to MVPS of NF are presented in figure 4.3.

Figure 4.3
Relationship of EPS, DPS and BVPS to MVPS of BOK


[^0]From the simple regression analysis, the regression equations are found (MVPS being dependent variable) as:

## MVPS on EPS

MVPS $=-1569.39+63.29$ EPS
The regression constant -1569.39 implies that when EPS is zero, MVPS is -1569.39 . The constant for EPS 63.29 implies that when EPS increases by Rs.1, MVPS increases by Rs. 63.29 and vice versa. The simple correlation coefficient is 0.96 .

MVPS on DPS
MVPS $=515.92+24.64$ DPS
The regression constant 215.92 implies that when DPS is zero, MVPS is 515.92. The constant for DPS 24.64 implies that when DPS increases by Rs.1, MVPS increases by Rs.24.64 and vice versa. The simple correlation coefficient is 0.51 .

## MVPS on BVPS

MVPS $=2087.97-1.99$ BVPS
The regression constant 2087.97 implies that when BVPS is zero, MVPS is 2087.97 the constant for BVPS -1.99 implies that when BVPS increases by Rs.1, MVPS decreases by Rs.1.99 and vice versa. The simple correlation coefficient is -0.10 .

### 4.2.3 Correlation and Regression Analysis of National Finance (NFC)

Table 4.8 summarizes the financial performances of NFC over last five years and table 4.9 shows the relationship (correlation) of EPS, DPS \& BVPS to MVPS along with the significance of such relationship.

Table 4.8
Summary of the Financial Performance of National Finance (NFC)

| Year | MVPS(a) | EPS(b) | DPS(c) | BVPS(d) |
| :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 295 | 69.12 | 10 | 271.94 |
| $2005 / 06$ | 263 | 17.37 | 10 | 184.65 |
| $2006 / 07$ | 460 | 25.36 | 50 | 199.89 |
| $2007 / 08$ | 1050 | 14.62 | 16 | 136.03 |
| $2008 / 09$ | 1050 | 19.44 | 13.68 | 131.75 |
| Total | $\mathbf{3 1 1 8}$ | $\mathbf{1 4 5 . 9 1}$ | $\mathbf{9 9 . 6 8}$ | $\mathbf{9 2 4 . 2 6}$ |
| Mean | $\mathbf{6 2 3 . 6 0}$ | $\mathbf{2 9 . 1 8}$ | $\mathbf{1 9 . 9 4}$ | $\mathbf{1 8 4 . 8 5}$ |
| SD | $\mathbf{3 5 4 . 5 2}$ | $\mathbf{2 0 . 2 8}$ | $\mathbf{1 5 . 2 0}$ | $\mathbf{5 1 . 0 2}$ |
| CV | $\mathbf{5 6 . 8 5}$ | $\mathbf{6 9 . 4 9}$ | $\mathbf{7 6 . 2 7}$ | $\mathbf{2 7 . 6 0}$ |

Source: Table 4.3 and Appendix 3
Table 4.9
Relationship of BVPS, EPS and DPS with MVPS

| Variables | $\mathbf{r}$ | $\boldsymbol{r}^{\mathbf{2}}$ | t-cal | t-table | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $r_{a b}$ | -0.52 | 0.27 | 1.054 | 3.182 | Not Significant |
| $r_{a c}$ | -0.09 | 0.008 | 0.156 | 3.182 | Not Significant |
| $r_{a d}$ | -0.82 | 0.67 | 2.481 | 3.182 | Not Significant |

Source: Appendix 3

For National Finance (NFC), from the above table it is revealed that, DPS has highest volatility with $76.27 \%$ of CV. MVPS and EPS are quite less volatile in comparisons to DPS with $56.85 \%$ and $69.49 \%$ of CV respectively. BVPS has least volatility with $27.60 \%$ of CV in last five years of period.

Similarly, while comparing NFC with industrial benchmark, mean value of MVPS of NFC is lesser than industrial average mean value of MVPS. But both SD and CV of MVPS of LFC is lesser than industrial average SD and CV. For EPS mean value of EPS of NFC is lesser than industrial average mean of EPS where as SD of EPS is lesser than industrial average of SD but CV of EPS is almost equal to the industrial average CV. For

DPS mean value of DPS is lesser than industrial average value but both SD and CV of DPS are lesser than industrial average SD and CV and finally for BVPS, mean BVPS of NFC is lesser than industrial average. SD and CV of BVPS is lesser than industrial average value of SD and CV . Thus from the above analysis, NFC has average performance.

From the simple correlation analysis MVPS is negatively correlated with all the three independent variables EPS, DPS and BVPS, which shows that increase in EPS, DPS and BVPS decreased MVPS and vice versa. The coefficient of determination shows that $67 \%$ of change in MVPS is explained by BVPS, $27 \%$ of change in MVPS is explained by EPS and only $0.8 \%$ of change in MVPS is explained by DPS.

From t-test analysis, the degree of correlation of MVPS to independent variables are not significant at $5 \%$ level of significance which means that MVPS is not correlated with EPS, DPS and BVPS.The linear relationship of EPS, DPS and BVPS to MVPS of NFC are presented in figure 4.4.

Figure 4.4
Relationship of MVPS with EPS, DPS \& BVPS of NFC


Source: Table 4.8

From the simple regression analysis, the regression equations are found (MVPS being dependent variable) as:

## MVPS on EPS

MVPS $=887.68-9.05$ EPS
The regression constant 887.68 implies that when EPS is zero, MVPS is 887.68 . The constant for EPS -9.05 implies that when EPS increases by Rs. 1, MVPS decreases by Rs. 9.05 and vice versa. The simple correlation coefficient is -0.52 .

## MVPS on DPS

MVPS =665.47-2.10 DPS
The regression constant 665.47 implies that when DPS is zero, MVPS is 665.47. The constant for DPS -2.10 implies that when DPS increases by Rs.1, MVPS decreases by Rs.2.10 and vice versa. The simple correlation coefficient is -0.09 .

MVPS on BVPS
MVPS $=1680.94-5.72$ BVPS
The regression constant 1680.94 implies that when BVPS is zero, MVPS is 1680.94. The constant for BVPS-5.72 implies that when BVPS increases by Rs.1, MVPS decreases by Rs.5.72 and vice versa. The simple correlation coefficient is -0.82 .

### 4.2.4 Correlation and Regression Analysis of Lalitpur Finance (LFC)

Table 4.10 summarizes the financial performances of LFC over last five years and table 4.11 shows the relationship (correlation) of EPS, DPS \& BVPS to MVPS along with the significance of such relationship.

Table 4.10
Summary of the Financial Performance of Lalitpur Finance (LFC)

| Year | MVPS(a) | EPS(b) | DPS(c) | BVPS(d) |
| :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 280 | 50.36 | 50 | 227 |
| $2005 / 06$ | 245 | 37.53 | 0 | 190.80 |
| $2006 / 07$ | 330 | 92.24 | 50 | 238.93 |
| $2007 / 08$ | 860 | 61.49 | 50 | 218.15 |
| $2008 / 09$ | 810 | 57.85 | 0 | 201.03 |
| Total | $\mathbf{2 4 9 5}$ | $\mathbf{2 9 9 . 4 7}$ | $\mathbf{1 5 0}$ | $\mathbf{1 0 7 5 . 9 1}$ |
| Mean | $\mathbf{4 9 9}$ | $\mathbf{5 9 . 8 9}$ | $\mathbf{3 0}$ | $\mathbf{2 1 5 . 1 8}$ |
| SD | $\mathbf{2 7 6 . 4 5}$ | $\mathbf{1 8 . 1 3}$ | $\mathbf{2 4 . 4 9}$ | $\mathbf{1 7 . 3 6}$ |
| $\mathbf{C V}$ | $\mathbf{5 5 . 4 0}$ | $\mathbf{3 0 . 2 7}$ | $\mathbf{8 1 . 6 5}$ | $\mathbf{8 . 0 7}$ |

Source: Table 4.3 and Appendix 4
Table 4.11
Relationship of BVPS, EPS and DPS with MVPS

| Variables | $\mathbf{r}$ | $\boldsymbol{r}^{\mathbf{2}}$ | t-cal | t-table | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $r_{a b}$ | 0.10 | 0.01 | 0.174 | 3.182 | Not Significant |
| $r_{a c}$ | -0.08 | 0.007 | 0.146 | 3.182 | Not Significant |
| $r_{a d}$ | -0.17 | 0.03 | 0.299 | 3.182 | Not Significant |

Source: Appendix 4

For Lalitpur Finance (LFC), from the above table it is revealed that DPS is highly volatile with $81.65 \%$ of CV. EPS and MVPS are quite less volatile with $30.27 \%$ and $54.40 \%$ of CV respectively. BVPS has least volatility with $8.07 \%$ of CV in last five years period.

On the other side, comparing LFC with industrial benchmark, mean MVPS of LFC is lesser than industrial average mean MVPS. But SD and CV of MVPS are lesser than industrial average SD and CV of MVPS. For EPS mean values of EPS of LFC is greater than industrial average mean value of EPS. But both SD and CV of EPS are lesser than industrial average SD and CV. For DPS, mean DPS of LFC is greater than industrial average DPS but SD and CV are lesser than industrial average SD and CV. Finally for BVPS, mean value of BVPS of LFC is greater than industrial average mean of BVPS. But both SD and CV of BVPS is lesser than industrial average value of SD and CV. Thus from this above analysis in overall, LFC has satisfactory performance.

From simple correlation analysis, it is revealed that MVPS is positively correlated with EPS with low degree of positive correlation but negatively correlated with DPS and BVPS with low degree of negative correlation. From the coefficient of determination, it is revealed that $3 \%$ of change in MVPS is explained by BVPS, $1 \%$ of change in MVPS is explained by EPS and only $0.7 \%$ of change in MVPS os explained by DPS.

From t-test analysis, the degree of correlation of MVPS with the independent variables EPS, DPS and BVPS are not significant at 5\% level of significance. It means that MVPS of LFC is not correlated with independent variables EPS, DPS and BVPS.

The linear relationship of EPS, DPS and BVPS to MVPS of LFC are presented in figure 4.5.

Figure 4.5
Relationship of MVPS with EPS, DPS \& BVPS of LFC


Source: Table 4.10

From the simple regression analysis, the regression equations are found (MVPS being dependent variable) as:

## MVPS on EPS

MVPS $=406.77+1.54$ EPS
The regression constant 406.77 implies that when EPS is zero, MVPS is 406.77. The constant for EPS 1.54 implies that when EPS increases by Rs.1, MVPS increases by Rs. 1.54 and vice versa. The simple correlation coefficient is 0.10 .

## MVPS on DPS

MVPS =527.50-0.95 DPS
The regression constant 527.50 implies that when DPS is zero, MVPS is 527.50 . The constant for DPS - 0.95 implies that when DPS increases by Rs.1, MVPS decreases by Rs. 0.95 and vice versa. The simple correlation coefficient is -0.08 .

## MVPS on BVPS

MVPS =1082.14-2.71 BVPS
The regression constant 1082.14 implies that when BVPS is zero, MVPS os 1082.14. The constant for BVPS -2.71 implies that when a BVPS increases by Rs.1, MVPS is decreases by Rs. 2.71 and vice versa. The simple correlation coefficient is -0.17 .

### 4.2.5 Correlation and Regression Analysis of Siddhartha Development (SDBL)

Table 4.12 summarizes the financial performance of SDBL over last five years and table 4.13 shows the relationship (correlation) of EPS, DPS \& BVPS to MVPS along with the significance of such relationship.

Table 4.12
Summary of the Financial Performance of Siddhartha Dev.Bank (SDBL)

| Year | MVPS(a) | EPS(b) | DPS(c) | BVPS(d) |
| :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 100 | 17.04 | 0 | 134.37 |
| $2005 / 06$ | 100 | 6.25 | 10 | 105.22 |
| $2006 / 07$ | 310 | 2.50 | 15 | 155.35 |
| $2007 / 08$ | 1525 | 15.79 | 10 | 133.20 |
| $2008 / 09$ | 253 | 5.46 | 5 | 102.69 |
| Total | $\mathbf{2 2 8 8}$ | $\mathbf{7 0 . 0 4}$ | $\mathbf{4 0}$ | $\mathbf{6 3 0 . 8 3}$ |
| Mean | $\mathbf{4 5 7 . 6 0}$ | $\mathbf{1 4 . 0 1}$ | $\mathbf{8}$ | $\mathbf{1 2 6 . 1 7}$ |
| SD | $\mathbf{1 0 . 1 4}$ | $\mathbf{7 . 4 5}$ | $\mathbf{5 . 1 0}$ | $\mathbf{1 9 . 7 0}$ |
| CV | $\mathbf{1 1 8 . 0 4}$ | $\mathbf{5 3 . 2 0}$ | $\mathbf{6 3 . 7 4}$ | $\mathbf{1 5 . 6 9}$ |

Source: Table 4.3 and Appendix 5
Table 4.13
Relationship of BVPS, EPS and DPS with MVPS

| Variables | $\mathbf{r}$ | $\boldsymbol{r}^{\mathbf{2}}$ | t-cal | t-table | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $r_{a b}$ | 0.18 | 0.03 | 0.317 | 3.182 | Not Significant |
| $r_{a c}$ | 0.28 | 0.08 | 0.505 | 3.182 | Not Significant |
| $r_{a d}$ | 0.23 | 0.05 | 0.409 | 3.182 | Not Significant |

Source: Appendix 5

For Siddhartha Development Bank (SDBL), the above table show that, MVPS has highest volatility with $118.04 \%$ of CV. BVPS has least volatility with $15.69 \%$ of CV. EPS and DPS has moderate volatility with $53.20 \%$ and $63.74 \%$ of CV respectively.

Comparing SDV with industrial benchmark, it is revealed that, mean MVPS of SDBL is less than industrial average mean value of MVPS. SD of MVPS is less than industrial SD but CV is almost equal to the industrial average CV of MVPS. For EPS, mean EPS of SDBL is lesser than industrial average mean of EPS but SD and CV are lesser than industrial average SD and CV. For DPS mean value of DPS of SDVL is lesser than industrial average mean of DPS, but both SD and CV of DPS are lesser than industrial average SD and CV of DPS. Finally for BVPS, mean value of BVPS of SDBL is lesser than industrial average mean value of BVPS. But SD and CV of BVPS is lesser than industrial average value of SD and CV of BVPS. Thus from the above analysis, in overall performance, SDBL is not satisfactory.

From simple correlation analysis it is revealed that MVPS is positively correlated with EPS, DPS and BVPS with low degree of positive correlation. The coefficient of determination shows that $8 \%$ of change in MVPS is explained by DPS, $5 \%$ of change in MVPS is explained by BVPS where as only $3 \%$ of change in MVPS is explained by EPS.

From t-test analysis, the degree of correlation of MVPS with other three independent variables EPS, DPS and BVPS are not significant at 5\% level of significance. It means that MVPS is not correlated with EPS, DPS and BVPS.

The linear relationship of EPS, DPS and BVPS to MVPS of SDBL are presented in figure 4.6.

Figure 4.6
Relationship of MVPS with EPS, DPS \& SDBL


## Source: Table 4.12

From the simple regression analysis, the regression equations are found (MVPS being dependent variable) as:

## MVPS on EPS

MVPS $=237.79+13.12$ EPS
The regression constant 237.79 implies that when EPS is zero, MVPS is 237.79. the constant for EPS 13.12 implies that when EPS increases by Rs.1, MVPS increases by Rs. 13.12 and vice versa. The simple correlation coefficient is 0.18 .

## MVPS on DPS

MVPS $=220+29.70$ DPS
The regression constant 220 implies that when DPS is zero, MVPS is 220. The constant for DPS 29.70 implies that when DPS increases by Rs.1, MVPS increases by Rs.29.70 and vice versa. The simple correlation coefficient is 0.28 .

## MVPS on BVPS

MVPS =-351.15+6.41 BVPS
The regression constant -351.15 implies that when BVPS is zero, MVPS is -351.15 . The constant for BVPS 6.41 implies that when BVPS increases by Rs.1, MVPS increases by Rs. 6.41 and vice versa. The simple correlation coefficient is -0.23 .

### 4.2.6 Correlation and Regression Analysis of Ace Development Bank (ACEDBL)

Table 4.14 summarizes the financial performances of ACEDBL over last five years and table 4.15 shows the relationship (correlation) of EPS, DPS \& BVPS to MVPS along with the significant of such relationship.

