# CHAPTER I

## INTRODUCTION

### 1.1 Background of the Study

Globalization of economies and market has been one of the major instruments of change. Due to globalization, a small sort of change occurred in one sector of economy affects the other sector too. With the result of dynamics of global changes and development, securities markets are rapidly responding. Therefore, securities market has become global phenomena. Security market index is perceived as an indicator of investors' confidence to invest in securities, which obviously, measures economic pulses of that nation. As capital market is a crucial element in the national economy, its role in reinvigorating and boosting the economic activities in the country holds significance. It helps to mobilize domestic resources as well as protect the interest of investors. It plays a significant role to provide the best investment opportunity by transferring the funds from surplus sector to deficit sector through transaction of long-term financial securities.

The efficient stock market and the role of Commercial Bank occupy an important place in financial management as both of these provide capital for the development of industry, trade and business. These financial activities inspire the savers to save and either deposit in bank where bank generates credits or invest in stock that supplies capital to the enterprises. Beside these, commercial bank renders numerous services to their customer in view of facilitating their economic and social life. All the economic activities of each and every country are highly influenced by the commercial banking business as well as stock business of that country. This study aims to explore stock movement and financial performance of Commercial Banks in Nepalese capital market.

No doubt, having a capital deficit economy, Nepal requires a huge amount of investment in productive activities for rapid economic development. Though a decade has passed since Nepal embarked on the path towards open market economy and liberalization policies, there are still a number of problems associated with it. Lack of proper commitment towards implementation of policies, rampant corruption, social and business insecurity and improper coordination between government and private agencies, has affected the overall performance of Nepalese

economy. Despite these shortcomings, capital market has been the most important sector of the Nepalese economy. The capital market offers the opportunity for investors to invest in the long-term ventures and also imparts liquidity to the security holders' by converting the securities of investors into liquid cash before the maturity of project.

In simple sense, securities market is a place where people buy and sell financial instruments. Although securities markets are concentrated in a few locations, they refer more to mechanism, rather than to physical locations designed to facilitate exchange of securities like government bonds, corporate bonds or debentures, ordinary shares, preference shares etc. Therefore, securities market can be defined as a mechanism for bringing together buyers and sellers of financial assets in order to facilitate trading.

The history of capital market in Nepal dates back to the era of Rana Prime Minister Judha Samsher, when Gunjman Singh, the first secretary at the Nepalese Embassy in England returned back to Kathmandu and set up to Industrial council. It drafted the company Act and Nepal bank Act for the first time in 1936 A.D. And Biratnagar Jute Mills Limited initiated the first public flotation of shares in the securities market in 1937 A.D. There were very few companies in Nepal issuing shares to general public until another company Act came into operation in1951. Despite of various barriers, the profit margins are much higher and capital market is the most booming sector in Nepalese economy. In this regard Ram Sharan Dangal, an entrepreneur says it is impossible to take turn for the better without the development of the capital market.

Capital market can be divided into two segments, i.e. securities market and non-Securities market Segment. The long termed nature of business debts, installment debts, commercial debts represented by acceptance bills, accommodation paper etc. and saving and deposits schemes which are not securities bearing fall under the Non-securities segment of the market. Security market deals in the financial instruments such as government bonds, industrial securities, bonds, etc.

A security market can be defined as a mechanism for bringing together buyers and sellers of financial assets in order to facilitate trading. Security markets are secondary markets because the financial assets traded on them were issued at some previous point in time. One of the main functions is price discovery. Price discovery

is a determination of a fair price for the securities it trades. The interaction of buyers and sellers in a security market determine the price of the security.

The securities market is basically divided into two parts; namely the *primary market* where initial flotation of shares take place, and the *secondary market* where the initially floated share are traded ensuring liquidity to the investors in the primary market.

For the development of capital market, needs the development of both the primary and secondary market.

**Primary market** is the market place where instead of goods and services, securities are sold to mobilize the saving for the establishment and operations of the business. Securities issued for the first time are traded in the primary market. The issuer may be a new company or one that has been in business for many years. The first issue of securities by new established company is called initial issue. Additional securities issued by existing companies are termed as further issue. There are three ways in which a company may raise capital in the primary market

- ） Granting stock subscription right to shareholders (i.e. Right Issue)
- ） Granting subscription rights to non-share holders (i.e. Allotment to special group and selected persons)
- ） Issuing new shares without granting subscription rights (i.e. public offering & private placement).

**Secondary Market** is the market place where second hand securities are traded, i.e. securities that have been previously issued are traded in the secondary market. The majority of all capital market transactions occur in the secondary market. The proceeds from sale of securities in the secondary market do not go to the original issuer but to the owners of the securities. In other words, securities are traded among the individual as well as institutional investors.

Stock exchanges are considered as an organized secondary market, which are called voluntary associations of members, who come together for the purpose of buying and selling securities. Only the securities of listed companies are traded in the stock exchanges and are bought & sold by auction. However, the secondary market is said to give liquidity to primary issues, and this liquidity is an essential ingredient in the capital formation process of the economy. NEPSE is only the secondary market in

the country. Nepal Stock Exchange, in short NEPSE, operating under Securities Exchange Act, 1983.

Primary markets facilitate the issuance of new securities, while secondary markets facilitate the trading of existing securities. Whereas primary market transactions provide funds for the initial issuer of securities, secondary market transactions do not. Some securities have a more active secondary market and are therefore more marketable than others. The issuance of new corporate stocks or new treasury securities is a primary market transaction, while the sale of existing corporate stocks or treasury securities holdings by any business or individual is a secondary market transaction.

## 1.2 Securities Market in Nepal: History and Development

Security market is a place where buying & selling of securities takes place in organized way. The history of Security market in Nepal dates back to the era of Rana Prime minister Judda Shamsher when Gunjaman Singh, the first secretary at Nepalese Embassy in England returned back to Kathmandu and set up the "Industrial Council". The council drafted company act and Nepal Bank Act for the first time in 1936. Biratnagar Jute Mills Ltd. Initiated the first public floatation of shares in the securities market in 1937. In the same year, Nepal Bank Ltd also issued the shares.  The ownership of the shares was strictly limited within the Rana families. Subsequently, the development of capital market remained stagnant. Almost two and half decade later, government of Nepal issued treasury bills in 1962 and development bonds in 1964. However, there was no security market to provide liquidity for these bonds until the establishment of Security Exchange Center (SEC) in 1976.

After the introduction of company act in 1951, the first issued treasury bills and bond, and the establishment of SEC were some significant developments in the field of capital markets in Nepal. The establishment of SEC, under the company act was the foundation stone of institutional development of the securities market.

The function of SEC was very limited on trading government bonds and national savings certificate only, which had predominantly held by Nepal Rastra Bank. SEC started secondary market for the corporate securities in 1984.

Securities Board Nepal (SEBON) was established on 26 May 1993 after the first amendment in the Securities Exchange Act 1983 became effective. After eighteen

years of incorporation, HMG Nepal converted Security Exchange Center into Nepal Stock Exchange (NEPSE) on 16 May, 1993, under a programme initiated to develop a competitive and efficient security market.

## Securities Board Nepal (SEBON)

Security board Nepal was established on $26^{th}$ May 1993, under the provision of the securities exchange Act, 1983. It was established with the objective of promoting and protecting the interest of investors by regulating the securities market. Apart from that, SEBON is also responsible for the development of the security market. To get the investor's confidence, it is necessary to make the securities market healthy, transparent and efficient and with this view the government has provide SEBON with various authoritative powers.

SEBON has been supervising the stock markets since its establishment. Its supervisory role has wider scope and extends from the maintenance of company transparency to the monitoring of brokerage firms. A company that does not fulfill the requirements placed by SEBO is delisted from the stock exchange due to the failure to comply with the rules and regulations of the governing body.

## Nepal Stock Exchange (NEPSE)

Nepal Stock Exchange, in short NEPSE, was established on 1993 under securities exchange Act, 1983. Nepal Stock Exchange was known as securities exchange centre earlier. Securities exchange centre was established with an objective of facilitating and promoting the growth of capital markets. The major task undertaken by Nepal Stock exchange are brokerage, undertaking, managing public issue, marking market for government bonds and other financial services. Nepal Stock Exchange is a non profit organization operating under Securities Exchange Act 1983. It is the sole organization for the operation of secondary market for listed security.

The basic objective of NEPSE is to impart free marketability and liquidity to the government and corporate securities by facilitating transactions in its trading floor through member, market intermediaries, such as broker, market makers etc. NEPSE opened its trading floor on 13th January 1994.

It was established with joint effort of Nepal Industrial Development Corporation and Nepal Rastra Bank to mobilize the public saving for ensuring public ownership in

the share public limited companies. In order to promote the stock exchange business, the centre made a series of studies in the beginning regarding both the public limited companies and undertaking the business of buying and selling of securities

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

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

At present there are 11 sales and issue manager and 2 dealers (Secondary market). At present, 159 companies have listed their securities to make them eligible for trading. Recently NEPSE has adopted a computerized electronic trading system replacing the old "Open out-Cry" system. The buying broker with the highest bid posts the price and his code number in the buying column, while the selling broker with the lowest offer posts the price and his code number in the selling column in the computer. The market maker quotes their bid and offer price on their own board before the floor starts. Once the bid and offer price match, contracts between the buying and selling brokers or between the brokers and market makers are concluded on the floor. Currently, NEPSE operates on the 'NEPSE Automated Trading System' (NATS), a fully screen automated trading system, which adopts the principle of an order-driven market. The stock market automation was supported by Asian Development Bank (ADB) under the CFG project (The Himalayan Times, August 25, 2007: 11). NEPSE also adopted T+3 concepts, which allows for transactions and payments to be settled in three days of an agreement.

## 1.2 Statement of Problem

Stock market is always being the most important role in modern capital market. And stock market is becoming one of the most popular investment areas these days. Because of the globalization of capital markets, the spreading of capital becomes faster and easier. It is regarded as one of important economic indicators of countries. After the establishment of Nepal Stock Exchange Limited (NEPSE) in 1994, the concept of capital market, has emerged and grown within a very span of time. There

are various institutions involved in the capital market but they are not showing positive and good performance as per the investor's expectation .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. Most of the government level efforts for the development of the stock market. The high movement of share prices may be the outcome of the efficient market behaviors. The dubious and hazardous movement of share prices has no sound fundamental backing of analysis and relationship to past results revealed in limited financial statements. It is because that the share price has crossed the boundary of the calculated dividend yield, net worth and price multiplies. The reaction is based on the assumption of strong form of the new market efficiency.

Stock market prediction has always had a certain appeal for researchers & financial investors. The reason is that who can beat the market, can gain excess profit. Investors who invest in stock markets usually are not aware of the stock market behavior. They are facing the problems of stock trading as they do not know which stocks to buy and which to sell in order to gain more profits. If they can predict the future behavior of stock prices, they can act immediately upon it and make profit. The more accurate the system predicts the stock price movement, the more profit one can gain from the prediction model. This type of problem of stock trading problem is also facing by the Nepalese investors.

In this context, the research problem of this study can be presented in following points

1. What are the major determinants of the Stock price of Nepalese Commercial Banks listed in NEPSE?

2. Is there any relationship between MPS with the major financial indicators EPS, BVPS and DPS?

3. Are the investors well aware about the trend of financial indicators which have major influence on determining MPS?

4. To what extent it is possible to predict volatility of share price by using technical analysis, fundamental analysis and the efficient market hypothesis?

## 1.3 Objectives of the Study

Every study has its own objective, like wise this study also has its objective. 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. This study aims to identify the factors respective for determinants of stock price and their relationship with the stock price, so that it will give a better insight into the stock price. Furthermore, this study is proposed to meet the following objective:

1. To evaluate the relation of stock price with major financial indicators.
2. To study and evaluate whether stocks of the sampled companies are overpriced, under priced or equilibrium price.
3. To assess different people's opinions regarding the causes of fluctuation in stock price
4. To provide suggestion on the basis of above analysis.

## 1.4 Significance of the study

Although money doesn't grow more than it does in the capital market, Nepalese Stock Market is still failure to convert its potential investors into actual investors. Many investors in Nepal are still unaware about the being doubtful for the investment due to its fluctuation and scandalous based activities. Beside this there are also lack of intuitional and professional experts and brokers in Nepalese stock market to provide the right advice for the investors. Many investors, analysts and brokers in Nepalese Stock market are still failure to apply the popular techniques like 'fundamental analysis' for predicting the stock price. Most of the investors are investing haphazardly in shares rather than analyzing it before investment. Despite the essential of prediction, predictability in NEPSE is difficult.

Findings of this study is helpful to all the parties involved in the stock market and commercial banks, since it provides guidance to the investors about the financial performance of commercial banks. Furthermore, this study helps to predict the future movement of price from the side of investors because the study analyses the fundamental analysis. This study attempts to construct the relation of MPS of the Nepalese commercial banks to the major financial indicators like EPS, BVPS, and DPS etc. The relation is hoped to show the status of Nepalese commercial banks with respect to the determiners of share price. These findings are helpful to the potential investors to make the better investment decision. Moreover, report of this study is important literature in regarding field in Nepalese context.