Table 4.14
Summary of the Financial Performance of Ace Dev.Bank(ACEDBL)

| Year | MVPS(a) | EPS(b) | DPS(c) | BVPS(d) |
| :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 251 | 18 | 0 | 179 |
| $2005 / 06$ | 320 | 27.94 | 42.11 | 201 |
| $2006 / 07$ | 459 | 6.71 | 5.26 | 112 |
| $2007 / 08$ | 856 | 12.96 | 10.53 | 122 |
| $2008 / 09$ | 588 | 6.92 | 5.50 | 108 |
| Total | 2474 | 72.53 | 63.40 | 722 |
| Mean | $\mathbf{4 9 4 . 8}$ | $\mathbf{1 4 . 5 1}$ | $\mathbf{1 2 . 6 8}$ | $\mathbf{1 4 4}$ |
| SD | $\mathbf{2 1 4 . 6 7}$ | $\mathbf{7 . 9 2}$ | $\mathbf{1 5 . 0 9}$ | $\mathbf{3 8 . 1 5}$ |
| CV | $\mathbf{4 3 . 3 9}$ | $\mathbf{5 4 . 5 8}$ | $\mathbf{1 1 8 . 9 8}$ | $\mathbf{2 6 . 4 2}$ |

Source: Table 4.3 and Appendix 6

Table 4.15
Relationship of BVPS, EPS and DPS with MVPS

| Variables | $\mathbf{r}$ | $\boldsymbol{r}^{\mathbf{2}}$ | t-cal | t-table | Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $r_{a b}$ | -0.49 | 0.24 | 0.973 | 3.182 | Not Significant |
| $r_{a c}$ | -0.20 | 0.04 | 0.353 | 3.182 | Not Significant |
| $r_{a d}$ | -0.70 | 0.49 | 1.698 | 3.182 | Not Significant |

Source: Appendix 6

For Ace Development Bank (ACEDBL) the above table shows that, DPS has highest volatility with $118.98 \%$ of CV. In comparison to DPS, MVPS and EPS are lesser volatile with $43.39 \%$ and $54.58 \%$ of CV respectively. BVPS has east volatility with $26.42 \%$ of CV.

From the comparison of ACEDBL to industrial benchmark it is revealed that, mean value of MVPS of ACEDBL is lesser than industrial average mean of MVPS but SD and CV are lesser than industrial average SD and CV. For EPS mean value of EPS of ACEDBL is lesser than industrial average mean of EPS but SD and CV of EPS lesser than industrial average SD and CV of EPS. For DPS mean value of ACEDBL is lesser than industrial average mean value of DPS. On the other hand., SD of DPS is lesser than industrial average SD but CV is greater than industrial average CV of DPS. Finally, for BVPS, the mean value of BVPS of ACEDBL is also lesser than industrial average value, where as
both SD and CV of BVPS is lesser than industrial average SD and CV of BVPS. From the above analysis it can be concluded that the Ace Development Bank has average performance.

From the simple correlation analysis, it is revealed that MVPS is negatively correlated with all the three independent variables EPS, DPS and BVPS with low degree, low degree and high degree of negative correlation respectively. The coefficient of determination shows that $49 \%$ of change in MVPS is explained by BVPS. Likewise $24 \%$ of change in MVPS is explained by EPS and this ratio to DPS is only $4 \%$.

From t-test analysis, it is derived that the degree of correlation of MVPS with EPS, DPS and BVPS are not significant at $5 \%$ level of significance. It means that MVPS is not correlated with EPS, DPS and BVPS.

The linear relationship of EPS, DPS and BVPS to MVPS of ACEDBL are presented in figure 4.7.

Figure 4.7
Relationship of MVPS with EPS, DPS \& BVPS of ACEDBL


Source: Table 4.14

From the simple regression analysis, the regression equations are found (MVPS being dependent variable) as:

## MVPS on EPS

MVPS =688.51-13.36 EPS
The regression constant 688.51 implies that when EPS is zero, MVPS is 688.51. The constant for EPS -13.36 implies that when EPS increases by Rs.1, MVPS decreases by Rs. 13.36 and vice versa. The simple correlation coefficient is -0.49 .

## MVPS on DPS

MVPS =530.81-2.84 DPS
The regression constant 530.81 implies that when DPS is zero, MVPS is 530.81. The constant for DPS -2.84 implies that when DPS increases by Rs.1, MVPS decreases by Rs.2.84 and vice versa. The simple correlation coefficient is -0.20 .

## MVPS on BVPS

MVPS $=1063.74-3.94$ BVPS
The regression constant 1063.74 implies that when BVPS is zero, MVPS is 1063.74. The constant for BVPS -3.94 implies that when BVPS increases by Rs.1, MVPS decreases by Rs.3.94 and vice versa. The simple correlation coefficient is -7.70.

### 4.3 Price Situations of the Stocks of Listed Companies

Under this topic, we examine the pricing status of common stock i.e. whether common stocks are overpriced or underpriced or equilibrium priced. The pricing status of stocks of particular firm is evaluated by comparing the required rate of return with actual realized rate of return. This chapter presents calculations of actual rate of return that a particular security has provided during the study period and its corresponding required rate of return. Comparison between the actual realized rate of return and required rate of return gives the way by which classification of stocks- whether overpriced or under priced, is possible. The greater the beta of a security, greater will be the risk and the greater the expected return required. Likewise, the lower the beta, lower will be the risk, the more valuable it becomes and the lower the expected return required.

The beta coefficients, risk premiums and required rate or return on the stocks of listed companies have been summarized in table 4.16. Required calculations have shown in Appendix 7 and 8.

Table 4.16
Price Situation of Common Stock of Listed Companies

| $\begin{array}{l}\text { Name of } \\ \text { the } \\ \text { Company }\end{array}$ | $\boldsymbol{\beta}$ | $\boldsymbol{R f}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\boldsymbol{\%}$ |  |  |$)$

Source: Appendix 7 and 8

From Table 4.12 it has been observed that the overall average market return is $31.89 \%$. The Treasury bill ( 28 days) rate is $5.16 \%$. the risk premium for the stocks of all the companies in the market is the difference between risk free rate and market rate of return i.e. $26.73 \%$.

In commercial banking sector actual realized rate of return of NABIL is $48.21 \%$ where as required rate of return during the study period is 34.04 which is below the actual realized rate of return. Therefore, the stock of NABIL during the study period is underpriced or undervalued. Beta coefficient of NABIL is 1.23 which is more than 1 (assumed beta coefficient of the market) which suggests that the stock of NABIL is aggressive. Likewise, actual realized rate of return of BOK is $53.17 \%$ where as required rate of return is only $31.09 \%$ which is below the actual return. Thus the stock of BOK is also underpriced. Beta coefficient of BOK is 0.97 which is less than 1 so the stock of BOK is considered as defensive.

In finance sector, actual realized rate of return of NFC is $36.25 \%$ but required rate of return is $29.48 \%$ which is lesser than actual (average) return, therefore it indicates that stock of NFC is underpriced or undervalued. The beta coefficient of NGC is 0.91 , it is lesser than 1 so the stock of NFC can be considered as defensive stock. Similarly, the actual realized rate of return of LFC is $38.77 \%$ whereas required rate of return is $22.53 \%$. This is lesser than actual return thus it indicated that stock of LFC is underpriced. Beta coefficient of LFC is 0.65 which is lesser than 1 . It suggests that stock of LFC is defensive.

In development bank sector, SDBL has actual realized rate of return of $106.57 \%$ but it has required rate of return of $97.91 \%$. it is lesser than actual (average) return. Therefore, it indicated that stock of SDBL is underpriced during the study period. The beta coefficient of SDBL is $3.47 \%$ which is very high than 1 . It suggests that stock of SDBL is very aggressive. Similarly, actual realized rate of return of ACEDBL is $34.89 \%$ whereas required rate of return is only $28.68 \%$, which is lesser than actual return. Therefore, the stock of ACEDBL is underpriced. The beta coefficient of ACEDBL is 0.88 which is lesser than 1. It indicates that the stock of ACEDBL is defensive.

The main reason behind the under valuation of the stocks of the sampled companies is that the price of the stock had approached the highest point without having any concrete financial causes yielding remarkable price appreciation during the study period. However, NEPSE index did not follow the same pattern and also the rate of return on Treasury bill issued by NRB rapidly decrease forcing it to limit within a lower level. In this way, Capital gain and market risk premium is minimum. Therefore, actual returns of some sampled companies are significantly higher than required return. If our stock market really appraises financial information bidding practice and signaling effects surely discouraged which eventually reflects real actual return. In addition to it, too short study period is another reason of such irrelevant result. Nevertheless, this study has focused the existing status of stocks of Nepalese companies.

Figure 4.8
Required rate of return and Average rate of return of companies under study


Source: Table 4.16

### 4.4 Analysis of Primary Data

This thesis involves primary data also which were collected through questionnaire. During the course of collecting primary data, the different companies including companies under the study as well as security brokers were visited. Among the various factors affecting the share price, twenty factors were considered and primary information was collected from thirty one [12 companies and 19 security brokers] institutions. The answers of the respondents were marked with +2 to -2 on the basis of the degree of agreement to disagreement of the respondents. ( -2 for strongly disagree, -1 for disagree, 0 for undecided, 1 for agree and 2 for strongly agree; using five degree Like - Type Scale. The summaries of the respondent's response for each of the identified factors are presented in this section separately.

### 4.4.1 Higher the Earnings (EPS), Higher the Share Price

The responses of the respondents for the affect of EPS to the market price of share were found as shown in table 4.17.

Table 4.17
Higher the Earnings (EPS), Higher the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 4 | 12.90 |
| 2 | Agree (A) | 21 | 67.74 |
| 3 | Undecided (U) | 4 | 12.90 |
| 4 | Disagree (D) | 2 | 6.45 |
| 5 | Strongly Disagree (SD) | 0 | 0.00 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure No. 4.9
Higher the Earnings (EPS), Higher the Share Price


Source: Table 4.17
From the primary responses it is found that $80.64 \%$ of the respondents agree that the increases earnings increase the share price in the market. Only, $6.45 \%$ were disagreed and $12.90 \%$ were undecided with the statement. So, the increase in EPS significantly increases the market price of the share and vice versa at 5\% level of significance.

### 4.4.2 Higher the Cash Dividend, Higher the Share Price

The responses of the respondents for the affect of cash dividend to the market price of share were found as shown in table 4.18.

Table 4.18
Higher the Cash Dividend, Higher the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 5 | 16.13 |
| 2 | Agree (A) | 19 | 61.29 |
| 3 | Undecided (U) | 3 | 9.68 |
| 4 | Disagree (D) | 3 | 9.68 |
| 5 | Strongly Disagree (SD) | 1 | 3.23 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11

Figure No.4.10
Higher the Cash Dividend, Higher the Share Price


Source: Table 4.18
From the primary responses it is found that $77.42 \%$ of the respondents agreed that the increases cash dividend increases the share price in the market. Only, $12.91 \%$ were disagreed and $9.68 \%$ were undecided with the statement. So, the increase in cash dividend significantly increases the market price of the share and vice versa at $5 \%$ level of significance.

### 4.4.3 Lower the Growth Rate (g), Higher the Share Price

The responses of the respondents for the affect of growth rate to the market price of share were found as shown in table 4.19.

Table 4.19
Lower the Growth Rate (g), Higher the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 0 | 0.00 |
| 2 | Agree (A) | 2 | 6.45 |
| 3 | Undecided (U) | 6 | 19.35 |
| 4 | Disagree (D) | 20 | 64.52 |
| 5 | Strongly Disagree (SD) | 3 | 9.68 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure No. 4.11
Lower the Growth Rate, Higher the Share Price


Source: Table 4.19
From the primary responses, it is found that $6.45 \%$ of the respondents agree that the decreases growth rate increases the share price in the market. $74.2 \%$ were disagreed and $19.35 \%$ were undecided with the statement. So, the decrease in growth rate does not
significantly increases the market price of the share and vice versa at $5 \%$ level of significance.

### 4.4.4 Higher the Interest Rate(r), Higher the Share Price

The responses of the respondents for the affect of interest rate to the market price of share were found as shown in table 4.20.

Table 4.20
Higher the Interest Rate(r), Higher the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 2 | 6.45 |
| 2 | Agree (A) | 17 | 54.84 |
| 3 | Undecided (U) | 7 | 22.58 |
| 4 | Disagree (D) | 4 | 12.9 |
| 5 | Strongly Disagree (SD) | 1 | 3.23 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.12
Higher the Interest Rate, Higher the Share Price


Source: Table 4.20
From the primary responses it is found that $61.29 \%$ of the respondents were agree that the increase in interest rate increases the share price in the market. Only, $16.13 \%$ were disagreed and $22.58 \%$ were undecided with the statement. So, the increase in interest rate
significantly increases the market price of the share and vice versa at $5 \%$ level of significance.

### 4.4.5 Higher the Retention Ration, Better the Share Price

The responses of the respondents for the affect of retention ratio to the market price of share were found as shown in table 4.21.

Table 4.21
Higher the Retention Ratio, Better the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 2 | 6.45 |
| 2 | Agree (A) | 14 | 45.16 |
| 3 | Undecided (U) | 5 | 16.13 |
| 4 | Disagree (D) | 8 | 25.81 |
| 5 | Strongly Disagree (SD) | 2 | 6.45 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.13
Higher the Retention Ratio, Better the Share Price

| Higher the Retention Ratio, Better the Share Price |
| :---: |
| $26 \%$ |

Source: Table 4.21
From the primary responses it is found that $51.61 \%$ of the respondents were agree that the increase in retention ratio increases the share price in the market. Only, $32.62 \%$ were disagreed and $16.13 \%$ were undecided with the statement. So, the increase in retention
ratio significantly affects the market price of the share and vice versa at $5 \%$ level of significance.

### 4.4.6 Stock Dividend Increases the Share Price

The responses of the respondents for the affect of stock dividend to the market price of share were found as shown in table 4.22.

Table 4.22
Stock Dividend Increases the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 2 | 6.45 |
| 2 | Agree (A) | 15 | 48.39 |
| 3 | Undecided (U) | 5 | 16.13 |
| 4 | Disagree (D) | 8 | 25.81 |
| 5 | Strongly Disagree (SD) | 1 | 3.23 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.14
Stock Dividend Increases the Share Price


## Source: Table 4.22

From the primary responses, it is found that $54.84 \%$ of the respondents agree that the stock dividend increases the share price in the market. Only, $29.04 \%$ were disagreed and
$16.13 \%$ were undecided with the statement. So, the stock dividend significantly affects the market price of the share and vice versa at $5 \%$ level of significance.

### 4.4.7 Higher Cost of Equity ( $K_{e}$ ), Reduces the Share Price

The responses of the respondents for the affect of cost of equity to the market price of share were found as shown in table 4.23.

Table 4.23
Higher Cost of Equity ( $K_{\boldsymbol{e}}$ ), Reduces the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 2 | 6.45 |
| 2 | Agree (A) | 14 | 45.16 |
| 3 | Undecided (U) | 6 | 19.35 |
| 4 | Disagree (D) | 8 | 25.81 |
| 5 | Strongly Disagree (SD) | 1 | 3.23 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.15
Higher Cost of Equity, Reduces the Share Price


## Source: Appendix 11

From the primary responses it is found that $51.61 \%$ of the respondents agree that the higher cost of equity decreases the share price in the market. Only, $29.04 \%$ were disagreed and $19.35 \%$ were undecided with the statement. So, the higher cost of equity
significantly affects the market price of the share and vice versa at $5 \%$ level of significance.

### 4.4.8 Instability of the Government Causes Fall in the Share Price

The responses of the respondents for the affect of the instability of the government to the market price of the share were found as shown in table 4.24.

Table 4.24
Instability of Government Reduces the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 3 | 9.68 |
| 2 | Agree (A) | 22 | 70.97 |
| 3 | Undecided (U) | 4 | 12.90 |
| 4 | Disagree (D) | 2 | 6.45 |
| 5 | Strongly Disagree (SD) | 0 | 0.00 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.16
Instability of Government reduces the Share Price


Source: Table 4.24
From the primary responses, it is found that $80.65 \%$ of the respondents agree that instability of government causes fall in the share price in the market. Whereas, $6.45 \%$
were disagreed and $12.90 \%$ were undecided with the statement. So, instability of the government significantly decreases the market price of the share and vice versa at 5\% level of significance.

### 4.4.9 Cease-Fire/Peace Talks Positively Affect the Share Price

The responses of the respondents for the affect of cease-fire/peace talks to the market price of share were found as shown in table 4.25.

Table 4.25
Cease-Fire/Peace Talk Positively Affect the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 4 | 12.90 |
| 2 | Agree (A) | 22 | 70.97 |
| 3 | Undecided (U) | 2 | 6.45 |
| 4 | Disagree (D) | 2 | 6.45 |
| 5 | Strongly Disagree (SD) | 1 | 3.23 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.17

## Cease-Fire/Peace Talk affects positively the Share Price



Source: Table 4.25

From the primary responses, it is found that $83.87 \%$ of the respondents agree that ceasefire/peace talks affect positively the share price in market. Whereas, $9.68 \%$ were disagreed and $6.45 \%$ were undecided with the statement. So, cease-fire/peace talks significantly affect the market price of the share positively at $5 \%$ level of significance.

### 4.4.10 Better the National Economy, Better the Share Price

The responses of the respondents for the affect of national economy to the market price of share were found as shown in table 4.26.