## 1.5 Limitations of the Study

This study tries to explore the factors determining the stock price in Nepal stock exchange. This study is done for the partial fulfillment of Masters of Business Studies. Time constraints, financial problem and lack of research experience are the primary limitation and other limitations are as follows:

1. This study confine only to Listed Companies of Nepal Stock Exchange and its members.

2. This research 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. This study covers the information of only few fiscal years date.

3. Foreign information and rules affecting the share market is ignored.

4. Studies and reference are also extremely limited in the prospective of Nepalese stock market.

5. Only 5 Companies are taken as sample from the whole listed companies in NEPSE as population, which may not represent the character of whole Nepalese stock market.

## 1.6. Organization of the study

The study concentrates on specific sector i.e. commercial banks. The commercial banking sector is the most efficient sector among others. This study has been organized over altogether five chapters. Starting from Introduction, Review of Literature, Research methodology, Presentation & Analysis of data and summary to conclusion & Recommendation, to get the result of the entire study. A brief outline of this chapter has been outlined as under.

Chapter I: Introduction

The First Chapter entitled "Introduction" introduces the subject, the research problem, objective of the study, along with limitation.

Chapter II: Review of Literature

The second chapter entitled "Review of Literature", contains the 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 document. This chapter mainly relates to the theoretical analysis and brief review of related and pertinent literature available.

Chapter III: Research methodology

The Third Chapter "Research methodology" deals with various methods used to conduct the study. It consists of research design, nature and sources of data. Methods used for data analysis and presentation and tools of analysis.

Chapter IV: Presentation & Analysis of data

The fourth chapter, "Presentation & Analysis of data", contains the presentation, analysis and interpretation of primary as well secondary data to indicate quantitative facts of the Stock price behaviour of the listed companies. It also contains analysis of primary questionnaire.

Chapter V: Summary, conclusion and recommendations

The Last Chapter covers with 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 further performance.

Finally, bibliography and appendix are presented at the end of the study.

# CHAPTER II
## REVIEW OF LITERATURE

### 2.1 Introduction

Review of literature is a basic requirement for any research. Review of literature means reviewing research studies or other relevant proposition in the related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted. It is an integral and mandatory process in research works. The review of literature helps the researcher to avoid repetition in the same task.

The basic ideas about the study can be drawn from the review of related literatures like research writings, different journals, research articles, thesis, newspapers, published or unpublished bibliographies, books, articles, dissertation etc. It is the critical summary of previous research report on a specific topic. This chapter has been divided into the following parts.

i) Conceptual framework

ii) Review of related studies

> ➤ Review of thesis
> ➤ Review of articles and journal

This chapter deals with the concepts and theories related to the theme of present study. The basic concern of the study is to focus on the pricing behaviour 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. The price behaviour of the stock and its trading activity has got the tremendous concentration in security investment.

### 2.2 Conceptual Framework of Financial Market

Conceptual framework is made through the review of different concepts and theories to direct this study. Moreover, reviews of empirical studies on the stock price behavior are made to make present study communicable in the mass literatures. The first section of this chapter contains concepts, middle part deals with theories on stock price behavior. The later section reviews some empirical studies.

### 2.2.1 Financial market

The financial market is still in infancy in Nepal. The financial market plays and important role in the efficient distribution and utilization of resources. So, financial market is extremely important in a capital-poor country like Nepal. Hence, a financial market is defined as a mechanism for trading the financial assets or claims. "Financial market provides a form, in which suppliers of funds and demanders of loans and investment can transact business directly" (Gitman, 1998: P.30). Two financial markets are the money markets and the capital markets. Short term funds of firm are raised from money market and long and middle term funds of firms are raised from capital market. This can be presented below:

### 2.2.1.1 Money Market

Money market is the place where the short term lending and borrowing takes place. It is such type of market, which is dominated by the securities having the maturity period of less than a year. Generally, money market consists of short term marketable securities, liquid and low risk securities such as commercial paper, Government Treasury bills, short term bank loan etc. The money market is created by a financial relationship between suppliers and demanders of short term funds, which have maturities of one year or less. The money market exists because certain individuals, businesses, government and financial institution have temporary idle funds that they wish to place in some type of liquid asset or short term interest earning instrument. At the same time, other individuals, business, governments and financial institutions find themselves in supplier and demanders of short term liquid finds (Gitman, 1988: 31))

The money market is a large, wholesale market where billions of dollars of low-risk, unsecured, short-term, zero coupon debt instruments that are highly liquid, are issued and actively traded everyday. Investors buy money market securities at a discount from their face values and reap whatever income they may earn from price appreciation that typically occurs as the maturity date of the security draws near. At maturity, the face value is repaid to the investor owning the security on that date. (Thapa, Bhattarai & Basnet, 2006. P.239)

### 2.2.1.2 Capital Market

Capital market is an organized market through which buyer and seller of long-term capital meet and function of buying and selling takes place. It means capital markets

are the institutions, those are engaged in mobilization of ideal saving in productive sectors. Therefore, the market where securities are traded is known as capital market. The capital market is a market for long-term securities having maturities greater than one year. The key instruments used in capital market are debt, stock, preferred stock, bonds and convertible issues. The capital market is broadly categorized into two markets namely, primary capital market and secondary capital market (Sharpe and Bailey, 2001: 25-27)

For the development of capital market, needs the development of both the primary and secondary market. Primary market consists of the investment banker, underwriter which issue the companies securities for the first time. Likewise, secondary market consists of stock exchange, stock broker etc which are concerned with the transaction of the securities issued in the primary market. In Nepal, there are nine financial institution engaged in the underwriter activities, which is the main function of the primary market. Similarly, Nepal Stock Exchange is only organized stock exchange in Nepal, where the transaction of securities carried out. The main instruments of capital market in Nepal are common stock, Government Bond (e.g. National saving Certificate, Government Development Bond) Debenture and Preferred Stock etc.

**Primary market**

The term "primary market" is used to denote the market for the original sale of securities by an issuer to the public. A primary market is the place where the new securities of government and corporation are issued and sold. The issuer received cash, which may be invested in productive assets or retirement of debt. The issuer may be a brand new company or that has been in business for years. The securities offer might be a new type for the issuer or additional amount of securities used frequently in the past. The primary markets are media through which new financial assets are issued or generated, satisfying in the part of financial needs of both demander and suppliers of today's fund. (Gitman, 2000:33-34)

For issuing the securities in market, the company has to register its shares in the SEBO to get the legal authority to the issuance of the shares and an issuer should issue their securities through underwriter and investment banker. The institutions that perform the role of an expert in issuing new securities are called investment bankers. These bankers make available advice to the business firms regarding the

nature of security, maturity, interest rate and underwrite the issue of securities. Sometimes the business firm can make the direct sale of the securities to the buyers without underwriting. Such direct sale is called direct placement of securities. (Thapa, Bhattarai & Basnet, 2006. P.4). The main function of primary market is to make the financial capital available to make new investments in building, equipment and stock of necessary goods. (Thapa, Bhattarai & Basnet, 2006. P.20)

**Secondary Market**

The market where the existing and pre-developed securities are bought and sold is called secondary market. Secondary market provides liquidity to the purchases of the securities. High liquidity of the secondary market encourages the investors to invest in the primary market as well. Secondary market can be regarded as the center to convert stocks, bonds and other securities into cash immediately.

Nepal Stock Exchange (NEPSE) is the only a secondary market in Nepal. It is noteworthy that the firm whose securities are being traded in the secondary market is not involved in the security market transaction and thus does not receive any funds from such transaction. Simply, one investor (seller) receives the fund from the investor (buyer). (Thapa, Bhattarai & Basnet, 2006. P.4)

The transaction is more in secondary market than in primary market. But these markets involve in mutually closely related way. For instance, if the price of securities increase in secondary market, the price of security in primary market also increase because of the investment transfer from one market to another according to price and return.( Thapa, Bhattarai & Basnet, 2006. P.20)

**2.2.2 Theory of Price Behaviour**

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 behaviour. They are:

   i.    Inefficient Market Theory
   ii.   Efficient Market Theory

**2.2.2.1 Inefficient Market Theory**

Conventional approach has considered that market is inefficient, which includes technical analysis theory, "Prior to the development of the efficient market theory,

investors were generally divided into two groups: Fundamentalists, Technicians". The two groups are analyzed as follows:

**Technical Analysis Theory**

Technical analysis is one of the important theory of price determination and interpretation of the stock. Technical analysis is based on widely accepted premise that securities price are determined by the supply and demand of securities. This theory involves in the study of past volume and price data of the stock to predict future price fluctuations. Typically, technical analysis records historical financial data on charts. It studies various graphs and charts of past share prices to find meaningful pattern and deduce or conclude about future price movement. By the help of past patterns, this theory predicts future prices. In the technical analysis theory, some charting techniques are used to predict the movements of single security and some are used to predict the movement of a market index. Technical analysis theory recommends for short-term speculation. Based on that recommendation for short term speculation, it forecasts the profitable pattern. The technical analysis theory suggests for the right time purchasing and selling. (Sharpe and Bailey, 2001:683) Technical analyst believes that important information about future price movements can be obtained by studying the historical price movement of stock prices. Financial data are recorded on graph paper and the data are scrutinized in search of repetitive patterns. Technical analysts base their buy and sell decision on the charts they prepare. (Thapa, Bhattarai, Basnet, 2006. P.393)

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

**Fundamental Analysis**

Simply, the fundamental analysis theory refers the formula and principle. According to the technical analyst, the fundamental analysis is idealist part of analysis. So, it is not perfect and market principle of analysis of stock price movement. Fundamental analysis theory also claims that any point of time, an individual stock has an intrinsic value, which is equal to the present value of the future cash flows from the security discounted at appropriate risk, adjusted discount rate, "The value of the common

stock is simply the present value of all the income which the owner of the share will receive" (Fransis, 1986: P 398)

Intrinsic value is the value of the share which is supported by assets, profitability, financial performance, future prospects, industry scenario, economy wide factors, etc. The idea about the intrinsic value helps in making investment decisions. It is believed that shares are likely to command the prices around the intrinsic value, therefore a comparison of intrinsic values and prevailing market price can help in deciding about the scrip to be purchased or sold. If intrinsic value is higher than the market price then the share price should be purchased and sell in vice versa condition (Khatri, 2006:122).

"Fundamental analysis uses different models like Top-Down versus Bottom Up forecasting, Probabilistic forecasting, econometric models, financial statement analysis etc to estimate the value of security" (Sharpe, Alexander and Bailey, 2001, 850-853). Therefore, the fundamental analyst reaches an investment decision on the basis of these analytical tools.

## 2.2.2.2 Efficient Market Theory

Efficient market theory refers the optimum price of the stock in the competition market. Stock price is neither over-valued nor undervalued in the market like monopoly market. This theory involves the study of random or efficient market hypothesis. "In 1990, French mathematicians Louis Bachelier writes a scientific paper suggesting that day-to-day security price fluctuation were random walk theory" (Paul H. Cootner, 1962). In an efficient market investors expect to make only normal profits and earn a normal rate of return on their investments. In such a market any new information immediately and fully reflected in price. New information is just that new, meaning as surprise. In a perfectly efficient market, price changes are close to random. (Sharpe, 1999:106).

Professor Fugene Fama published an empirical study in 1965 that analyzed the stock price movements of all the stocks that make up the DJIA. Fama investigated daily price changes for 30 stock over a 5 year period.

Fama's study was designed to measure the degree of randomness with which stock prices are fluctuated. Fama thought that financial information arrived randomly and assumed that prices responded efficiently to the new information. Fama delineated three levels of market efficiency.

**Weak Form Market Efficiency**: The weakly hypothesis stipulates that historical price and volume data for securities contain non information which can be used to earn a trading profit above that could be attained with a naïve buy and hold investment strategy. Thus, hypothesis suggests that a technical analyst is well recorded but worthless fork lore.

**Semi-Strong Form Market Efficiency**: Semi-strong form market efficiency hypothesis specifies that markets are efficient enough for prices to reflect all publicity available information. Consequently, only those insiders who have access to valuable information could earn a profit larger than what could be earned by using a naïve buy and hold strategy in a semi strong efficient market.

**Strong Form Market Efficiency:** It claims that no one can earn a profit larger than what could be earned with a naïve buy and hold strategy by trading on short-term security price movements. Security markets can be strong efficient of the rates of stock price changes and independent random variables and none of the market participants use inside information. (Thapa, Bhattarai & Basnet, 2006. P.403)

### 2.2.3 Common Stocks

Common stock is a security issued by a company to raise equity capital. It is one of the major sources of long-term (permanent) capital. Funds provided by common equity are used to finance major portion of the firm's fixed assets such as land and building, plant and machinery, vehicle etc. Common stock represents ownership of the company. Common stockholders of a company are its real owners. Their liability, however, is limited to the amount of their investment. Common stock certificates are legal documents that evidence ownership of the holders in a company. Common stockholders have residual claim on income and asset. Common stock dividend is paid after payment of interest to the creditors, tax to the government, preferred dividend to the preferred stockholders. Similarly, in the event of liquidation, common stockholders have a residual claim on the assets of the company after the claim of all creditors and preferred stockholders are settled in full. Common stock does not have the maturity date. Shareholders, however, can sell their stocks in the secondary market. Hence, the company which needs fund for indefinite period issues shares of common stock.