Table 4.26
Better the National Economy, Better the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 4 | 12.90 |
| 2 | Agree (A) | 21 | 67.74 |
| 3 | Undecided (U) | 4 | 12.90 |
| 4 | Disagree (D) | 2 | 6.45 |
| 5 | Strongly Disagree (SD) | 0 | 0.00 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.18
Better the National Economy, Better the Share Price


Source: Table 4.26

From the primary responses, it is found that $80.64 \%$ of the respondents agree that better national economy affect positively the share price in market. Whereas, $6.45 \%$ were disagreed and $12.90 \%$ were undecided with the statement. So, better national economy significantly affects the market price of the share positively at $5 \%$ level of significance.

### 4.4.11 Higher the Market Liquidity, Lower the Share Price

The responses of the respondents for the affect of market liquidity to the market price of share were found as shown in table 4.27.

Table 4.27
Higher the Market Liquidity, Lower the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 2 | 6.45 |
| 2 | Agree (A) | 9 | 29.03 |
| 3 | Undecided (U) | 7 | 22.58 |
| 4 | Disagree (D) | 10 | 32.26 |
| 5 | Strongly Disagree (SD) | 3 | 9.68 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.19
Higher the Market Liquidity, Lower the Share Price


Source: Table 4.27

From the primary responses, it is found that $35.48 \%$ of the respondents agree that higher market liquidity affect negatively the share price in market. Whereas, $41.9 \%$ were disagreed and $22.58 \%$ were undecided with the statement. So, higher market liquidity does not significantly affects the market price of the share and vice versa at $5 \%$ level of significance.

### 4.4.12 Higher the Risk, Higher the Share Price

The responses of the respondents for the affect of risk to the market price of share were found as shown in table 4.28.

Table 4.28

## Higher the Risk, Higher the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 1 | 3.23 |
| 2 | Agree (A) | 2 | 6.45 |
| 3 | Undecided (U) | 5 | 16.13 |
| 4 | Disagree (D) | 20 | 64.52 |
| 5 | Strongly Disagree (SD) | 3 | 9.68 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.20
Higher the Risk, Higher the Share Price


Source: Table 4.28

From the primary responses, it is found that $9.68 \%$ of the respondents agree with higher the risk, higher the share price. Whereas, $74.2 \%$ were disagreed and $16.13 \%$ were undecided with the statement. So, the risk factor significantly affects the market price of the share negatively at $5 \%$ level of significance.

### 4.4.13 Larger Companies have Higher Share Price

The responses of the respondents for larger companies have higher share price were found as shown in table 4.29.

Table 4.29
Larger Companies have Higher Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 3 | 9.68 |
| 2 | Agree (A) | 15 | 48.38 |
| 3 | Undecided (U) | 5 | 16.13 |
| 4 | Disagree (D) | 7 | 22.58 |
| 5 | Strongly Disagree (SD) | 1 | 3.23 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.21
Larger Companies have higher Share Price

| Larger Companies have higher Share Price |  |
| :---: | :---: |
|  | $\begin{aligned} & \square \text { Strongly Agree (SA) } \\ & \text { Agree (A) } \\ & \boxtimes \text { Undecided (U) } \\ & \text { ® Disagree (D) } \\ & \text { © Strongly Disagree (SD) } \end{aligned}$ |

Source: Table 4.29

From the primary responses, it is found that $56.06 \%$ of the respondents agree that larger companies have higher share price. Whereas, $25.81 \%$ were disagreed and $16.13 \%$ were undecided with the statement. So, the larger company size significantly affects the market price of the share at $5 \%$ level of significance.

### 4.4.14 Share Price Increases With Change in Management

The responses of the respondents for share price increases with change in management were found as shown in table 4.30

Table 4.30
Share Price Increases with Change in Management

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 0 | 0.00 |
| 2 | Agree (A) | 5 | 16.13 |
| 3 | Undecided (U) | 18 | 58.06 |
| 4 | Disagree (D) | 7 | 22.58 |
| 5 | Strongly Disagree (SD) | 1 | 3.23 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.22
Share Price increases with Change in Management


Source: Table 4.30

From the primary responses, it is found that $16.13 \%$ of the respondents agree that share price increases with change in management. Whereas, $25.81 \%$ were disagreed and $58.06 \%$ were undecided with the statement. So, change in management does not significantly affect the market price of the share and vice versa at $5 \%$ level of significance.

### 4.4.15 Lower the BVPS, Higher the Share Price

The responses of the respondents for lower the BVPS. Higher the share prices were found as shown in table 4.31.

Table 4.31
Lower the BVPS, Higher the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 0 | 0.00 |
| 2 | Agree (A) | 2 | 6.45 |
| 3 | Undecided (U) | 5 | 16.13 |
| 4 | Disagree (D) | 21 | 67.13 |
| 5 | Strongly Disagree (SD) | 3 | 9.68 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.23
Lower the BVPS, Higher the Share Price


Source: Table 4.31

From the primary responses, it is found that $6.45 \%$ of the respondents agree that lower BVPS causes higher the share price. Whereas, $77.42 \%$ were disagreed and $58.06 \%$ were undecided with the statement. So, change in management does not significantly affect the market price of the share and vice versa at $5 \%$ level of significance.

### 4.4.16 Share Price is influenced by Demand \& Supply

The responses of the respondents for demand and supply affect share price were found as shown in table 4.32.

Table 4.32
Share Price is Influenced by Demand \& Supply

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 4 | 12.90 |
| 2 | Agree (A) | 20 | 64.52 |
| 3 | Undecided (U) | 2 | 6.45 |
| 4 | Disagree (D) | 4 | 12.90 |
| 5 | Strongly Disagree (SD) | 1 | 3.23 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.24
Share Price is Influenced by Demand \& Supply

| Share Price is Affected by Demand \& Supply |  |
| :---: | :---: |
|  | Strongly Agree (SA) <br> $\square$ Agree (A) <br> © Undecided (U) <br> D Disagree (D) <br> $\square$ Strongly Disagree (SD) |

Source: Table 4.31

From the primary responses, it is found that $77.42 \%$ of the respondents agree that lower share demand and supply affect prices. Whereas, $16.13 \%$ were disagreed and $6.45 \%$ were undecided with the statement. So, the fact that demand and supply of the stock significantly affects the market price of the share and vice versa at $5 \%$ level of significance.

### 4.4.17 Rumors and Whims Affect the Share Price

The responses of the respondents for rumors and whims affecting share price were found as shown in table 4.33.

Table 4.33

## Rumors and Whims Affect the Share Price

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 4 | 12.90 |
| 2 | Agree (A) | 17 | 54.84 |
| 3 | Undecided (U) | 5 | 16.13 |
| 4 | Disagree (D) | 3 | 9.68 |
| 5 | Strongly Disagree (SD) | 2 | 6.45 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.25
Rumors and Whims affect the Share Price


Source: Table 4.33

From the primary responses, it is found that $67.74 \%$ of the respondents agree that share rumors and whims affect share price. Whereas, $16.13 \%$ were disagreed and $16.13 \%$ were undecided with the statement. So, the fact that rumors and whims significantly affect the market price of the share and vice versa at $5 \%$ level of significance.

### 4.4.18 Capital Market is not developed due to Poor Regulatory Mechanism

The responses of the respondents for capital market is not well developed due to poor regulatory mechanism were found as shown in table 4.34.

Table 4.34
Capital Market is not developed due to Poor Regulatory Mechanism

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 4 | 12.90 |
| 2 | Agree (A) | 14 | 54.84 |
| 3 | Undecided (U) | 5 | 16.13 |
| 4 | Disagree (D) | 4 | 12.90 |
| 5 | Strongly Disagree (SD) | 1 | 3.23 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.26
Capital Market is not developed due to Poor Regulatory Mechanism


Source: Table 4.34

From the primary responses, it is found that $67.74 \%$ of the respondents agree that capital market is not well developed due to poor regulatory mechanism. Whereas, $16.13 \%$ were disagreed and $16.13 \%$ were undecided with the statement. So, the fact that capital market is not well developed due to poor regulatory mechanism is significant at $5 \%$ level of significance.

### 4.4.19 Listed Companies are not serious towards Shareholder's Interests

The responses of the respondents for listed companies are not serious about shareholder's interest were found as shown in table 4.35.

Table 4.35
Listed Companies are not serious towards Shareholder's Interests

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 5 | 16.13 |
| 2 | Agree (A) | 16 | 51.61 |
| 3 | Undecided (U) | 3 | 9.68 |
| 4 | Disagree (D) | 5 | 16.13 |
| 5 | Strongly Disagree (SD) | 2 | 6.45 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.27
Listed Companies are not serious towards Shareholder's Interests


Source: Table 4.35

From the primary responses, it is found that $67.74 \%$ of the respondents agree with the fact that listed companies are not serious about shareholder's interests. Whereas, 22.58\% were disagreed and $9.68 \%$ were undecided with the statement. So, the fact that listed companies are not serious about shareholder's interest is significant at $5 \%$ level of significance.

### 4.4.20 NEPSE and SEBO/N are not able to protect Shareholder's Interests

The responses of the respondents for NEPSE and SEBO/N are not able to protect shareholders interests were found as shown in table 4.36.

Table 4.36
NEPSE and SEBO/N are not able to protect Shareholder's Interests

| S.No. | Responses | No. | Percentage |
| :---: | :--- | :---: | :---: |
| 1 | Strongly Agree (SA) | 2 | 6.45 |
| 2 | Agree (A) | 5 | 16.13 |
| 3 | Undecided (U) | 3 | 9.68 |
| 4 | Disagree (D) | 17 | 54.84 |
| 5 | Strongly Disagree (SD) | 4 | 12.90 |
|  | Total | $\mathbf{3 1}$ | $\mathbf{1 0 0}$ |

Source: Appendix 11
Figure 4.28
NEPSE and SEBO/N are not able to protect Shareholder's Interests


Source: Table 4.36

From the primary responses, it is found that 22.58 of the respondents agree with the fact that NEPSE and SEBON are not able to protect the shareholders interest. Whereas, $67.74 \%$ were disagreed and $9.68 \%$ were undecided with the statement. So, the fact that NEPSE and SEBON are not able to protect shareholders interest is not significant at 5\% level of significance.

### 4.5 Major Findings of the Study

In this study both primary and secondary data are analyzed. The researcher, with the help of research questionnaire gathered primary data, which helped to identify the factors affecting the stock price. Similarly, with the help of secondary data, the relationship of market price per share with dividend, earning as well as book value was determined. Here, the empirical findings from both of the primary as well as secondary data analysis are presented separately below:

### 4.5.1 Findings from Secondary Data Analysis

The analysis of secondary data of 6 private companies gives the following results:
For NABIL, MVPS is positively correlated with EPS, DPS and BVPS. But these relationships are not significant at 5\% level of significance. BVPS, EPS and DPS are less volatile in comparison to the MVPS. It has very god result in industrial benchmark. In overall NABIL has very god performance in the last five years.
> For BOK, MVPS is positively correlated with EPS and DPS but negatively correlated with BVPS. This relationship with EPS is significantly where this relationship with DPS and EPS are not significant at 5\% level of significance. EPS, DPS and BVPS are less volatile than MVPS. It has god performance while comparing to the industrial benchmark. So, it revealed from the analysis that BOK has good performance in last five years.
> MVPS has negative correlation with EPS, DPS and BVPS of NFC. However these degrees of correlation are not significant at $5 \%$ level of significance. DPS is more volatile but MVPS, BVPS and EPS are less volatile in comparison to DPS. In industrial benchmark it has not been satisfactory performance because of lower
mean of independent variables but closer CV to industrial average values of CV of independent variables.
$>$ For LFC, MVPS has positive correlation with EPS but negative correlation with DPS and BVPS. But $t$-test analysis shows that neither of them is significant at 5\% level of significance. BVPS, EPS and MVPS are less volatile with less CV but DPS has highest volatility in comparison to them. LFC has satisfactory performance in industrial benchmark. In overall LFC has satisfactory performance in last five years.
> For SDBL, MVPS is positively correlated with EPS, DPS and BVPS with low degree of positive correlation. However these degrees of correlation are not significant at $5 \%$ level of significance which is revealed from t-test analysis. It has not satisfactory performance in industrial benchmark.
> MVPS of ACEDBL has negative correlation with all three independent variables EPS, DPS and BVPS. But the degree of these correlations is not significant at 5\% level of significance. DPS has highest volatility. In comparison to this MVPS, BVPS and DPS are less volatile. ACEDBL has only average performance in industrial benchmark.
$>$ Pricing status analysis of the stock of sampled companies has shown that stock price of all the sample companies NABIL, BOK, NFC, LFC, SDBL and ACEDBL are underpriced during the study period because actual returns were remarkable higher than required returns. The treasury bills discount rates is in increasing trend because of in sufficient availability of liquidity in the market. This discount rate is considered as the risk free rate. In the same way few companies among the listed companies in NEPSE are performing satisfactorily, therefore NEPSE index is in declining trend, which eventually yield lower rate of market return. Thus these all are the key reasons due to which required return is significantly lower during the study period.
$>$ Though, beta coefficients are calculated to assign required return, these coefficients tell the nature or behavior of stock whether individual stock is aggressive of defensive. The stock of BOK, NFC, LFC and ACEDBL are defensive because their beta coefficients are less than 1, whereas stock of NABIL
and SDBL are aggressive because their beta coefficients are more than 1. Defensive stocks indicate that they are less volatile in comparison to the market where as aggressive stocks are more volatile than of market return.

### 4.5.2 Major Findings from Primary Data Analysis

On the other hand, the analysis of primary data reveals the following results:
> MVPS is significantly affected by company's performance such as earnings, cash dividends payment, book value, risk associated with the company and growth rate at $5 \%$ level of significance.
$>$ When looking at, the other relevant factors to share price such as interest rate, retention ratio, cost of equity stock dividend etc., these factors also significantly affects the share price at $5 \%$ level of significance.
$>$ Similarly, the political, economic and environmental factors such as instability of government, cease-fire, national economy, etc. significantly affect the share price at $5 \%$ level of significance.
$>$ From other factor like change in management has insignificant impact on the share price.
$>$ Similarly, size of the company, demand and supply, rumors and whims etc significantly affect the share price.
$>$ While analyzing the response of capital market is not well developed in Nepal, listed companies are not serious about shareholders' interest and NEPSE and SEBON are not able to protect share holder's interest has shown significant implication at 5\% level of significance.

# CHAPTER - V SUMMARY, CONCLUSION \& RECOMMENDATIONS 

### 5.1 Summary

This is the final chapter that involves summary, conclusions and recommendations of the research work. The fact and findings from primary and secondary data analysis are presented in this chapter. Besides summarizing and concluding research work, recommendations are made to concerned persons and organizations.

Nepalese Stock Market is in developing stage. Most of the general public i.e. average citizens are still unaware about it. Though Share Market plays a vital role in the mobilization of capital in national economy, in the case of Nepal, it is still crawling towards the betterment.

The history of Security Market in Nepal is not old. It was started with the flotation of Shares by Biratnagar Jute Mills Ltd. and Nepal Bank Ltd. n 1937. Introduction Company Act 1964, the first issuance of Government Bond in 1064 and the establishment of Securities Exchange Center Ltd. in 1976 were other significant developments regarding the capital market.

Investors invest their savings in the Common Stock of public companies through Primary and Secondary Markets. Generally, the investors aimed to maximize their profit from their investment. But due to the lack of proper knowledge and poor regulatory performance of Nepalese Capital Market, the investors may not achieve the returns as expected. Only the few educated city dwellers know what share market is and how they regulated. Besides, government has not prioritized the development of capital market sufficiently.

The prime objective of this study is to find out the major determinants of Share Price of listed companies in NEPSE. Hence, 6 companies listed in NEPSE are taken in
consideration for the purpose. Market Price of these institutions has been analytically tested here to compare with other financial indicators like DPS, EPS and BPS. For such analysis, secondary data has been gathered from the different sources and different statistical tools and financial tools have been used to analyze these. Not only this, respondents were requested to fill up the questionnaire aiming to collect primary data related to share price of listed companies. The result of the response has been analyzed thoroughly in this thesis.

For the convenience, the study has been divided in five main chapters, i) Introduction, ii) Review of Literature, iii) Research Methodology, iv) Data Presentation and Analysis and v) Summary, Conclusion and Recommendation.