**2.2.3.1 Value of the Common Stock**

Common stock has different values, which are used in different perspective. `

Par value

Par value is stated price in common stock certificates. The corporate charter specifies the par value of a share of common stock. In Nepal, Company Act, 2063 (2006 A.D) has given flexibility to set a par value. A company can set a par value of Rs. 50 each or any other higher amount divisible by the figure ten as provided in the memorandum of association and articles of association.

Book value

Book value is an accounting concept. The firm's book value of equity includes common stock, share premium (additional paid-in capital) and retained earning. It represents owners' contribution to the firm, hence is known as the net worth of a firm. Book value is simply the amount per share of common stock to be received if all the firm's assets are sold for their exact book value and all liabilities (including preference stock) are paid. Book value per share is computed by dividing total book value or total net worth by number of shares outstanding.

$$\text{Book Value} = \frac{\text{Total Net Worth}}{\text{Number of Shares outstanding}}$$

Liquidation value

Liquidation value is the amount that a company could realize if it sells its assets after having terminated its business and paying all creditors. Liquidation value does not include the value of intangible and fictitious assets since the operations of the company are assumed to cease.

Market Value

Market value of a security (common stock) is the current or actual price at which the stock is being traded in the market. Company's future growth, earnings, earning power, level of risk etc. are reflected in market price of the security

Intrinsic value

Intrinsic value of a security is theoretical value or fair value. It is based on future cash flows, future prospects, future state of the economy and other factors that affect the valuation of the security or asset. Intrinsic value of a security is its economic value. In an efficient market, there is no significant difference between market value and intrinsic of the security. Intrinsic value is calculated as the present value of the

expected cash flow stream discounted at the investor's appropriate required rate of return. (Gautam & Thapa. 2008, P.112-113)

### 2.2.3.2 Common Stock Valuation

Common stock is an ownership security. The common stockholders expect to be rewarded through periodic cash dividends and an increasing or at least non declining share value. Like current owners, prospective owners and security analysts frequently estimate the firm's value. They purchase the stock where they believe that it is undervalued that its true value is greater than its market price. They sell the stock when they feel that it is overvalued that its market price is greater than its true value. (Gitman, L.J:P. 299)

### 2.3 Review of Related Studies

### 2.3.1 Review of Journal and Article

Articles, journal and bulletins are of great significance for thesis writing. Number of scholars and academic researchers has written many research articles on theme related to present study. So in order to make this study more comprehensive, some articles, books etc related to stock price are consulted and reviewed.

Fama's (1965) on the random walk model was one of the best definitive and comprehensive study 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 statistical tools such as serial correlation and run test to draw inference about dependent 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 average was +0.03, which is near to zero. But on the daily price changes, 11 out of 30 stocks had correlation coefficient more than twice their compound 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, probable unimportant for both the statistician and 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.

Pradhan (1994), studied the market behaviour in Nepal and concluded that large stocks have larger PE ratios, larger ratios of the market value to book value of equity and smaller dividends. However, PE ratios and dividend ratio are more variable for smaller stocks where as market value to book value of equity is more variable for the larger stocks. Larger stocks also have higher liquidity, higher leverage, lower profitability, lower assets turnover and lower interest coverage. Smaller dividends, lower profitability, lower assets turnover and lower interest coverage for larger stock may be attributed to the fact that most of the larger stocks are at their initial stage of operation. Stocks with larger market value to book value of equity have larger P/E ratio and lower dividends. PE ratios are more variable for stocks with larger market value to book value ratios and dividends ratios are more variable for stocks with smaller market value to book value. Stocks with larger 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 larger market value to book value ratios while earnings, assets turnover and interest coverage are more variable for stocks with smaller market value to book value ratios. Stock with larger PE ratio has larger market value to book value of equity and smaller dividends ratios. However, their ratios of market value to book value of equity, and dividends are more variable for smaller stocks than for larger stocks. Stocks with larger PE ratios have lower liquidity, higher leverage, lower profitability, lower assets turnover and lower interest coverage. However, liquidity, leverage, earnings,
turnover and interest coverage are all more variable for stocks with smaller PE ratios Stock paying higher dividends has higher liquidity, lower leverage, higher earnings, higher turnover and higher interest coverage.

Shrestha (2004) expressed in "A Journal of Management and Development Review" that capital market proved to be one of the important segments of the economy since it facilitates and provides better institutional arrangements for the borrowing and lending of long term funds. Capital market is the general barometer that measures the proper collection and channelization of savings for investment in productive and

income generating assets. The allocative-efficiency in the use funds is the basis for measuring the performance of capital market. In this way, he tries to study the impact of regulation on capital market in Nepal. But what matters crucial is the effective regulation of security market. However, experience in the number of advanced and developing countries shows that regulation of securities market became a felt necessity as a result of manipulative practices and dishonest security dealings. He further describes even in our country, the Get-Quick- Rich traders in securities market turned logical idea into a noxious growth. And there is playing on public money by public limited companies by issuing with rosy prospectus to mislead investors in the absence of appropriate control and supervision through strong enforcement of the regulation.

At last, he suggested that in order to make the impact of regulation meaningful and purposeful, many improvements are required.

### 2.3.2 Review of Unpublished Thesis

Number of thesis relevant to this study has been reviewed for the purpose of finding previous studies and their findings. Some of the important findings are presented here below:

Karki (2007) 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 differences 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 pay out ratio.

) To explain the price behaviour, 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 of 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.

Shrestha (2006) has conducted research on "Share price Behaviour of Commercial Bank 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 main findings of Shrestha are as follows:

) The total numbers of actual and expected runs are statically significant for most of the equity share, 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 increase. This means, the information of past price changes 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 affects the price of shares.

) There exists a low order serial dependence, which helps in certain extent to increase investor's expected profit.

Subedi (2005) studied "Stock Price Behaviour in Nepal", the main objectives of the study were to identify the relationship between stock price and other variables.
The basis 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.

From the above objectives she also concludes the following findings:

- In NEPSE, EPS, DPS & BVPS individually do not have consistent relationship with the market price of shares, among the listed companies, the pricing behaviur varies from one company to another.
- But EPS, DPS and BVPS jointly have significant effect in market prices of shares. 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 behaviour.
- There is difference of proper laws and policies regarding the capital market, shareholders are feeling unsecured to invest in security market due to poor regulatory mechanism to protect shareholders interest.

Amatya (2005) has conducted a research on "Brokerage Services and Stock Price Movement in NEPSE". The main areas of her research are as follows:

- To examine the brokerage services in NEPSE.
- To study the stock price movements of companies in NEPSE.
- To examine the conditions regarding to the change of stock price.

From her study she concluded that,

- Pricing behaviour of stock differs 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 MVPS. It means that there may be other major factors influencing and determining the share price significantly.
- The involvement of different sectors especially the broker with various services and facilities in comparison to cost help to grow the involvement of the number of investors and the number of shares traded.