### 5.2 Conclusion

From the data analysis and major findings, the following conclusion can be drawn:

* It can be concluded that among the six samples companies the financial strength of NABIL bank is highest compared to the other sampled companies. All the financial indicators, mainly EPS, DPS and BVPS have good performance and highest in each year compared to those of other samples companies. BOK has also good performance in the last five years period.
* However, taking only finance companies, it can be concluded that although LFC is earning high EPS and providing high dividend than NFC, the MVPS of NFC is greater than MVPS of LFC because NFC has adopted the policy of alluring to potential investors towards it by providing cash dividend every year to the investors whereas, LFC has been providing only stock dividend and it was also not in consistence and regular way. As the book value per share of LFC is greater than NFC, it can be concluded that LFC adopted the policy of internal financing by keeping higher amount of retained earnings.
* While taking development banks only it can be concluded that in average ACEDBL is generating more EPS than SDBL and paying cash dividend regularly so, in average MVPS of ACEDBL is greater than MVPS of SDBL and as per BVPS, ACEDBL has greater BVPS in average than BVPS of SDBL.
* On the basis of correlation analysis, it can be concluded that the relationship of MVPS with EPS, DPS and BVPS of NABIL is positive. However, the hypothesis test showed that all these relationship are not statistically significant. It can be concluded that MVPS may not increase/decrease with the increase/decrease of EPS, DPS and BVPS individually of NABIL. Similarly in case of BOK, MVPS has positive relationship with EPS and DPS but negative relationship with BVPS. But only the relationship with EPS is statistically significant. Here, it can be concluded that MVPS may not increase/decrease with the individual increase/decrease of DPS and BVPS of BOK. Likewise, MVPS of NFC is negatively correlated with EPS, DPS and BVPS but these relationships are not statistically significant. Similarly, MVPS of LFC has positive correlation with EPS but negative correlation with DPS and BVPS but these relationships are also not statistically significant. In the same way in development banks sector, MVPS has positive relationship with all the three variables EPS, DPS and BVPS of SDBL but these all relationships are statistically insignificant, similarly MVPS of ACEDBL has negative relationship with EPS, DPS and BVPS. But these relationships are also statistically insignificant. Gazing all these facts, it can be concluded that individually EPS, DPS and BVPS has no significant role to increase/decrease MVPS. However, they may have significant combined effect. Hence, it can be considered that besides these financial indicators, there may be other factors that need to be traced out.
* On the basis of primary data analysis, it can be concluded that the investors are interested in stock dividend than other factors like interest rate, retention rate, cost of equity etc. Besides, stock dividend the external environment of the nation, like political, economic and environmental instability significantly affects the share price whereas, the global environment has nothing to do with the price change. Also, the exchange rate, seasonal factors, change in management have insignificant impact on share price. However, the size of the company, rumors and whims, demand and supply significantly affects the share price. Eventually, on the basis of primary data, it can be concluded that capital market is not well
developed in Nepal, listed companies are not serious about shareholder's interests and NEPSE and SEBON are not able to protect share holders interest.


### 5.3 Recommendations

The following suggestions can be recommended regarding the share price of listed companies, on the basis of the data analyzed in the previous sections:

* The performances of commercial banks are better than the other sectors so it is recommended to the investors to invest their investment in this sector.
* Since general public are unaware about the share and share market, an organized effort is necessary to aware the public about it. A separate department in NEPSE or an independent organization is recommended which analyze, inform and create the awareness within the emerging potential investors about share and share market through different approached like seminar, conference or print, air media.
* To control the speculation in share, an effective control mechanism is necessary. A clear system is to be employed to evaluate and punish such speculations so that no further influence can be observed in Share Price due to artificial reasons. The government should create a rational and sincere environment within share brokers and share traders for controlling such speculations.
* It is also recommended to the concerned regulatory body to carry out further research on the specifics of market efficiency to develop an efficient capital market.
* True, scrutinized and credible information about the listed companies are not available because of absences of credible rating system. So, it is recommended to the concerned body that independent rating agencies should be encouraged to establish here so, that potential investors will have clear picture of financial health and future prospect of company.
* NEPSE has to ensure that all companies share all relevant information timely bases so that the stock price reflects their company's status more accurately.
* Government should formulate and implement a rigid rules and regulations for the further development of Share Market. A mechanism to take immediate action for
the faulty company is to be established. It will help to check and balance the share price in the market.
* The investors are recommended to receive a clear picture of their financial track before investing in the company. They should be alert and aware about the misconduct of relative company, brokers, NEPSE or government. They are required to boost their knowledge up regarding share and share market to get the expected returns from their investment.
* An open policy to encourage and promote foreign investors in share price would be fruitful to strengthen the share market of Nepal considering the fact of present globalization.
* The public or investors are recommended that for the clear and absolute result regarding the determinants of share price, a population study of whole share market for a longer study period is required. This gives the only factual information about the actual determinants of share price.
* The public companies should provide up to date information to the present and potential investors regularly so that they can be an informed investor.


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## Appendix 1

i. Simple Correlation and Regression Analysis between Market Price per Share and Earning Per Share of NABIL.

| Year | MVPS(X) | EPS(Y) | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 1505 | 105.49 | 2265025 | 11128.1401 | 158762.45 |
| $2005 / 06$ | 2240 | 129.21 | 5017600 | 16695.2241 | 289430.40 |
| $2006 / 07$ | 5050 | 137.08 | 25502500 | 18790.9264 | 692254 |
| $2007 / 08$ | 5275 | 108.31 | 27825625 | 11731.0561 | 571335.25 |
| $2008 / 09$ | 4899 | 106.76 | 24000201 | 11397.6976 | 523017.24 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{1 8 9 6 9}$ | $\mathbf{5 8 6 . 8 5}$ | $\mathbf{8 4 6 1 0 9 5 1}$ | $\mathbf{6 9 7 4 3 . 0 4}$ | $\mathbf{2 2 3 4 7 9 9 . 3 4}$ |

## Correlation

$$
\begin{aligned}
& r=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
&=\frac{5 \times 2234799.34-18969 \times 586.65}{\sqrt{5 \times 84610951-(18969)^{2}} \sqrt{5 \times 69743.04-(586.85)^{2}}} \\
&=\frac{111739967.7-11131957.65}{7951.84 \times 65.74}=\frac{42039.05}{522753.96}=0.80 \\
& r^{2}=(0.080)^{2}=0.0064
\end{aligned}
$$

## Regression equation

$\bar{X}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{18969}{5}=3793.80 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{586.85}{5}=117.37$
$\mathrm{b}=\frac{N \sum X Y-\sum X \sum Y}{N \sum Y^{2}-(Y)^{2}}=\frac{5 \times 2234799.34-18965 \times 586.85}{5 \times 69743.04-(586.85)^{2}}=\frac{42039.05}{4322.28}=9.73$
$\mathrm{a}=\overline{\mathrm{X}}-\mathrm{b} \overline{\mathrm{Y}}=3793.80-9.73 \times 117.37=2652.25$

## T-Test

$$
\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{0.08 \sqrt{5-2}}{\sqrt{1-(0.08)^{2}}}=\frac{0.1385}{0.997}=0.1389
$$

## ii. Simple Correlation and Regression Analysis between Market Price per Share and Dividend Per Share of NABIL.

| Year | $\mathbf{M V P S}(\mathbf{X )}$ | $\mathbf{D P S}(\mathbf{Y})$ | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 1505 | 70 | 2265025 | 4900 | 105350 |
| $2005 / 06$ | 2240 | 85 | 5017600 | 7225 | 190400 |
| $2006 / 07$ | 5050 | 140 | 25502500 | 19600 | 707000 |
| $2007 / 08$ | 5275 | 100 | 27825625 | 10000 | 527500 |
| $2008 / 09$ | 4899 | 85 | 24000201 | 7225 | 416415 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{1 8 9 6 9}$ | $\mathbf{4 8 0}$ | $\mathbf{8 4 6 1 0 9 5 1}$ | $\mathbf{4 8 9 5 0}$ | $\mathbf{1 9 4 6 6 6 5}$ |

## Correlation

$$
\begin{aligned}
& r=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
&=\frac{5 \times 1946665-18969 \times 480}{\sqrt{5 \times 84610951-(18969)^{2}} \sqrt{5 \times 48950-(480)^{2}}} \\
&=\frac{9733325-9405120}{7951.84 \times 119.79}=\frac{628205}{952550.91}=0.66 \\
& r^{2}=(0.66)^{2}=0.43
\end{aligned}
$$

## Regression equation

$\overline{\mathrm{X}}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{18969}{5}=3793.80 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{480}{5}=96$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 1946665-18965 \times 480}{5 \times 48950-(480)^{2}}=\frac{628205}{14350}=43.78$
$a=\bar{X}-b \bar{Y}=3793.80-43.78 \times 96=-408.80$

## T-Test

$\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{0.66 \sqrt{5-2}}{\sqrt{1-(0.66)^{2}}}=\frac{1.1431}{0.7512}=1.522$

## iii. Simple Correlation and Regression Analysis between Market Price per Share and Book Value Per Share of NABIL.

| Year | MVPS(X) | $\mathbf{B V P S}(\mathbf{Y})$ | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 1505 | 337 | 2265025 | 113569 | 507185 |
| $2005 / 06$ | 2240 | 381 | 5017600 | 145161 | 853440 |
| $2006 / 07$ | 5050 | 418 | 25502500 | 174724 | 2110900 |
| $2007 / 08$ | 5275 | 354 | 27825625 | 125316 | 1867350 |
| $2008 / 09$ | 4899 | 324 | 24000201 | 104976 | 1587276 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{1 8 9 6 9}$ | $\mathbf{1 8 1 4}$ | $\mathbf{8 4 6 1 0 9 5 1}$ | $\mathbf{6 6 3 7 4 6}$ | $\mathbf{6 9 2 6 1 5 1}$ |

## Correlation

$$
\begin{aligned}
& r=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
&=\frac{5 \times 6926151-18969 \times 1814}{\sqrt{5 \times 84610951-(18969)^{2}} \sqrt{5 \times 663746-(1814)^{2}}} \\
&=\frac{34630755-34409766}{7951.84 \times 167.73}=\frac{220989}{1333762.12}=0.165 \\
& r^{2}=(0.165)^{2}=0.027
\end{aligned}
$$

## Regression equation

$\overline{\mathrm{X}}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{18969}{5}=3793.80 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{1814}{5}=362.8$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 6926151-18965 \times 1814}{5 \times 663746-(1814)^{2}}=\frac{220989}{28134}=7.85$
$a=\bar{X}-b \bar{Y}=3793.80-7.85 \times 362.80=945.82$

## T-Test

$t=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{0.16 \sqrt{5-2}}{\sqrt{1-(0.16)^{2}}}=\frac{0.277}{0.987}=0.230$

## Appendix 2

i. Simple Correlation and Regression Analysis between Market Price per Share and Earning Per Share of BOK.

| Year | $\mathbf{M V P S}(\mathbf{X )}$ | $\mathbf{E P S}(\mathbf{Y})$ | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 430 | 30.1 | 184900 | 906.01 | 12943 |
| $2005 / 06$ | 850 | 43.67 | 722500 | 1907.0689 | 37119.5 |
| $2006 / 07$ | 1375 | 43.5 | 1890625 | 1892.25 | 59812.5 |
| $2007 / 08$ | 2350 | 59.94 | 5522500 | 3592.8036 | 140859 |
| $2008 / 09$ | 1825 | 54.68 | 3330625 | 2989.9024 | 99791 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{6 8 3 0}$ | $\mathbf{2 3 1 . 8 9}$ | $\mathbf{1 1 6 5 1 1 5 0}$ | $\mathbf{1 1 2 8 8 . 0 3}$ | $\mathbf{3 5 0 5 2 5}$ |

## Correlation

$$
\begin{aligned}
& r=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
&=\frac{5 \times 350525-6830 \times 231.89}{\sqrt{5 \times 11651150-(6830)^{2}} \sqrt{5 \times 11288.03-(231.89)^{2}}} \\
&=\frac{1752625-1583808.7}{3406.88 \times 51.64}=\frac{168816.30}{175931.28}=0.96 \\
& r^{2}=(0.96)^{2}=0.92
\end{aligned}
$$

## Regression equation

$\overline{\mathrm{X}}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{6830}{5}=1366 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{231.89}{5}=46.38$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 350525-6830 \times 231.89}{5 \times 11288.03-(231.89)^{2}}=\frac{168816.30}{2667.18}=63.29$
$a=\bar{X}-b \bar{Y}=1366-63.29 \times 46.38=-1569.39$
T-Test
$\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{0.96 \sqrt{5-2}}{\sqrt{1-(0.96)^{2}}}=\frac{1.663}{0.28}=5.939$

## ii. Simple Correlation and Regression Analysis between Market Price per Share and Dividend Per Share of BOK.

| Year | $\mathbf{M V P S}(\mathbf{X})$ | $\mathbf{D P S}(\mathbf{Y})$ | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 430 | 15 | 184900 | 225 | 6450 |
| $2005 / 06$ | 850 | 48 | 722500 | 2304 | 40800 |
| $2006 / 07$ | 1375 | 20 | 1890625 | 400 | 27500 |
| $2007 / 08$ | 2350 | 42.11 | 5522500 | 1773.2521 | 98958.5 |
| $2008 / 09$ | 1825 | 47.37 | 3330625 | 2243.9169 | 86450.25 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{6 8 3 0}$ | $\mathbf{1 7 2 . 4 8}$ | $\mathbf{1 1 6 5 1 1 5 0}$ | $\mathbf{6 9 4 6 . 1 7}$ | $\mathbf{2 6 0 1 5 8 . 7 5}$ |

## Correlation

$$
\begin{aligned}
r & =\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
& =\frac{5 \times 260158.75-6830 \times 172.48}{\sqrt{5 \times 11651150-(6830)^{2}} \sqrt{5 \times 6946.17-(172.48)^{2}}} \\
& =\frac{1300793.75-1178038.40}{3406.88 \times 70.58} \quad=\frac{122755.35}{240457.59}=0.51
\end{aligned}
$$

$r^{2}=(0.51)^{2}=0.26$

## Regression equation

$\overline{\mathrm{X}}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{6830}{5}=1366 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{172.48}{5}=34.50$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 260158.75-6830 \times 172.48}{5 \times 6946.17-(172.48)^{2}}=\frac{122755.35}{4981.50}=24.64$
$a=\bar{X}-b \bar{Y}=1366-24.64 \times 34.50=515.92$

## T-Test

$\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{0.51 \sqrt{5-2}}{\sqrt{1-(0.51)^{2}}}=\frac{0.8833}{0.8602}=1.0269$

## iii. Simple Correlation and Regression Analysis between Market Price per Share and Book Value Per Share of BOK.

| Year | MVPS(X) | $\mathbf{B V P S}(\mathbf{Y})$ | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 430 | 337 | 184900 | 113569 | 144910 |
| $2005 / 06$ | 850 | 381 | 722500 | 145161 | 323850 |
| $2006 / 07$ | 1375 | 418 | 1890625 | 174724 | 574750 |
| $2007 / 08$ | 2350 | 354 | 5522500 | 125316 | 831900 |
| $2008 / 09$ | 1825 | 324 | 3330625 | 104976 | 591300 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{6 8 3 0}$ | $\mathbf{1 8 1 4}$ | $\mathbf{1 1 6 5 1 1 5 0}$ | $\mathbf{6 6 3 7 4 6}$ | $\mathbf{2 4 6 6 7 1 0}$ |

## Correlation

$$
\begin{aligned}
r & =\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
& =\frac{5 \times 2466710-6830 \times 1814}{\sqrt{5 \times 11651150-(6830)^{2}} \sqrt{5 \times 663746-(1814)^{2}}} \\
& =\frac{12333550-12389620}{3406.88 \times 167.73}=\frac{-56070}{571435.98}=-0.10
\end{aligned}
$$

$r^{2}=(-0.10)^{2}=0.01$

## Regression equation

$\overline{\mathrm{X}}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{6830}{5}=1366 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{1814}{5}=362.80$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 2466710-6830 \times 1814}{5 \times 663746-(1814)^{2}}=\frac{-56070}{28134}=-1.99$
$a=\overline{\mathrm{X}}-\mathrm{b} \overline{\mathrm{Y}}=1366-(-1.99) \times 362.80=2087.97$

## T-Test

$\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{-0.10 \sqrt{5-2}}{\sqrt{1-(-0.10)^{2}}}=\frac{-0.1732}{0.995}=-0.1740$
$/ t /=0.1740$

## Appendix 3

## i. Simple Correlation and Regression Analysis between Market Price per Share and Earning Per Share of NFC.

| Year | MVPS(X) | $\mathbf{E P S}(\mathbf{Y})$ | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 295 | 69.12 | 87025 | 4777.5744 | 20390.4 |
| $2005 / 06$ | 263 | 17.37 | 69169 | 301.7169 | 4568.31 |
| $2006 / 07$ | 460 | 25.36 | 211600 | 643.1296 | 11665.6 |
| $2007 / 08$ | 1050 | 14.62 | 1102500 | 213.7444 | 15351 |
| $2008 / 09$ | 1050 | 19.44 | 1102500 | 377.9136 | 20412 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{3 1 1 8}$ | $\mathbf{1 4 5 . 9 1}$ | $\mathbf{2 5 7 2 7 9 4}$ | $\mathbf{6 3 1 4 . 0 8}$ | $\mathbf{7 2 3 8 7 . 3 1}$ |

## Correlation

$$
\begin{aligned}
& \mathrm{r}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
&=\frac{5 \times 72387.31-3118 \times 145.91}{\sqrt{5 \times 2572794-(3118)^{2}} \sqrt{5 \times 6314.08-(145.91)^{2}}} \\
&=\frac{361936.55-454947.38}{1772.58 \times 101.39}=\frac{-93010.83}{179721.89}=-0.52 \\
& r^{2}=(-0.52)^{2}=0.27
\end{aligned}
$$

## Regression equation

$\bar{X}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{3118}{5}=623.6 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{145.91}{5}=29.18$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 72387.31-3118 \times 145.91}{5 \times 6314.08-(145.91)^{2}}=\frac{-93010.83}{10280.67}=-9.05$
$a=\bar{X}-b \bar{Y}=623.6-(-9.05) \times 29.18=887.68$

## T-Test

$$
\begin{aligned}
& \mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{-0.52 \sqrt{5-2}}{\sqrt{1-(-0.52)^{2}}}=\frac{-0.9006}{0.8542}=-1.0544 \\
& \mathrm{t} /=1.0544
\end{aligned}
$$

## ii. Simple Correlation and Regression Analysis between Market Price per Share and Dividend Per Share of NFC.

| Year | MVPS(X) | DPS(Y) | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 295 | 10 | 87025 | 100 | 2950 |
| $2005 / 06$ | 263 | 10 | 69169 | 100 | 2630 |
| $2006 / 07$ | 460 | 50 | 211600 | 2500 | 23000 |
| $2007 / 08$ | 1050 | 16 | 1102500 | 256 | 16800 |
| $2008 / 09$ | 1050 | 13.68 | 1102500 | 187.1424 | 14364 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{3 1 1 8}$ | $\mathbf{9 9 . 6 8}$ | $\mathbf{2 5 7 2 7 9 4}$ | $\mathbf{3 1 4 3 . 1 4}$ | $\mathbf{5 9 7 4 4}$ |

## Correlation

$$
\begin{aligned}
& \mathrm{r}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
&=\frac{5 \times 59744-3118 \times 99.68}{\sqrt{5 \times 2572794-(3118)^{2}} \sqrt{5 \times 3143.14-(99.68)^{2}}} \\
&=\frac{298720-310802.24}{1772.58 \times 76.02}=\frac{-12082.24}{134751.66}=-0.09 \\
& r^{2}=(-0.09)^{2}=0.0081
\end{aligned}
$$

## Regression equation

$\bar{X}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{3118}{5}=623.6 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{99.68}{5}=19.94$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 59744-3118 \times 99.68}{5 \times 3143.14-(99.68)^{2}}=\frac{-12082.24}{5779.60}=-2.10$
$a=\bar{X}-b \bar{Y}=623.6-(-2.10) \times 19.94=665.47$

## T-Test

$\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{-0.09 \sqrt{5-2}}{\sqrt{1-(-0.09)^{2}}}=\frac{-0.1559}{0.996}=-0.1559$
$/ t /=0.1559$
iii. Simple Correlation and Regression Analysis between Market Price per Share and Book Value Per Share of NFC.

| Year | MVPS(X) | BVPS(Y) | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 295 | 271.94 | 87025 | 73951.3636 | 80222.3 |
| $2005 / 06$ | 263 | 184.65 | 69169 | 34095.6225 | 48562.95 |
| $2006 / 07$ | 460 | 199.89 | 211600 | 39956.0121 | 91949.4 |
| $2007 / 08$ | 1050 | 136.03 | 1102500 | 18504.1609 | 142831.5 |
| $2008 / 09$ | 1050 | 131.75 | 1102500 | 17358.0625 | 138337.5 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{3 1 1 8}$ | $\mathbf{9 2 4 . 2 6}$ | $\mathbf{2 5 7 2 7 9 4}$ | $\mathbf{1 8 3 8 6 5 . 2 2}$ | $\mathbf{5 0 1 9 0 3 . 6 5}$ |

## Correlation

$$
\begin{aligned}
& r=\frac{N \sum X Y-\sum X \sum Y}{\sqrt{N \sum X^{2}-\left(\sum X\right)^{2}} \sqrt{N \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
&=\frac{5 \times 501903.65-3118 \times 924.26}{\sqrt{5 \times 2572794-(3118)^{2}} \sqrt{5 \times 183865.22-(924.26)^{2}}} \\
&=\frac{2509518.25-2881842.68}{1772.58 \times 255.09}=\frac{-372324.43}{42167.43}=-0.82 \\
& r^{2}=(-0.82)^{2}=0.67
\end{aligned}
$$

## Regression equation

$\overline{\mathrm{X}}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{3118}{5}=623.6 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{924.26}{5}=184.85$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 501903.65-3118 \times 924.26}{5 \times 183865.22-(924.26)^{2}}=\frac{-372324.43}{65069.55}=-5.72$
$\mathrm{a}=\overline{\mathrm{X}}-\mathrm{b} \overline{\mathrm{Y}}=623.6-(-5.72) \times 184.85=1680.94$

## T-Test

$\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{-0.82 \sqrt{5-2}}{\sqrt{1-(-0.82)^{2}}}=\frac{-1.4203}{0.5724}=-2.481$
$\mathrm{t} / \mathrm{t}=2.481$

## Appendix 4

i. Simple Correlation and Regression Analysis between Market Price per Share and Earning Per Share of LFC.

| Year | MVPS(X) | EPS(Y) | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 250 | 50.36 | 62500 | 2536.1296 | 12590 |
| $2005 / 06$ | 245 | 37.53 | 60025 | 1408.5009 | 9194.85 |
| $2006 / 07$ | 330 | 92.24 | 108900 | 8508.2176 | 30439.2 |
| $2007 / 08$ | 860 | 61.49 | 739600 | 3781.0201 | 52881.4 |
| $2008 / 09$ | 810 | 57.85 | 656100 | 3346.6225 | 46858.5 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{2 4 9 5}$ | $\mathbf{2 9 9 . 4 7}$ | $\mathbf{1 6 2 7 1 2 5}$ | $\mathbf{1 9 5 8 0 . 4 9}$ | $\mathbf{1 5 1 9 6 3 . 9 5}$ |

## Correlation

$$
\begin{aligned}
& r=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
&=\frac{5 \times 151963.95-2495 \times 299.47}{\sqrt{5 \times 1627125-(2495)^{2}} \sqrt{5 \times 19580.49-(299.47)^{2}}} \\
&=\frac{759819.75-717177.65}{1382.24 \times 90.66}=\frac{12642.10}{125313.89}=0.10 \\
& r^{2}=(0.10)^{2}=0.01
\end{aligned}
$$

## Regression equation

$\overline{\mathrm{X}}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{2495}{5}=499 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{299.47}{5}=59.89$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \Sigma \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 151963.95-2495 \times 299.47}{5 \times 19580.49-(299.47)^{2}}=\frac{12642.10}{8220.17}=1.54$
$\mathrm{a}=\overline{\mathrm{X}}-\mathrm{b} \overline{\mathrm{Y}}=499-(1.54) \times 59.89=406.77$

## T-Test

$$
\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{0.10 \sqrt{5-2}}{\sqrt{1-(0.10)^{2}}}=\frac{0.1732}{0.9950}=0.1741
$$

## ii. Simple Correlation and Regression Analysis between Market Price per Share and Dividend Per Share of LFC.

| Year | MVPS(X) | DPS(Y) | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 250 | 50 | 62500 | 2500 | 12500 |
| $2005 / 06$ | 245 | 0 | 60025 | 0 | 0 |
| $2006 / 07$ | 330 | 50 | 108900 | 2500 | 16500 |
| $2007 / 08$ | 860 | 50 | 739600 | 2500 | 43000 |
| $2008 / 09$ | 810 | 0 | 656100 | 0 | 0 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{2 4 9 5}$ | $\mathbf{1 5 0}$ | $\mathbf{1 6 2 7 1 2 5}$ | $\mathbf{7 5 0 0}$ | $\mathbf{7 2 0 0 0}$ |

## Correlation

$$
\begin{aligned}
& r=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
&=\frac{5 \times 72000-2495 \times 150}{\sqrt{5 \times 1627125-(2495)^{2}} \sqrt{5 \times 7500-(150)^{2}}} \\
&=\frac{360000-374250}{1382.24 \times 122.47}=\frac{-14250}{169282.93}=-0.084 \\
& r^{2}=(-0.084)^{2}=0.007
\end{aligned}
$$

## Regression equation

$\bar{X}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{2495}{5}=499 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{150}{5}=30$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 72000-2495 \times 150}{5 \times 7500-(150)^{2}}=\frac{-14250}{15000}=-0.95$
$a=\bar{X}-b \bar{Y}=499-(-0.95) \times 30=527.50$

## T-Test

$\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{-0.08 \sqrt{5-2}}{\sqrt{1-(-0.08)^{2}}}=\frac{-0.1455}{0.9965}=-0.1460$
$/ t /=0.1460$
iii. Simple Correlation and Regression Analysis between Market Price per Share and Book Value Per Share of LFC.

| Year | MVPS(X) | $\mathbf{B V P S}(\mathbf{Y})$ | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 250 | 227 | 62500 | 51529 | 56750 |
| $2005 / 06$ | 245 | 190.8 | 60025 | 36404.64 | 46746 |
| $2006 / 07$ | 330 | 238.93 | 108900 | 57087.5449 | 78846.9 |
| $2007 / 08$ | 860 | 218.15 | 739600 | 47589.4225 | 187609 |
| $2008 / 09$ | 810 | 201.03 | 656100 | 40413.0609 | 162834.3 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{2 4 9 5}$ | $\mathbf{1 0 7 5 . 9 1}$ | $\mathbf{1 6 2 7 1 2 5}$ | $\mathbf{2 3 3 0 2 3 . 6 7}$ | $\mathbf{5 3 2 7 8 6 . 2 0}$ |

## Correlation

$$
\begin{aligned}
& r=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
&=\frac{5 \times 532786.20-2495 \times 1075.91}{\sqrt{5 \times 1627125-(2495)^{2}} \sqrt{5 \times 233023.67-(1075.91)^{2}}} \\
&=\frac{2663931-2684395.45}{1382.24 \times 86.81}=\frac{-20464.45}{19992.25}=-0.17 \\
& r^{2}=(-0.17)^{2}=0.03
\end{aligned}
$$

## Regression equation

$\overline{\mathrm{X}}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{2495}{5}=499 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{1075.91}{5}=215.18$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 532786.20-2495 \times 1075.91}{5 \times 233023.67-(1075.91)^{2}}=\frac{-20464.45}{7536.02}=-2.71$
$\mathrm{a}=\overline{\mathrm{X}}-\mathrm{b} \overline{\mathrm{Y}}=499-(-2.71) \times 215.18=1082.14$

## T-Test

$\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{-0.17 \sqrt{5-2}}{\sqrt{1-(-0.17)^{2}}}=\frac{-0.2944}{0.9849}=-0.2989$
$/ t /=0.2989$

## Appendix 5

## i. Simple Correlation and Regression Analysis between Market Price per Share and Earning Per Share of SDBL.

| Year | MVPS(X) | EPS(Y) | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 100 | 17.04 | 10000 | 290.3616 | 1704 |
| $2005 / 06$ | 100 | 6.25 | 10000 | 39.0625 | 625 |
| $2006 / 07$ | 310 | 25.5 | 96100 | 650.25 | 7905 |
| $2007 / 08$ | 1525 | 15.79 | 2325625 | 249.3241 | 24079.75 |
| $2008 / 09$ | 253 | 5.46 | 64009 | 29.8116 | 1381.38 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{2 2 8 8}$ | $\mathbf{7 0 . 0 4}$ | $\mathbf{2 5 0 5 7 3 4}$ | $\mathbf{1 2 5 8 . 8 1}$ | $\mathbf{3 5 6 9 5 . 1 3}$ |

## Correlation

$$
\begin{aligned}
& r=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
&=\frac{5 \times 35695.13-2288 \times 70.04}{\sqrt{5 \times 2505734-(2288)^{2}} \sqrt{5 \times 1258.81-(70.04)^{2}}} \\
&=\frac{178475.65-160251.52}{2700.69 \times 37.26}=\frac{18224.13}{100627.71}=0.18 \\
& r^{2}=(0.18)^{2}=0.032
\end{aligned}
$$

## Regression equation

$\overline{\mathrm{X}}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{2288}{5}=457.60 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{70.04}{5}=14.01$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 35695.13-2288 \times 70.04}{5 \times 1258.81-(70.04)^{2}}=\frac{18224.13}{1388.45}=13.12$
$\mathrm{a}=\overline{\mathrm{X}}-\mathrm{b} \overline{\mathrm{Y}}=457.60-(13.12) \times 14.01=273.79$

## T-Test

$$
\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{0.18 \sqrt{5-2}}{\sqrt{1-(0.18)^{2}}}=\frac{0.3118}{0.9839}=0.3169
$$

## ii. Simple Correlation and Regression Analysis between Market Price per Share and Dividend Per Share of SDBL.

| Year | MVPS(X) | DPS(Y) | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 100 | 0 | 10000 | 0 | 0 |
| $2005 / 06$ | 100 | 10 | 10000 | 100 | 1000 |
| $2006 / 07$ | 310 | 15 | 96100 | 225 | 4650 |
| $2007 / 08$ | 1525 | 10 | 2325625 | 100 | 15250 |
| $2008 / 09$ | 253 | 5 | 64009 | 25 | 1265 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{2 2 8 8}$ | $\mathbf{4 0}$ | $\mathbf{2 5 0 5 7 3 4}$ | $\mathbf{4 5 0}$ | $\mathbf{2 2 1 6 5}$ |

## Correlation

$$
\begin{aligned}
& r=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
&=\frac{5 \times 22165-2288 \times 40}{\sqrt{5 \times 2505734-(2288)^{2}} \sqrt{5 \times 450-(40)^{2}}} \\
&=\frac{110825-91520}{2700.69 \times 25.49}=\frac{19305}{68840.59}=0.28 \\
& r^{2}=(0.28)^{2}=0.078
\end{aligned}
$$

## Regression equation

$\bar{X}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{2288}{5}=457.60 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{40}{5}=8$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 22165-2288 \times 40}{5 \times 450-(40)^{2}}=\frac{19305}{650}=29.70$
$a=\bar{X}-b \bar{Y}=457.60-(29.70) \times 8=220$

## T-Test

$$
\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{0.28 \sqrt{5-2}}{\sqrt{1-(0.28)^{2}}}=\frac{0.4850}{0.9602}=0.5051
$$

iii. Simple Correlation and Regression Analysis between Market Price per Share and Book Value Per Share of SDBL.

| Year | $\mathbf{M V P S}(\mathbf{X )}$ | $\mathbf{D P S}(\mathbf{Y})$ | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 100 | 134.37 | 10000 | 18055.2969 | 13437 |
| $2005 / 06$ | 100 | 105.22 | 10000 | 11071.2484 | 10522 |
| $2006 / 07$ | 310 | 155.35 | 96100 | 24133.6225 | 48158.50 |
| $2007 / 08$ | 1525 | 133.20 | 2325625 | 17742.24 | 203130 |
| $2008 / 09$ | 253 | 102.69 | 64009 | 10545.2361 | 25980.57 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{2 2 8 8}$ | $\mathbf{6 3 0 . 8 3}$ | $\mathbf{2 5 0 5 7 3 4}$ | $\mathbf{8 1 5 4 7 . 6 4}$ | $\mathbf{3 0 1 2 2 8 . 0 7}$ |

## Correlation

$$
\begin{aligned}
& \mathrm{r}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
& \\
& =\frac{5 \times 301228.07-2288 \times 630.83}{\sqrt{5 \times 2505734-(2288)^{2}} \sqrt{5 \times 81547.64-(630.83)^{2}}} \\
& =\frac{1506140.35-1443339.04}{2700.69 \times 98.95}=\frac{62801.31}{267233.27}=0.23 \\
& r^{2}=(0.23)^{2}=0.053
\end{aligned}
$$

## Regression equation

$\bar{X}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{2288}{5}=457.60 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{630.83}{5}=126.17$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 301228.07-2288 \times 630.83}{5 \times 81547.64-(630.83)^{2}}=\frac{62801.31}{9791.71}=6.41$
$a=\bar{X}-b \bar{Y}=457.60-(6.41) \times 126.17=-351.15$

## T-Test

$\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{0.23 \sqrt{5-2}}{\sqrt{1-(0.23)^{2}}}=\frac{0.3984}{0.9731}=0.4094$

## Appendix 6

i. Simple Correlation and Regression Analysis between Market Price per Share and Earning Per Share of ACEDBL.

| Year | MVPS(X) | $\mathbf{E P S}(\mathbf{Y})$ | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 251 | 18 | 63001 | 324 | 4518 |
| $2005 / 06$ | 320 | 27.94 | 102400 | 780.6436 | 8940.8 |
| $2006 / 07$ | 459 | 6.71 | 210681 | 45.0241 | 3079.89 |
| $2007 / 08$ | 856 | 12.96 | 732736 | 167.9616 | 11093.76 |
| $2008 / 09$ | 588 | 6.92 | 345744 | 47.8864 | 4068.96 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{2 4 7 4}$ | $\mathbf{7 2 . 5 3}$ | $\mathbf{1 4 5 4 5 6 2}$ | $\mathbf{1 3 6 5 . 5 1}$ | $\mathbf{3 1 7 0 1 . 4 1}$ |