)  The effective brokering service helps to increase the transaction and thereby create liquidity of stocks.

Shrestha, (2004) studied on the topic "Share prices Behaviour in Nepal" was conducted with the major objective of securities market of Nepal, which are as follows:

)  To analyze development and the efficiency of stock market of Nepal.

)  To analyze whether the sequence of price change are constant with change of the series of random number, expected number and the independent Bin process,

)  To analyze the sensitivity of securities (specially banking, financing and insurance sectors) and compare with market return.

)  To determine the efficiency of the stock market through the theoretical model of efficiency market hypothesis in the securities market.

The researcher examined daily closing prices of 30 stocks during the period from 13 Jan 1998 to Mid July, 2002 by means of serial correlation and runs tests found that the successive price changes are dependent. The main findings of this study are:

)  The price changes in the present and future stock market may not be independent of the price change in the past and present respectively.

)  The change of price of the present and past may be helpful to forecast future price change. Hence, there exists the sufficient amount of opportunities for the sophisticated investors.

)  There exists no profitable trading rule to make greater profit than they would make under the naïve-buy and hold strategy in their speculation through the information of past price changes.

)  When logs of days increase, the mean value of series correlation of coefficient is lower, that indicates the past changes may have low power to predict the future price change.

)  The development of institute rates of stock markets are also not in satisfactory factors and Nepalese stock market is not efficient in pricing shares.

Baral (2003) has conducted research on "Stock Price Movement in Nepalese securities Market". The main objectives of his research are:

- To study and analyze the stock price and volume.
- To study and analyze the rate of newly listed companies and maintenance of already listed companies in NEPSE.
- To study and analyze the investors views regarding the decisions on stock investment.
- To study and examine the signaling factors impact on stock price with the help of NEPSE index.

The major findings of Baral 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.
- On analyzing the price trend of three years, NEPSE index in different months with the help of monthly trend showed that the price trend of different months of the year 2000 was in increasing trend, 2001 in decreasing trend and while that of 2002 was sometimes in increasing trend and sometimes in decreasing trend.
- Studying the sector wise monthly trend analysis for one year (Poush 2058 to Mangsir 2059), it was found that unsystematic activities of the Nepalese stock price market. No experts can certainly forecast about the stock price.
- Volume of stock traded in stock exchange during the stock period was found in increasing trend but in last year it was in decreasing trend.

Dhakal, (2003) studied on "Dividend and Stock Price Behaviour" which was carried out by the data for 16 enterprises form 1998 to 2002. This study used simultaneous equation model as developed by Friend and Puckett (1964)

The main objectives of that study were as follows:

- To test the difference between dividend per share and share prices.
- To determine the impact of dividend policy on share prices.
- To identify whether it is possible to increase the market value of the stock changing dividend policy or payout ratio.

The major findings of the study are as follows

- The difference between dividend per share and stock price is positive in the sample companies.
- Dividend per share affects the share prices variedly in different sectors.

) Changing the dividend policy or dividend per share might help to increase the market price of share.

) The difference between stock prices and lagged earning ratio is negative.

Aryal Mukti (1997) conducted study on "The General Behaviour of Stock Market Price" using serial correlation analysis and runs tests on daily closing prices of 21 stocks during 13 Jan 1994 to 13 September, 1994 is conducted with the following objectives.

) To discuss theoretically movements of stock market price changes of an individual common stock as a whole.

) To develop the empirical probability distribution of successive price changes of an individual common stocks markets as a whole.

) To examine whether the successive price changes of stock market are independent of each other or not.

The main findings of the study are:

) On the basis of the run test and serial correlation, it seems that the independent assumption of random walk model in stock market prices is rejected by collected sample data of 21 companies, at least as a description of price behaviour in Nepal Stock Exchange. The share price changes are dependent on each other.

) The random walk model of security speculative price behavior has been refuted at least in the Nepalese context, which clarifies that the knowledge of the past becomes useful in predicting the future movements of stock market prices.

) The securities, in the past, were incorrectly priced either over or under valued as actual market prices of securities.

) There exists frequent persistence than reaction in the general stock market climate because of the investor's irrational behaviour that causes the irrational movement of prices of stock.

) The general stock market of Nepal for the initial period appeared to be inefficient in incorporating the possible appearance of information into the successive prices change. Therefore, the investing publics are not aware of the information available publicly, appropriately in adjusting with the actual market price.

## 2.4. Research Gap

This research is not a new research in Share Price Movement of Commercial banks of Nepal. There are many research conducted in this topic. In other research, most researchers used serial correlations, run tests and simultaneous equations.

In this research, different financial indicators have been used to analyze its financial performance, which has not been done in other research. Based on primary questionnaire, different analysis has been made. In this research five commercial banks are taken into consideration. The recommendation is given regarding causes of fluctuation of stock price and for the betterment of the listed commercial banks in NEPSE.

# CHAPTER III
## RESEARCH METHODOLOGY

### 3.1 Background

This chapter provides the methods used to achieve the study goal stated earlier. It includes research design, nature and sources of data, selection of enterprises, data proceeding, and methods of analysis and result interpretation procedures. Moreover, this chapter includes the definition of terms used in analysis part.

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 certain objectives. This chapter refers to the overall research method from the theoretical aspects to the collection and analysis of data. This research tries to perform a well- designed 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 techniques.

### 3.2 Research design

Research design is plan, structure and strategy of investigating conceived so as to obtain answer of research question and to control variance. The plan is the overall scheme or program of the research," (Kerlinger, 1986:275),

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 in 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. The study is over finally as planned in the research design.

### 3.3 Population and Samples of Data

The term population of data denotes for the commercial banks listed in NEPSE (as per 2008 A.D) and Sample data are the data from organizations selected from

population in few numbers. First, research has considered only common stock of banks as sample and second, those securities which were listed NEPSE before 2000 A.D, are selected. Third, the banks who's MPS are higher, are selected for the research. The sample data of five banks namely NABIL, SBI, BOK, EBL, HBL represents 19% out of 26 commercial banks.

## 3.4 Nature and Sources of Data

For the purpose of analysis in this research, both the primary and the secondary data are used. The facts and figures provided by the banks are taken into considerations. However some data have also been collected from primary sources. The proforma of interview schedule has been presented in Appendix 8.

The secondary data are collected from the following sources:

1. Annual reports published by the banks
2. Statistical reports of the NRB
3. Related books, magazines, bulletins, journals and newspaper
4. Related website.
5. Publications of Ministry of Finance
6. Security Exchange Board of Nepal

## 3.5 Data Collection Techniques

Data were not available in readymade format. Data manipulated as per research requirements. First, needed data assessed. Second, data are collected and only essential are selected, classified and such a way that they represent qualitative and quantitative glimpse. Only manipulated data used in this research. To manipulate data Computer Application program MS- Office, Professional Edition, 2003 are used. Techniques of data collection are as follows:

⟩ Library Research

⟩ Internet, Homepages and Related Links study

⟩ Review and reports of concerns

For the collection of primary data, structured questionnaires are issued to:

⟩ Bank Personnel

⟩ Public Investors/ Shareholders

⟩ Potential Investors

**3.6 Data Analysis Tools**

The primary and secondary 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.

**3.6.1 Financial Tools**

Except the statistical tools, some financial tools are also used in this research work. "Financial analysis is the process of identifying the financial strength and weakness of the firm by properly establishing relationship between the item of the balance sheet and profit and loss account" (Pandey, LM, financial Management, edition, p.108)

The major financial tools used in this research are:

**3.6.1.1 Earning Per Share (EPS):**

It is earnings made by single units of a share and earning power of a company. It shows the profitability of the firm 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 shareholders by no. of share outstanding. The earning available to the shareholders is calculated by net profit after taxes and preference dividends.

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

**3.6.1.2 Dividend per Share (DPS):**

The DPS is the amount paid on dividend to the holder of one share of the stock. Only financial strong companies distribute 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

### 3.6.1.3 Market Share price per Share (MPS)

MPS is the market value per share of the stock on the floor of stock exchange at a specified date. It is the most important attribute of the stock market. In other words, it is a trading price of a stock in the market. MPS reflects the functional status of the concerned firm. MPS will be high if the financial status of the firm is sound and vice versa. It is calculated as:

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

### 3.6.1.4 Book Value per Share (BVPS)

The sum of the cumulative retained earnings and other entries (such as common stocks and contributed in 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. It is calculated as:

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

### 3.6.1.5 Holding Period Returns

A key measure of investors' success is the rate at which their funds have grown during the investment period. The total holding period rate (HPR) of a share of stocks depends on the increase (or decrease) in the price of the share over the investment period as well as on any dividend income the share has provided. The rate of return is defined as rupees earned over the investment period per rupee invested. It is represented by R and expressed in terms of percentage basis. It is calculated as

$$HPR = \frac{\text{Ending Price - Beginning Price + Cash Dividend}}{\text{Beginning Price}}$$

Symbolically,

$$HPR = \frac{P_t + P_{t+1} + D_t}{P_{t+1}} = \text{Capital Gain + Dividend Yield}$$

Where, $P_t$ = Price of a stock at time t

$P_{t+1}$ = Price of a stock at time t +1

$D_t$ = Dividend per share at time t

### 3.6.1.6 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. $R_m$ denotes it. Under this study, NEPSE index will be used. It is a value weighted index and companies of all the stocks listed in NEPSE. The NEPSE index is used for the study.

$$\text{Annual Market Return } (R_m) = \frac{\text{Ending NEPSE Index-Beginning NEPSE Index}}{\text{Beginning NEPSE Index}}$$

$$\text{Annual Market Return } (\overline{R}_m) = \frac{R_m}{N}$$

Where,

$R_m$ = Summation of annual market return

N= Number of observation

**Risk of Market Returns**

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:

$$\text{Standard Deviation } (\sigma_m) = \sqrt{\frac{(R_m - \overline{R}_m)^2}{N-1}}$$

### 3.6.1. 7 Market Sensitivity Analysis

**Covariance**

The covariance measures how two variables co-vary. It is a measure of the absolute association between two variables. Here, the returns of individual stocks and the market return co-vary are measured by covariance between the return of individual stocks and market return. It is computed as:

$$\text{Cov } R_j, R_m = \frac{[(R_j - \overline{R}_j)(R_m - \overline{R}_m)]}{N}$$

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. It can be calculated by using following formula

$$\beta_j = \frac{COV(R_m\ R_j)}{\sigma^2_m}$$

COV $(R_m\ R_j)$ is the covariance between the return of an individual asset and the returns of the market and $\sigma^2_m$ is the variance of the market returns. Stocks can be classified as aggressive or defensive or average depending on the value of beta coefficients.

| Beta coefficient ($\beta$) | Stocks classification | Degree of risk |
|---|---|---|
| Exactly 1 | Average stock | Equally risky as the market |
| Greater than 1 | Aggressive stock | More risky than the market |
| Less than 1 | defensive stock | Less risky than the market |

Beta coefficient can also be related with the CAPM equation to determine the required rate of return of a given stock. The required rate of return (Ki) is the risk free rate of return ($R_f$) plus a risk premium (RPM=$\{R_m - R_f\}$) based on the beta of the stock ($\beta_j$)

$K_i = R_f + \beta \square (R_m - R_f)$ or $K_i = R_f + RPM\beta_j$

**3.6.2 Statistical tools**

Statistical tools are the mathematical techniques used to facilitate the analysis and interpretation of numerical data. "Statistical Analysis is one particular language, which describe the data and makes possible to talk about the relation and the difference of the variables."

**3.6.2.1 Average (Mean)**

Mean is the value, which represents the group of values and gives an idea about the concentration of values in the central part of the distribution. An average gives us a point, which is most representative of the data. It depicts the characteristics of the

whole group. The value of the AM is obtained by adding together all the items and b dividing this total by the number of items.

Mathematically,

Arithmetic Mean (AM) is given by,

$$\overline{X} = \frac{x}{n}$$

Where,

$\overline{X}$ = Arithmetic Mean

n = Number of observations

   x = Sum of all the values of variable X


**3.6.2.2 Standard Deviation**

The standard Deviation (σ) measures the absolute dispersion. The greater the standard deviation, greater will be magnitude of the deviations of the values from their mean. A small standard deviation means a high degree of uniformity of the observations as well as homogeneity of a series. The smaller the SD means the lower the riskiness of the stock and vice versa. Smaller SD shows the good performance of the company and vice versa.

Mathematically,

$$\sigma = \sqrt{\frac{(X-\overline{X})^2}{N-1}}$$


**3.6.2.3 Coefficient of Variation (CV)**

Coefficient of Variation (CV) is a relative measure. To compare the variability between two or more series, CV is more appropriate statistical tool.

Mathematically,

$$CV = \frac{\sigma}{\overline{X}}$$

The result shown by the SD & mean cannot provide correct decision. So, to have the correct decision, CV is calculated. It is because CV is used to compare when both SD & the mean values of the stock get differ. Two variables can be compared by the

help of C.V. Less the C.V. more will be the uniformity, consistency etc. and more the C.V. less will be the uniformity, consistency etc.

### 3.6.2.4 Correlation Analysis

Correlation is defined as the relationship between dependent variable and independent variable. If the two or more variables are so related that the change in the value of dependent variable then they are said to have correlation. Correlation analysis is defined as the statistical technique which measures the degree and direction of relationship between the variables.