## Correlation

$$
\begin{aligned}
r & =\frac{N \sum X Y-\sum X \sum Y}{\sqrt{N \sum X^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
& =\frac{5 \times 31701.41-2474 \times 72.3}{\sqrt{5 \times 1454562-(2474)^{2}} \sqrt{5 \times 1365.51-(72.53)^{2}}} \\
& =\frac{158507.05-179439.53}{1073.37 \times 39.58}=\frac{-20932.17}{42483.98}=-0.49 \\
r^{2} & =(-0.49)^{2}=0.24
\end{aligned}
$$

## Regression equation

$\overline{\mathrm{X}}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{2474}{5}=494.80 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{72.53}{5}=14.51$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 31701.41-2474 \times 72.3}{5 \times 1365.51-(72.53)^{2}}=\frac{-20932.17}{156695}=-13.36$
$a=\bar{X}-b \bar{Y}=494.80-(-13.35) \times 14.51=668.51$

## T-Test

$\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{-0.49 \sqrt{5-2}}{\sqrt{1-(-0.49)^{2}}}=\frac{-0.8487}{0.8718}=-0.9735$
/t/ = 0.9735

## ii Simple Correlation and Regression Analysis between Market Price per Share and Dividend Per Share of ACEDBL.

| Year | $\mathbf{M V P S}(\mathbf{X )}$ | $\mathbf{D P S}(\mathbf{Y})$ | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 251 | 0 | 63001 | 0 | 0 |
| $2005 / 06$ | 320 | 42.11 | 102400 | 1773.2521 | 13475.2 |
| $2006 / 07$ | 459 | 5.26 | 210681 | 27.6676 | 2414.34 |
| $2007 / 08$ | 856 | 10.53 | 732736 | 110.8809 | 9013.68 |
| $2008 / 09$ | 588 | 5.5 | 345744 | 30.25 | 3234 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{2 4 7 4}$ | $\mathbf{6 3 . 4 0}$ | $\mathbf{1 4 5 4 5 6 2}$ | $\mathbf{1 9 4 2 . 0 5}$ | $\mathbf{2 8 1 3 7 . 2 2}$ |

## Correlation

$$
\begin{aligned}
r & =\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
& =\frac{5 \times 28137.22-2474 \times 63.40}{\sqrt{5 \times 1454562-(2474)^{2}} \sqrt{5 \times 1942.05-(63.40)^{2}}} \\
& =\frac{140686.10-156851.60}{1073.37 \times 75.43}=\frac{-16165.50}{80964.30}=-0.20
\end{aligned}
$$

$r^{2}=(-0.20)^{2}=0.04 r$

## Regression equation

$\bar{X}=\frac{\sum \mathrm{X}}{\mathrm{N}}=\frac{2474}{5}=494.80 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{N}}=\frac{63.04}{5}=12.68$
$\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 28137.22-2474 \times 63.40}{5 \times 1942.05-(63.40)^{2}}=\frac{-16165.50}{5690.69}=-2.84$
$a=\bar{X}-b \bar{Y}=494.80-(-2.84) \times 12.68=530.81$

## T-Test

$\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{-0.20 \sqrt{5-2}}{\sqrt{1-(-0.20)^{2}}}=\frac{-0.3464}{0.9798}=-0.3535$
$/ t /=0.3535$

## iii. Simple Correlation and Regression Analysis between Market Price per Share and Book Value Per Share of ACEDBL.

| Year | $\mathbf{M V P S}(\mathbf{X )}$ | $\mathbf{B V P S}(\mathbf{Y})$ | $\boldsymbol{X}^{\mathbf{2}}$ | $\boldsymbol{Y}^{\mathbf{2}}$ | $\mathbf{X Y}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2004 / 05$ | 251 | 179 | 63001 | 32041 | 44929 |
| $2005 / 06$ | 320 | 201 | 102400 | 40401 | 64320 |
| $2006 / 07$ | 459 | 112 | 210681 | 12544 | 51408 |
| $2007 / 08$ | 856 | 122 | 732736 | 14884 | 104432 |
| $2008 / 09$ | 588 | 108 | 345744 | 11664 | 63504 |
| $\mathbf{N}=\mathbf{5}$ | $\mathbf{2 4 7 4}$ | $\mathbf{7 2 2}$ | $\mathbf{1 4 5 4 5 6 2}$ | $\mathbf{1 1 1 5 3 4}$ | $\mathbf{3 2 8 5 9 3}$ |

## Correlation

$$
\begin{aligned}
r & =\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\sqrt{\mathrm{~N} \sum \mathrm{X}^{2}-\left(\sum \mathrm{X}\right)^{2}} \sqrt{\mathrm{~N} \sum \mathrm{Y}^{2}-\left(\sum \mathrm{Y}\right)^{2}}} \\
& =\frac{5 \times 328593-2474 \times 722}{\sqrt{5 \times 1454562-(2474)^{2}} \sqrt{5 \times 11534-(722)^{2}}} \\
& =\frac{1642965-1786228}{1073.37 \times 190.75} \quad=\frac{-143263}{204746.56}=-0.70
\end{aligned}
$$

$r^{2}=(-0.70)^{2}=0.49$

## Regression equation

$$
\overline{\mathrm{X}}=\frac{\sum \mathrm{X}}{\mathrm{~N}}=\frac{2474}{5}=494.80 \quad \overline{\mathrm{Y}}=\frac{\sum \mathrm{Y}}{\mathrm{~N}}=\frac{722}{5}=144.40
$$

$$
\mathrm{b}=\frac{\mathrm{N} \sum \mathrm{XY}-\sum \mathrm{X} \sum \mathrm{Y}}{\mathrm{~N} \sum \mathrm{Y}^{2}-(\mathrm{Y})^{2}}=\frac{5 \times 328593-2474 \times 722}{5 \times 111534-(722)^{2}}=\frac{-1432637}{36386}=-3.94
$$

$$
a=\bar{X}-b \bar{Y}=494.80-(-3.94) \times 144.40=1063.74
$$

## T-Test

$\mathrm{t}=\frac{r \sqrt{n-2}}{\sqrt{1-r^{2}}}=\frac{-0.70 \sqrt{5-2}}{\sqrt{1-(-0.70)^{2}}}=\frac{-1.2124}{0.7141}=-1.6977$
$/ t /=1.6977$

## Appendix 7

## Calculation of Market Return ( $\mathbf{R}_{\mathbf{m}}$ )

| Year | NEPSE Index | Annual Return <br> $\left(\mathbf{R}_{\mathbf{m}}\right)$ | $\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}$ | $\left(\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}\right)^{\mathbf{2}}$ |
| :---: | :---: | :---: | :---: | :---: |
| $2003 / 04$ | 222.04 |  |  |  |
| $2004 / 05$ | 286.67 | 29.11 | -2.78 | 7.7284 |
| 2005.06 | 386.83 | 34.94 | 3.05 | 9.3025 |
| $2006 / 07$ | 683.95 | 76.81 | 44.92 | 2017.8064 |
| $2007 / 08$ | 963.36 | 40.85 | 8.96 | 80.2816 |
| $2008 / 09$ | 749.1 | -22.24 | -54.13 | 2930.0569 |
|  |  | $\sum \mathbf{R}_{\mathbf{m}}=\mathbf{1 5 9 . 4 7}$ |  | $\left(\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}\right)^{\mathbf{2}}=\mathbf{5 0 4 5 . 1 7 5 8}$ |

$\mathbf{R}_{\mathbf{m}}=\frac{\mathrm{NI}_{\mathrm{t}+1}-\mathrm{NI}_{\mathrm{t}}}{\mathrm{NI}_{\mathrm{t}}}$ where, $\mathrm{NI}_{\mathrm{t}+1}=$ NEPSE index at year " $\mathrm{t}+1$ " and $\mathrm{NI}_{\mathrm{t}}=$ NEPSE index at year " $t$ "

Average Market Return $\left(\overline{\mathbf{R}}_{\mathrm{m}}\right)=\frac{\sum \mathrm{R}_{\mathrm{m}}}{\mathrm{N}}=\frac{159.47}{5}=31.89 \%$
Variance of Market Return, $\operatorname{Var}\left(\mathbf{R}_{\mathrm{m}}\right)=\frac{\sum \mathrm{R}_{\mathrm{m}}-\overline{\mathrm{R}}_{\mathrm{m}}}{\mathrm{N}}=\frac{5045.1758}{5-1}=$ 1261.30\%

Standard Deviation of Market Return $\left(\boldsymbol{\sigma}_{\mathrm{m}}\right)=\sqrt{\operatorname{Var} \mathrm{R}_{\mathrm{m}}}=\sqrt{1261.30}=$ 35.51\%

## Appendix 8

i. Calculation of Actual Rate of $\operatorname{Return}\left(\overline{\mathbf{R}}_{\mathrm{m}}\right)$ and Required Rate of Return E(R) of NABIL

| Year | Closing <br> Price | Cash <br> Dividend | $\mathbf{R}_{\mathbf{j}}$ | $\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}$ | $\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathbf{j}}$ | $\left(\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}\right)\left(\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathbf{j}}\right)$ |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: |
| $2003 / 04$ | 1000 |  |  |  |  |  |  |  |
| $2004 / 05$ | 1505 | 70 | 57.5 | -2.78 | 9.29 | -25.8262 |  |  |
| $2005 / 06$ | 2240 | 85 | 54.48 | 3.05 | 6.27 | 19.1235 |  |  |
| $2006 / 07$ | 5050 | 100 | 129.91 | 44.92 | 81.7 | 3669.964 |  |  |
| $2007 / 08$ | 5275 | 60 | 5.64 | 8.96 | -42.57 | -381.4272 |  |  |
| $2008 / 09$ | 4899 | 35 | -6.46 | -54.13 | -54.67 | 2959.2871 |  |  |
|  |  | $\sum \mathbf{R}_{\mathbf{j}}=\mathbf{2 4 1 . 0 7}$ |  |  |  | $\sum\left(\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}\right)\left(\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathbf{j}}\right)=\mathbf{6 2 4 1 . 1 2 1 2}$ |  |  |

Average Actual Rate of Return $\left(\overline{\mathbf{R}}_{\mathbf{j}}\right)=\frac{\sum \mathrm{R}_{\mathrm{j}}}{\mathrm{N}}=\frac{241.07}{5}=48.21$
Co- Variance, $\operatorname{Cov}\left(\mathbf{R}_{\mathbf{m}}, \mathbf{R}_{\mathbf{j}}\right)=\frac{\sum(\mathrm{Rm}-\overline{\mathrm{R} m})(\mathrm{Rj}-\overline{\mathrm{R}} \mathrm{j})}{\mathrm{N}-1}=\frac{6241.12}{5-1}=1560.28$
Beta Coefficient $(\boldsymbol{\beta})=\frac{\operatorname{Cov}\left(\mathrm{R}_{\mathrm{m}}, \mathrm{R}_{\mathrm{j}}\right)}{\operatorname{Var}\left(\mathrm{R}_{\mathrm{m}}\right)}=\frac{1560.28}{1261.30}=1.23$
Required Rate of Return, $\mathbf{E}(\mathbf{R})=\operatorname{Rf}+\left(\overline{\mathrm{R}}_{\mathrm{m}}-\mathrm{Rf}\right) \times \beta=5.16+(31.89-$ $5.16) \times 1.23=38.04$

## ii. Calculation of Actual Rate of Return $\left(\overline{\mathbf{R}}_{\mathbf{m}}\right)$ and Required Rate of Return E(R) of BOK

| Year | Closing <br> Price | Cash <br> Dividend | $\mathbf{R}_{\mathbf{j}}$ | $\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}$ | $\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathbf{j}}$ | $\left(\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}\right)\left(\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathbf{j}}\right)$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $2003 / 04$ | 295 |  |  |  |  |  |
| $2004 / 05$ | 430 | 15 | 50.85 | -2.78 | -2.32 | 6.4496 |
| $2005 / 06$ | 850 | 18 | 101.86 | 3.05 | 48.69 | 148.5045 |
| $2006 / 07$ | 1375 | 20 | 64.12 | 44.92 | 10.95 | 491.874 |
| $2007 / 08$ | 2350 | 2.11 | 71.06 | 8.96 | 17.89 | 160.2944 |


| $2008 / 09$ | 1825 | 7.37 | -22.03 | -54.13 | -75.2 | 4070.576 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  | $\sum \mathbf{R}_{\mathbf{j}}=\mathbf{2 6 5 . 8 6}$ |  | $\sum\left(\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}\right)\left(\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathbf{j}}\right)=\mathbf{4 8 7 7 . 6 9 8 5}$ |  |

Average Actual Rate of Return $\left(\overline{\mathbf{R}}_{\mathbf{j}}\right)=\frac{\sum \mathrm{R}_{\mathbf{j}}}{\mathrm{N}}=\frac{265.86}{5}=53.17$
Co- Variance, $\operatorname{Cov}\left(\mathbf{R}_{\mathbf{m}}, \mathbf{R}_{\mathbf{j}}\right)=\frac{\sum(\mathrm{Rm}-\overline{\mathrm{R}} \mathrm{m})(\mathrm{Rj}-\overline{\mathrm{R}} \mathbf{j})}{\mathrm{N}-1}=\frac{4877.70}{5-1}=1219.42$
Beta Coefficient $(\boldsymbol{\beta})=\frac{\operatorname{Cov}\left(\mathrm{R}_{\mathrm{m}}, \mathrm{R}_{\mathrm{j}}\right)}{\operatorname{Var}\left(\mathrm{R}_{\mathrm{m}}\right)}=\frac{1219.42}{1261.30}=0.97$
Required Rate of Return, $\mathbf{E}(\mathbf{R})=\operatorname{Rf}+\left(\overline{\mathrm{R}}_{\mathrm{m}}{ }^{-} \mathrm{Rf}\right) \times \beta=5.16+(31.89$ $5.16) \times 0.97=31.09$
iii. Calculation of Actual Rate of Return $\left(\overline{\mathbf{R}}_{m}\right)$ and Required Rate of Return E(R) of NFC

| Year | Closing Price | Cash Dividend | $\mathbf{R}_{\mathbf{j}}$ | $\mathbf{R}_{\mathrm{m}} \mathbf{-} \overline{\mathbf{R}}_{\mathrm{m}}$ | $\mathbf{R}_{\mathbf{j}} \mathbf{-} \overline{\mathbf{R}}_{\mathbf{j}}$ | $\left(\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}\right)\left(\mathbf{R}_{\mathbf{j}} \mathbf{-} \overline{\mathbf{R}}_{\mathbf{j}}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2003/04 | 360 |  |  |  |  |  |
| 2004/05 | 295 | 0.53 | -17.91 | -2.78 | -54.16 | 150.5648 |
| 2005/06 | 263 | 0.53 | -10.67 | 3.05 | -46.92 | -143.106 |
| 2006/07 | 460 | 5 | 76.81 | 44.92 | 40.56 | 1821.9552 |
| 2007/08 | 1050 | 16 | 131.74 | 8.96 | 95.49 | 855.5904 |
| 2008/09 | 1050 | 13.68 | 1.3 | -54.13 | -34.95 | 1891.8435 |
|  |  | $\sum \mathrm{R}_{\mathrm{j}}=181.27$ |  | $\sum\left(\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathrm{m}}\right)\left(\mathbf{R}_{\mathrm{j}}-\overline{\mathbf{R}}_{\mathrm{j}}\right)=\mathbf{4 5 7 6 . 8 4 7 9}$ |  |  |

Average Actual Rate of Return $\left(\overline{\mathbf{R}}_{\mathbf{j}}\right)=\frac{\sum \mathrm{R}_{\mathbf{j}}}{\mathrm{N}}=\frac{181.27}{5}=36.25$
Co- Variance, $\operatorname{Cov}\left(\mathbf{R}_{\mathbf{m}}, \mathbf{R}_{\mathbf{j}}\right)=\frac{\sum(\mathrm{Rm}-\overline{\mathrm{R}} \mathrm{m})(\mathrm{Rj}-\overline{\mathrm{R}} \mathrm{j})}{\mathrm{N}-1}=\frac{4576.8479}{5-1}=$ 1144.21

Beta Coefficient $(\boldsymbol{\beta})=\frac{\operatorname{Cov}\left(\mathrm{R}_{\mathrm{m}}, \mathrm{R}_{\mathrm{j}}\right)}{\operatorname{Var}\left(\mathrm{R}_{\mathrm{m}}\right)}=\frac{1144.21}{1261.30}=0.91$

Required Rate of Return, $\mathbf{E}(\mathbf{R})=\operatorname{Rf}+\left(\overline{\mathrm{R}}_{\mathrm{m}}-\mathrm{Rf}\right) \times \beta=5.16+(31.89-$
$5.16) \times 0.91=29.48$
iv. Calculation of Actual Rate of Return $\left(\overline{\mathbf{R}}_{\mathrm{m}}\right)$ and Required Rate of Return $\mathrm{E}(\mathrm{R})$ of LFC

| Year | Closing <br> Price | Cash <br> Dividend | $\mathbf{R}_{\mathbf{j}}$ | $\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}$ | $\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathbf{j}}$ | $\left(\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}\right)\left(\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathbf{j}}\right)$ |  |  |  |  |  |  |  |
| :--- | :--- | :--- | ---: | ---: | ---: | ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $2003 / 04$ | 235 |  |  |  |  |  |  |  |  |  |  |  |  |
| $2004 / 05$ | 250 | 0 | 6.38 | -2.78 | -32.39 | 90.0442 |  |  |  |  |  |  |  |
| $2005 / 06$ | 245 | 0 | -2 | 3.05 | -40.77 | -124.3485 |  |  |  |  |  |  |  |
| $2006 / 07$ | 330 | 0 | 34.69 | 44.92 | -4.08 | -183.2736 |  |  |  |  |  |  |  |
| $2007 / 08$ | 860 | 0 | 160.61 | -9.96 | 121.84 | 1091.6864 |  |  |  |  |  |  |  |
| $2008 / 09$ | 810 | 0 | -5.81 | -54.13 | -44.58 | 2413.1154 |  |  |  |  |  |  |  |
|  |  | $\sum \mathbf{R}_{\mathbf{j}}=\mathbf{1 9 3 . 8 7}$ |  |  |  |  |  |  |  | $\sum\left(\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}\right)\left(\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathbf{j}}\right)=\mathbf{3 2 8 7 . 2 2 3 9}$ |  |  |  |

Average Actual Rate of $\operatorname{Return}\left(\overline{\mathbf{R}}_{\mathbf{j}}\right)=\frac{\sum \mathrm{R}_{\mathbf{j}}}{\mathrm{N}}=\frac{193.87}{5}=38.77$
Co- Variance, $\operatorname{Cov}\left(\mathbf{R}_{\mathbf{m}}, \mathbf{R}_{\mathbf{j}}\right)=\frac{\sum(\mathrm{Rm}-\overline{\mathrm{R}} \mathrm{m})(\mathrm{Rj}-\overline{\mathrm{R}} \mathrm{j})}{\mathrm{N}-1}=\frac{3287.2239}{5-1}=$ 821.80

Beta Coefficient $(\boldsymbol{\beta})=\frac{\operatorname{Cov}\left(\mathrm{R}_{\mathrm{m}}, \mathrm{R}_{\mathbf{j}}\right)}{\operatorname{Var}\left(\mathrm{R}_{\mathrm{m}}\right)}=\frac{821.80}{1261.30}=0.65$
Required Rate of Return, $\mathbf{E}(\mathbf{R})=\operatorname{Rf}+\left(\overline{\mathrm{R}}_{\mathrm{m}}-\mathrm{Rf}\right) \times \beta=5.16+(31.89-$
$5.16) \times 0.65=22.53$
v. Calculation of Actual Rate of Return $\left(\overline{\mathbf{R}}_{\mathrm{m}}\right)$ and Required Rate of Return E(R) of SDBL

| Year | Closing Price | Cash Dividend | $\mathbf{R}_{\mathbf{j}}$ | $\mathbf{R}_{\mathrm{m}}-\overline{\mathbf{R}}_{\mathbf{m}}$ | $\mathbf{R}_{\mathbf{j}} \mathbf{-} \overline{\mathbf{R}}_{\mathbf{j}}$ | $\left(\mathbf{R}_{\mathrm{m}}-\overline{\mathbf{R}}_{\mathbf{m}}\right)\left(\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathbf{j}}\right)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2003/04 | 100 |  |  |  |  |  |
| 2004/05 | 100 | 0 | 0 | -2.78 | -106.57 | 296.2646 |
| 2005/06 | 100 | 10 | 10 | 3.05 | -96.57 | -294.5385 |
| 2006/07 | 310 | 0.79 | 210.79 | 44.92 | 104.22 | 4681.5624 |
| 2007/08 | 1525 | 10 | 395.16 | 8.96 | 288.59 | 2585.7664 |
| 2008/09 | 253 | 5 | -83.08 | -54.13 | -189.65 | 10265.7545 |
|  |  | $\sum \mathbf{R}_{\mathrm{j}}=\mathbf{5 3 2 . 8 7}$ |  | $\sum\left(\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}\right)\left(\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathrm{j}}\right)=\mathbf{1 7 5 3 5 . 8 0 9 4}$ |  |  |

Average Actual Rate of Return $\left(\overline{\mathbf{R}}_{\mathbf{j}}\right)=\frac{\sum \mathrm{R}_{\mathbf{j}}}{\mathrm{N}}=\frac{532.87}{5}=106.57$
Co- Variance, $\operatorname{Cov}\left(\mathbf{R}_{\mathbf{m}}, \mathbf{R}_{\mathbf{j}}\right)=\frac{\sum(\mathrm{Rm}-\overline{\mathrm{R}} \mathrm{m})(\mathrm{Rj}-\overline{\mathrm{R}} \mathrm{j})}{\mathrm{N}-1}=\frac{17534.8094}{5-1}=$ 4383.70

Beta Coefficient $(\boldsymbol{\beta})=\frac{\operatorname{Cov}\left(\mathrm{R}_{\mathrm{m}}, \mathrm{R}_{\mathrm{j}}\right)}{\operatorname{Var}\left(\mathrm{R}_{\mathrm{m}}\right)}=\frac{4383.70}{1261.30}=3.47$
Required Rate of Return, $\mathbf{E}(\mathbf{R})=\operatorname{Rf}+\left(\overline{\mathrm{R}}_{\mathrm{m}}-\mathrm{Rf}\right) \times \beta=5.16+(31.89-$
$5.16) \times 3.47=97.91$

## vi. Calculation of Actual Rate of Return $\left(\bar{R}_{m}\right)$ and Required Rate of Return $\mathrm{E}(\mathbf{R})$ of ACEDBL

| Year | Closing <br> Price | Cash <br> Dividend | $\mathbf{R}_{\mathbf{j}}$ | $\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}$ | $\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathbf{j}}$ | $\left(\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}\right)\left(\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathbf{j}}\right)$ |
| :--- | :--- | :--- | ---: | ---: | :--- | ---: |
| $2003 / 04$ | 173 |  |  |  |  |  |
| $2004 / 05$ | 251 | 0 | 45.09 | -2.78 | 10.2 | -28.356 |
| $2005 / 06$ | 320 | 2.11 | 28.33 | 3.05 | -6.56 | -20.008 |
| $2006 / 07$ | 459 | 5.26 | 45.08 | 44.92 | 10.19 | 457.7348 |
| $2007 / 08$ | 856 | 0.53 | 86.61 | 8.96 | 51.72 | 463.4112 |
| $2008 / 09$ | 588 | 5.5 | -30.66 | -54.13 | -65.55 | 3548.2215 |
|  |  | $\sum \mathbf{R}_{\mathbf{j}}=\mathbf{1 7 4 . 4 5}$ | $\sum\left(\mathbf{R}_{\mathbf{m}}-\overline{\mathbf{R}}_{\mathbf{m}}\right)\left(\mathbf{R}_{\mathbf{j}}-\overline{\mathbf{R}}_{\mathbf{j}}\right)=\mathbf{4 4 2 1 . 0 0 3 5}$ |  |  |  |

Average Actual Rate of $\operatorname{Return}\left(\overline{\mathbf{R}}_{\mathbf{j}}\right)=\frac{\sum \mathrm{R}_{\mathbf{j}}}{\mathrm{N}}=\frac{174.45}{5}=34.89$
Co- Variance, $\operatorname{Cov}\left(\mathbf{R}_{\mathbf{m}}, \mathbf{R}_{\mathbf{j}}\right)=\frac{\sum(\mathrm{Rm}-\overline{\mathrm{R}} \mathrm{m})(\mathrm{Rj}-\overline{\mathrm{R}} \mathrm{j})}{\mathrm{N}-1}=\frac{4421.0035}{5-1}=$ 1105.25

Beta Coefficient $(\boldsymbol{\beta})=\frac{\operatorname{Cov}\left(\mathrm{R}_{\mathrm{m}}, \mathrm{R}_{\mathrm{j}}\right)}{\operatorname{Var}\left(\mathrm{R}_{\mathrm{m}}\right)}=\frac{1105.25}{1261.30}=0.88$
Required Rate of Return, $\mathbf{E}(\mathbf{R})=\operatorname{Rf}+\left(\overline{\mathrm{R}}_{\mathrm{m}}-\mathrm{Rf}\right) \times \beta=5.16+(31.89$ -
5.16) $\times 0.88=28.68$

## Appendix 9

## Calculation of Industrial Average:

(Average performance of 15 companies- 5 commercial banks, 5 finance companies and 5 development banks)

|  | MVPS(A) | EPS(B) | DPS(C) | BVPS(D) | $(\mathbf{A}-\overline{\mathbf{A}})^{2}$ | $(\mathrm{B}-\mathrm{B})^{2}$ | $(\mathrm{C}-\overline{\mathbf{C}})^{2}$ | $(\mathrm{D}-\mathrm{D})^{2}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\frac{1}{\hat{*}}$ | 1505 | 105.49 | 70 | 337 | 317554.79 | 3713.684 | 1688.388 | 16223.12 |
|  | 2240 | 129.21 | 85 | 381 | 1686154.19 | 7167.316 | 3146.088 | 29367.68 |
|  | 5050 | 137.08 | 140 | 418 | 16879936.6 | 8561.801 | 12340.99 | 43418.06 |
|  | 5275 | 108.31 | 100 | 354 | 18779395.6 | 4065.338 | 5053.788 | 20842.7 |
|  | 4899 | 106.76 | 85 | 324 | 15661964.6 | 3870.084 | 3146.088 | 13080.5 |
| 光 | 430 | 30.01 | 15 | 213.60 | 261611.79 | 208.8025 | 193.4881 | 15.7609 |
|  | 850 | 43.67 | 48 | 230.67 | 8368.5904 | 0.7744 | 364.4281 | 442.6816 |
|  | 1375 | 43.50 | 20 | 164.68 | 187939.59 | 1.1025 | 79.3881 | 2020.503 |
|  | 2350 | 59.94 | 42.11 | 222.51 | 1983928.59 | 236.8521 | 174.24 | 165.8944 |
|  | 1825 | 54.68 | 47.37 | 206.25 | 780607.59 | 102.6169 | 340.7716 | 11.4244 |
| $\begin{aligned} & \cup \\ & \mathbf{Y} \end{aligned}$ | 295 | 69.12 | 10 | 271.94 | 417936.39 | 603.6849 | 357.5881 | 3882.536 |
|  | 263 | 17.37 | 10 | 184.65 | 460335.11 | 738.7524 | 357.5881 | 624.0004 |
|  | 460 | 25.36 | 50 | 199.89 | 231822.99 | 368.2561 | 444.7881 | 94.8676 |
|  | 1050 | 14.62 | 16 | 136.03 | 11776.5904 | 895.8049 | 166.6681 | 5416.96 |
|  | 1050 | 19.44 | 13.68 | 131.75 | 11776.5904 | 630.5121 | 231.9529 | 6065.294 |
| U | 250 | 50.36 | 50 | 227 | 478144.59 | 33.7561 | 444.7881 | 301.7169 |
|  | 245 | 37.53 | 0 | 190.80 | 485084.39 | 49.2804 | 835.7881 | 354.5689 |
|  | 330 | 92.24 | 50 | 238.93 | 373907.79 | 2274.336 | 444.7881 | 858.49 |


|  | 860 | 61.49 | 50 | 218.15 | 6638.9904 | 286.9636 | 444.7881 | 72.5904 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 810 | 57.85 | 0 | 201.03 | 17286.9904 | 176.89 | 835.7881 | 73.96 |
| 会 | 100 | 17.04 | 0 | 134.37 | 708088.59 | 756.8001 | 835.7881 | 5664.068 |
|  | 100 | 6.25 | 10 | 105.22 | 708088.59 | 1466.89 | 357.5881 | 10901.45 |
|  | 310 | 25.50 | 15 | 155.35 | 398766.99 | 362.9025 | 193.4881 | 2946.318 |
|  | 1525 | 15.79 | 10 | 133.20 | 340495.59 | 827.1376 | 357.5881 | 5841.545 |
|  | 253 | 5.46 | 5 | 102.69 | 474004.71 | 1528.028 | 571.6881 | 11436.16 |
| $\begin{aligned} & \text { 会 } \\ & \text { 岛 } \\ & 4 \end{aligned}$ | 251 | 18 | 0 | 179 | 476762.63 | 704.9025 | 835.7881 | 938.1969 |
|  | 320 | 27.94 | 42.11 | 201 | 386237.39 | 275.8921 | 174.24 | 74.4769 |
|  | 459 | 6.71 | 5.26 | 112 | 232786.95 | 1431.866 | 559.3225 | 9531.617 |
|  | 856 | 12.96 | 10.53 | 122 | 7306.8304 | 997.9281 | 337.8244 | 7679.017 |
|  | 588 | 6.92 | 5.50 | 108 | 124948.11 | 1416.017 | 548.0281 | 10328.66 |
|  | 100 | 51.10 | 20 | 471.89 | 708088.59 | 42.9025 | 79.3881 | 68780.31 |
|  | 103 | 30.57 | 26 | 377.87 | 703048.71 | 195.4404 | 8.4681 | 28304.70 |
|  | 110 | 41.84 | 36.73 | 332.30 | 691358.99 | 7.3441 | 61.1524 | 15047.93 |
|  | 148 | 24.04 | 28.10 | 201.21 | 629610.51 | 420.6601 | 0.6561 | 70.8964 |
|  | 184 | 25.48 | 21.05 | 171.42 | 573775.95 | 363.6649 | 61.7796 | 1460.004 |


|  | 800 | 39.50 | 12.50 | 201 | $\begin{aligned} & 20016.590 \\ & 4 \end{aligned}$ | $\begin{aligned} & 25.502 \\ & 5 \end{aligned}$ | $\begin{aligned} & 269.28 \\ & 81 \end{aligned}$ | 74.4769 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1260 | 59.35 | 55.46 | 240 | 101454.99 | 219.04 | $\begin{aligned} & \hline 704.90 \\ & 25 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 922.336 \\ 9 \end{array}$ |
|  | 1729 | 62.57 | 30 | 234 | 620187.75 | $\begin{aligned} & 324.72 \\ & 04 \\ & \hline \end{aligned}$ | 1.1881 | $\begin{array}{\|l\|} \hline 593.896 \\ 9 \end{array}$ |
|  | 2450 | 57.87 | 40.83 | 223 | $\begin{aligned} & 2275632.5 \\ & 0 \end{aligned}$ | $\begin{aligned} & 177.42 \\ & 24 \end{aligned}$ | $\begin{aligned} & \hline 142.08 \\ & 64 \end{aligned}$ | $\begin{array}{\|l\|} \hline 178.756 \\ 9 \end{array}$ |
|  | 1388 | 37.42 | 20 | 162 | 199380.11 | $\begin{aligned} & 50.836 \\ & 9 \end{aligned}$ | $\begin{aligned} & \hline 79.388 \\ & 1 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2268.61 \\ & 7 \end{aligned}$ |
|  | 870 | 54.22 | 20 | 219.87 | 5109.3904 | $\begin{aligned} & 93.508 \\ & 9 \end{aligned}$ | $\begin{aligned} & \hline 79.388 \\ & 1 \end{aligned}$ | $\begin{aligned} & 104.857 \\ & 6 \end{aligned}$ |
|  | 1379 | 62.78 | 25 | 217.67 | 191423.75 | $\begin{aligned} & 332.33 \\ & 29 \end{aligned}$ | $\begin{aligned} & 15.288 \\ & 1 \end{aligned}$ | 64.6416 |
|  | 2430 | 78.42 | 40 | 280.82 | $\begin{aligned} & 2215691.7 \\ & 9 \end{aligned}$ | $\begin{aligned} & 1147.1 \\ & 77 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 122.98 \\ & 81 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 5068.01 \\ & 6 \end{aligned}$ |
|  | 3132 | 91.82 | 50 | 321.77 | $\begin{aligned} & 4798377.8 \\ & 7 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2234.4 \\ & 53 \end{aligned}$ | $\begin{aligned} & \hline 444.78 \\ & 81 \\ & \hline \end{aligned}$ | $\begin{array}{\|l\|} \hline 12575.3 \\ 8 \\ \hline \end{array}$ |
|  | 2455 | 99.99 | 60 | 313.64 | $\begin{aligned} & 2290742.7 \\ & 9 \end{aligned}$ | $\begin{aligned} & 3073.5 \\ & 94 \end{aligned}$ | $\begin{array}{\|l} \hline 966.58 \\ 81 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 10818.0 \\ 8 \\ \hline \end{array}$ |
|  | 445 | 47.97 | 63.16 | 251.38 | 246492.39 | $\begin{aligned} & 11.696 \\ & 4 \end{aligned}$ | $\begin{aligned} & 1173.0 \\ & 63 \end{aligned}$ | $\begin{aligned} & 1743.06 \\ & 3 \end{aligned}$ |
|  | 500 | 38.60 | 10.53 | 195.71 | 194904.59 | $\begin{aligned} & 35.402 \\ & 5 \end{aligned}$ | $\begin{aligned} & 337.82 \\ & 44 \end{aligned}$ | $193.766$ |
|  | 500 | 22.24 | 21.053 | 162.80 | 194904.59 | $\begin{aligned} & 497.73 \\ & 61 \\ & \hline \end{aligned}$ | $\begin{aligned} & 61.732 \\ & 45 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2193.04 \\ & 9 \end{aligned}$ |
|  | 1490 | 25.37 | 31.58 | 158.59 | 300874.19 | 367.87 | 7.1289 | 2605.08 |


|  |  |  |  |  |  | 24 |  | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 980 | 19.88 | 10.53 | 140.61 | 1483.7904 | $\begin{array}{\|l\|} \hline 608.60 \\ 89 \\ \hline \end{array}$ | $\begin{aligned} & \hline 337.82 \\ & 44 \end{aligned}$ | 4763.76 |
| W222222222 | 130 | 30.70 | 19.05 | 152.69 | 658499.79 | $\begin{array}{\|l} \hline 191.82 \\ 25 \\ \hline \end{array}$ | $\begin{aligned} & 97.219 \\ & 6 \end{aligned}$ | $\begin{aligned} & 3242.16 \\ & 4 \end{aligned}$ |
|  | 195 | 28.28 | 35.09 | 134.41 | 557232.39 | $\begin{aligned} & 264.71 \\ & 29 \end{aligned}$ | $\begin{array}{\|l\|} \hline 38.192 \\ 4 \\ \hline \end{array}$ | $\begin{aligned} & \hline 5658.04 \\ & 8 \end{aligned}$ |
|  | 200 | 34.24 | 21.05 | 167.51 | 549792.59 | $\begin{array}{\|l\|} \hline 106.29 \\ 61 \\ \hline \end{array}$ | $\begin{aligned} & 61.779 \\ & 6 \end{aligned}$ | $\begin{aligned} & 1774.09 \\ & 4 \\ & \hline \end{aligned}$ |
|  | 283 | 28.89 | 21.05 | 167.39 | 433595.91 | $\begin{aligned} & \hline 245.23 \\ & 56 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 61.779 \\ & 6 \end{aligned}$ | $\begin{aligned} & 1784.21 \\ & 8 \end{aligned}$ |
|  | 335 | 15.26 | 0 | 136.98 | 367817.99 | $\begin{array}{\|l\|} \hline 857.90 \\ 41 \\ \hline \end{array}$ | $\begin{array}{\|l} \hline 835.78 \\ 81 \\ \hline \end{array}$ | $\begin{aligned} & 5278.02 \\ & 3 \\ & \hline \end{aligned}$ |
|  | 100 | 0.76 | 0 | 95.77 | 708088.59 | $\begin{aligned} & 1917.5 \\ & 64 \end{aligned}$ | $\begin{array}{\|l\|} \hline 835.78 \\ 81 \\ \hline \end{array}$ | $\begin{aligned} & 12964.1 \\ & 0 \end{aligned}$ |
|  | 100 | 10.46 | 0 | 106.23 | 708088.59 | $\begin{array}{\|l} \hline 1162.1 \\ 28 \end{array}$ | $\begin{array}{\|l} \hline 835.78 \\ 81 \\ \hline \end{array}$ | $10691.5$ |
|  | 210 | 16.98 | 0 | 117.84 | 535062.99 | $\begin{array}{\|l} \hline 760.10 \\ 49 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 835.78 \\ 81 \\ \hline \end{array}$ | $\begin{aligned} & 8425.40 \\ & 4 \\ & \hline \end{aligned}$ |
|  | 236 | 26.84 | 0 | 143.10 | 497702.03 | $\begin{array}{\|l\|} \hline 313.64 \\ 41 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 835.78 \\ 81 \\ \hline \end{array}$ | $4426.24$ |
|  | 225 | 32.35 | 0 | 138.31 | 513343.59 | 148.84 | $\begin{array}{\|l\|} \hline 835.78 \\ 81 \\ \hline \end{array}$ | $\begin{aligned} & 5086.54 \\ & 2 \end{aligned}$ |
|  | 920 | 47.91 | 31.58 | 239.59 | 461.3904 | $\begin{aligned} & \hline 11.289 \\ & 6 \\ & \hline \end{aligned}$ | 7.1289 | $\begin{array}{\|l\|} \hline 897.601 \\ 6 \\ \hline \end{array}$ |
|  | 1100 | 59.24 | 35 | 228.72 | $\begin{aligned} & \hline 25128.590 \\ & 4 \end{aligned}$ | $\begin{array}{\|l\|} \hline 215.79 \\ 61 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 37.088 \\ 1 \\ \hline \end{array}$ | $\begin{aligned} & \hline 364.428 \\ & 1 \end{aligned}$ |
|  | 1740 | 60.66 | 40 | 264.74 | 637634.19 | $\begin{aligned} & 259.53 \\ & 21 \end{aligned}$ | $\begin{aligned} & 122.98 \\ & 81 \end{aligned}$ | $\begin{aligned} & 3037.11 \\ & 2 \end{aligned}$ |
|  | 1980 | 62.74 | 45 | 247.95 | $\begin{aligned} & 1078523.7 \\ & 9 \end{aligned}$ | $\begin{array}{\|l\|} \hline 330.87 \\ 61 \\ \hline \end{array}$ | $\begin{aligned} & \hline 258.88 \\ & 81 \end{aligned}$ | $\begin{aligned} & 1468.42 \\ & 2 \end{aligned}$ |
|  | 1760 | 61.90 | 43.56 | 256.52 | 669974.99 | $\begin{aligned} & 301.02 \\ & 25 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 214.62 \\ & 25 \\ & \hline \end{aligned}$ | $\begin{aligned} & 2198.67 \\ & 2 \end{aligned}$ |
| $\begin{aligned} & \text { N } \\ & 0 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 2 \\ & 4 \\ & 4 \end{aligned}$ | 200 | 30.02 | 20 | 207.01 | 549792.59 | $\begin{aligned} & \hline 211.12 \\ & 09 \end{aligned}$ | $\begin{array}{\|l} \hline 79.388 \\ 1 \\ \hline \end{array}$ | 6.8644 |
|  | 150 | 5.46 | 35.09 | 232.57 | 626440.59 | $\begin{array}{\|l\|} \hline 1528.0 \\ 28 \end{array}$ | $38.192$ | $\begin{aligned} & 526.243 \\ & 6 \end{aligned}$ |
|  | 212 | 14.81 | 26.31 | 240.22 | 532141.07 | $\begin{array}{\|l\|} \hline 884.46 \\ 76 \\ \hline \end{array}$ | 6.76 | $\begin{aligned} & 935.748 \\ & 1 \\ & \hline \end{aligned}$ |
|  | 358 | 33.24 | 0 | 186.72 | 340448.91 | $\begin{aligned} & 127.91 \\ & 61 \end{aligned}$ | $\begin{array}{\|l\|} \hline 835.78 \\ 81 \\ \hline \end{array}$ | $\begin{array}{\|l\|} \hline 524.868 \\ 1 \\ \hline \end{array}$ |
|  | 495 | 42.81 | 0 | 240.22 | 199344.39 | 3.0276 | $\begin{aligned} & 835.78 \\ & 81 \end{aligned}$ | $\begin{aligned} & 935.748 \\ & 1 \end{aligned}$ |
|  | 115 | 55.68 | 10 | 159.60 | 683069.19 | $\begin{aligned} & 123.87 \\ & 69 \end{aligned}$ | $\begin{aligned} & \hline 357.58 \\ & 81 \end{aligned}$ | $\begin{aligned} & 2503.00 \\ & 1 \end{aligned}$ |
|  | 105 | 128.30 | 30 | 257.90 | 699698.79 | 7014.0 | 1.1881 | 2329.99 |


|  |  |  |  |  |  | 63 |  | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 242 | 44.68 | 73.68 | 192.93 | 489272.27 | 0.0169 | $\begin{aligned} & 2004.3 \\ & 53 \end{aligned}$ | 278.89 |
|  | 265 | 39.34 | 20 | 192.93 | $\begin{array}{\|l} 457625.1 \\ 9 \end{array}$ | $\begin{aligned} & 27.144 \\ & 1 \\ & \hline \end{aligned}$ | $\begin{aligned} & 79.388 \\ & 1 \end{aligned}$ | 278.89 |
|  | 328 | 52.15 | 33.53 | 132.54 | $\begin{aligned} & 376357.7 \\ & 1 \end{aligned}$ | 57.76 | $\begin{aligned} & \hline 21.344 \\ & 4 \\ & \hline \end{aligned}$ | $\begin{aligned} & 5942.8 \\ & 68 \\ & \hline \end{aligned}$ |
| $\begin{gathered} \text { TOT } \\ \text { AL } \end{gathered}$ | $\begin{aligned} & \hline 706 \\ & 11 \\ & \hline \end{aligned}$ | $\begin{aligned} & 3341 . \\ & 42 \end{aligned}$ | $\begin{aligned} & 2168 . \\ & 07 \\ & \hline \end{aligned}$ | $\begin{aligned} & 15722 . \\ & 65 \end{aligned}$ | $\begin{array}{\|l\|} \hline 9275735 \\ \mathbf{6 . 7 0} \\ \hline \end{array}$ | $\begin{aligned} & \hline 71049 . \\ & 08 \end{aligned}$ | $\begin{aligned} & 50992 . \\ & 63 \end{aligned}$ | $\begin{aligned} & \hline 448066 \\ & .20 \end{aligned}$ |

## Mean Values:

$\operatorname{Mean} \operatorname{MVPS}(\overline{\mathrm{A}})=\frac{\sum \mathrm{A}}{\mathrm{N}}=\frac{70611}{75}=941.48$

Mean EPS $(\overline{\mathrm{B}})=\frac{\sum \mathrm{B}}{\mathrm{N}}=\frac{3341.42}{75}=44.55$

Mean DPS $(\overline{\mathrm{C}})=\frac{\sum \mathrm{C}}{\mathrm{N}}=\frac{2168.07}{75}=28.91$

Mean BVPS $(\overline{\mathrm{D}})=\frac{\sum \mathrm{D}}{\mathrm{N}}=\frac{15722.65}{75}=209.63$

## Standard Deviations:

Standard Deviation of $\operatorname{MVPS}\left(\delta_{\mathrm{A}}\right)=\sqrt{\frac{\sum(\mathrm{A}-\overline{\mathrm{A}})^{2}}{\mathrm{~N}}}=\sqrt{\frac{92757356.70}{75}}=1112.10$
Standard Deviation of $\operatorname{EPS}\left(\delta_{B}\right)=\sqrt{\frac{\sum(B-\bar{B})^{2}}{N}}=\sqrt{\frac{71049.08}{75}}=30.78$
Standard Deviation of DPS $\left(\delta_{\mathrm{C}}\right)=\sqrt{\frac{\sum(\mathrm{C}-\overline{\mathrm{C}})^{2}}{\mathrm{~N}}}=\sqrt{\frac{50992.63}{75}}=26.07$

Standard Deviation of BVPS $\left(\delta_{D}\right)=\sqrt{\frac{\sum(\mathrm{D}-\overline{\mathrm{D}})^{2}}{\mathrm{~N}}}=\sqrt{\frac{448066.20}{75}}=77.29$

## Coefficient of Variations (CV)

CV of MVPS $=\frac{\delta_{\mathrm{A}}}{\overline{\mathrm{A}}}=\frac{1112.10}{941.48}=118.12 \%$

CV of $\mathrm{EPS}=\frac{\delta_{\mathrm{B}}}{\overline{\mathrm{B}}}=\frac{30.78}{44.55}=69.08 \%$
CV of DPS $=\frac{\delta_{\mathrm{C}}}{\overline{\mathrm{C}}}=\frac{26.07}{28.91}=90.20 \%$

CV of BVPS $=\frac{\delta_{\mathrm{D}}}{\overline{\mathrm{D}}}=\frac{77.29}{209.63}=36.87 \%$

## APPENDIX 10

## Questionnaire:

## Dear Sir/Madam

This is for your kind information that this is an attempt to identify the determinants of share price of companies listed in NEPSE for the partial fulfillment of the research work required for MBS degree TU. You are kindly requested to fill up the following questionnaire with the best answer in your view. I would be grateful to you for the contribution of your valuable time and effort and I assure that your responses will be kept strictly confidential.

Name: Position: $\qquad$
Institution: $\qquad$

## Questions:

Please use tick mark () in an alternative.

1. When EPS is increased it increases the share price of a company.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree..
2. If a company pays high cash dividend it increases the share price in the market.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
3. If growth rate of a company is low, then share price of the company is high.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree...
(e) Strongly Disagree..
4. When market interest rate is higher then share price of a company is also remain high.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree...
(e) Strongly Disagree..
5. If the retention ratio of a company is high then its share price will also increase in the market.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
6. If a company pays high stock dividend then it increases the share price in the market.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
7. When a company pays high cost of equity, it decreases the share price in the market.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
8. When government is unstable in the country then it decreases the share price in the market.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
9. Cease-fire/peace talk in the country affects positively the price of share in the market.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
10. If the national economy of a country is better then the share price is also better.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
11. When liquidity is high in the market, share price decreases in the market.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree..
12. If there is presence of high risk then share price is also high.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
13. Larger companies have high share price in the market.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree...
(e) Strongly Disagree..
14. When the management of a company is changed, it decreases its share price in the market.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
15. When BVPS of a company is low, it increases the share price in the market.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
16. Share price of a company is affected by its demand and supply.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
17. Rumors and whims in the market affect the companies' share price.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
18. Capital market is not well developed due to poor regulatory mechanism.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
19. Listed companies are not serious towards shareholder's interest.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....
20. NEPSE and SEBON are able to protect shareholder's interest.
(a) Strongly Agree....
(b) Agree....
(c) Undecided....
(d) Disagree....
(e) Strongly Disagree....

## Appendix 11

## Summary of Primary Data

| S.N. | Variables | SA | $\mathbf{A}$ | $\mathbf{U}$ | $\mathbf{D}$ | SD | Total |
| :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | Higher the EPS, Higher the Share Price | 4 | 21 | 4 | 2 | 0 | $\mathbf{3 1}$ |
| 2. | Higher the Cash Dividend, Higher the Share Price | 5 | 19 | 3 | 3 | 1 | $\mathbf{3 1}$ |
| 3. | Lower the Growth rate(g), Higher the Share Price | 0 | 2 | 6 | 20 | 3 | $\mathbf{3 1}$ |
| 4. | Higher the Interest Rate(r), Higher the Share Price | 2 | 17 | 7 | 4 | 1 | $\mathbf{3 1}$ |
| 5. | Higher the Retention Ratio, Better the Share Price | 2 | 14 | 5 | 8 | 2 | $\mathbf{3 1}$ |
| 6. | Stock Dividend Increases the Share Price | 2 | 15 | 5 | 8 | 1 | $\mathbf{3 1}$ |
| 7. | Higher Cost of Equity (Ke) Reduces the Share Price | 2 | 14 | 6 | 8 | 1 | $\mathbf{3 1}$ |
| 8. | Instability of Government Reduces the Share Price | 3 | 22 | 4 | 2 | 0 | $\mathbf{3 1}$ |
| 9. | Cease-Fire/Peace Talk Positively Affect the Share Price | 4 | 22 | 2 | 2 | 1 | $\mathbf{3 1}$ |
| 10. | Better the National Economy, Better the Share Price | 4 | 21 | 4 | 2 | 0 | $\mathbf{3 1}$ |
| 11. | Higher the Market Liquidity, Lower the Share Price | 2 | 9 | 7 | 10 | 3 | $\mathbf{3 1}$ |
| 12. | Higher the Risk, Higher the Share Price | 1 | 2 | 5 | 20 | 3 | $\mathbf{3 1}$ |
| 13. | Larger Companies have Higher Share Price | 3 | 15 | 5 | 7 | 1 | $\mathbf{3 1}$ |
| 14. | Share Price Increases with Change in Management | 0 | 5 | 18 | 7 | 1 | $\mathbf{3 1}$ |
| 15. | Lower the BVPS, Higher the Share Price | 0 | 2 | 5 | 21 | 3 | $\mathbf{3 1}$ |
| 16. | Share Price is affected by Demand and Supply | 4 | 20 | 2 | 4 | 1 | $\mathbf{3 1}$ |
| 17. | Rumors and Whims Affect the Share Price | 4 | 17 | 5 | 3 | 2 | $\mathbf{3 1}$ |
| 18. | Capital Market is not well developed due to <br> Poor Regulatory Mechanism | 4 | 17 | 5 | 4 | 1 | $\mathbf{3 1}$ |
| 19. | Listed Companies are not serious towards <br> Shareholder's Interest | 5 | 16 | 3 | 5 | 2 | $\mathbf{3 1}$ |
| 20. | NEPSE and SEBO/N are able to Protect <br> Shareholder's Interest | 2 | 5 | 3 | 17 | 4 | $\mathbf{3 1}$ |

Where, weight for: $S A=2, A=1, U=0, D=-1$ and $S D=-2$


[^0]:    Source: Table 4.6