The degree of relationship between two variables is known as simple correlation (Sharma and Chaudhari, 2003:405). The most widely used in practice for calculating correlation coefficient between two variables is "**Karl Pearson's correlation coefficient**". The correlation coefficient between two variables X and Y, usually denoted by r(X,Y) or $r_{xy}$ or simply r, is a numerical measure of linear relationship between them and is defined as

$R_{12}$ = correlation coefficient between $X_1$ and $X_2$

$$\text{Correlation Coefficient (r)} = \frac{n\ x_1 x_2\ Z(\ x_1)(\ x_2)}{\sqrt{n\ x_1^2\ Z(\ x_1)^2}\ \sqrt{n\ x_2^2\ Z(\ x_2)^2}}$$

The value of r lies between -1 and +1. Symbolically, $-1 \leq r \leq +1$

The correlation coefficient is symmetric in two variables, i.e. $r_{xy} \neq r_{yx}$ (It can be verified by exchanging X and Y in the formula). It is a pure number independent of the unit of measurement.

Interpretation of correlation coefficient

i.   When r = +1, there is perfect positive correlation

ii.  When r = -1, there is perfect negative correlation

iii. When r = 0, there is no correlation

iv.  When r lies between 0.7 and 0.999 (-0.7 to -0.999) there is a high degree of positive (or negative) correlation.

v.   When r lies between 0.5 and 0.699 (-0.5 to -0.699) there is a moderate degree of positive (or negative) correlation.

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

### 3.6.2.5 Coefficient of Determination

The coefficient of determination is the way to measure the contribution of independent variables in predicting the dependent variables. It is more appropriate while verifying the results than the correlation coefficient and computed by square of the correlation coefficient as mentioned below.

Coefficient of Determination $(r^2) = r \times r$

It is the proportion of total variation in y that is explained by the linear relation between x & y. The value of $r^2$ lies between 0 & 1. Symbolically, $0 \leq r^2 \leq 1$

The value of $r^2$ close to zero implies the absence of any significant correlation between x & y, r close to 1 implies a strong correlation between x & y.


### 3.6.2.6 Probable Error (P.E)

If r is the correlation coefficient in a sample of n pairs of observations, then its standard error (S.E) is given by:

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

Probable error (P.E) of correlation coefficient is given by:

P.E(r) $= 0.6745 \times$ S.E (r)

$$= 0.6745 \frac{1 - r^2}{\sqrt{n}}$$

Probable error is an old measure for testing the reliability of an observed correlation coefficient. Probable error of correlation coefficient denoted by P.E is the measure of testing the reliability of the calculated value of r.

i) If r < P.E it is insignificant, so perhaps there is no evidence of correlation

ii) If r > P.E it is significant


### 3.6.2.7 Regression Analysis

Regression is the statistical tool, with the help of which we can predict the unknown value of one variable from known value of any other variable. Assuming that the two variables are closely related, we can estimate the value of one variable from the value of another. The variable, whose value is given, is called independent variable and the variable whose value is to be predicted is called dependent variable. It is a statistical tool for determining relationship between the variables by the establishment of an approximate functional relationship between them. It is used to

determine that whether the dependent variable is influenced by the given independent variable or not.

Under this study, simple regression analysis is being used. It describes the average relationship between two variables. In this study, the following simple regression has been analyzed.

MPS = a + bEPS………….. (i)

MPS = a + bDPS…………. (ii)

MPS = a + bBVPS………… (iii)

### 3.6.2.8 Graphs:

Graph help to show the general trend of the ratios in respect to the time. A very common way of presenting data for two variables, which have a relationship, is in a figure or chart graph that works best when the data is continuous. A figure is used to show the changes of dependent variables in relation to the change of independent variables. It is common practice to place the independent variable along X-axis and dependent variable on Y-axis. For the calculation, the researcher has selected the financial ratios as dependent variable and the time in years as independent variables.

### 3.6.2.9 Research Questions

A questionnaire is a list of queries designed to elicit the required information in the form of short answers filled into the blank spaces or through multiple choice questions. Research questions are being used to collect primary data.

# CHAPTER IV

## DATA PRESENTATION AND ANALYSIS

### 4.1 Introduction

This chapter, data analysis and interpretation is major part of the study. In this part, the analytical exploration and manipulation of data has been attempted within the frame of the research methodology and then analyzed data are presented with appropriate form like tables, graphs and diagrams. In this chapter, relevant and available data of five listed companies, which had been taken as sample from the categorized sectors by NEPSE and an attempt has been made to the study.

This chapter intends to analyze collected secondary data and also primary datas and interpret that research. In this chapter efforts have been made to present and analyze the collected data. The source of data was company brochure, annual reports, NEPSE website, SEBON website and library. These collected data are presented in systematic formats and analyzed using different appropriate tools and techniques. Data collected from various sources were classified and tabulated as requirement of the study and in accordance to the nature of collected data.

### 4.2 Analysis of Financial Performance of the Company

The performances of individual Company that are listed in the stock exchange have direct impact on capital market. A company having a good performance has highest market price, higher demand of stock, lower risk and lower cost of capital.

Various indicators are used to analyze the company's performance. The used indicators are EPS, MPS, DPS, and BVPS.

### 4.2.1 Earning Per Share

Earnings Per share refer the rupee amount earned per share of common stock outstanding. The higher earning indicates the better achievement of the profitability of the banks by mobilizing their funds and vice versa. The profitability of a firm from the point of view of the ordinary share holders is the EPS. It measures the profit available to the equity holders on a per share basis i.e. the amount that they can get on every share held. The earning per share of the banks under the study is tabulated as follows:

**Table no. 4.1**

**Earning Per Share of Concern Banks**

| Year | NABIL | BOK | HBL | EBL | SBI |
|---|---|---|---|---|---|
| 2004/05 | 105.49 | 30.10 | 47.91 | 54.22 | 13.29 |
| 2005/06 | 129.21 | 43.67 | 59.24 | 62.78 | 18.27 |
| 2006/07 | 137.08 | 43.50 | 60.66 | 78.42 | 39.35 |
| 2007/08 | 108.31 | 59.94 | 62.74 | 91.82 | 28.33 |
| 2008/09 | 106.76 | 54.68 | 61.90 | 99.99 | 36.18 |
| Mean | 117.37 | 46.38 | 58.49 | 77.45 | 27.08 |
| SD | 13.15 | 10.33 | 5.42 | 17.15 | 10.03 |
| CV | 0.1120 | 0.2227 | 0.0927 | 0.2214 | 0.3703 |

*Source: Annual Reports of SEBON*

The above table shows the EPS of five sampled banks over the five years period. NABIL has the mean EPS of Rs. 117.37. It is observed that EPS was below the average in the initial study period. However, its performance improved over the study period except in 2007/08, in its EPS is decrease. It shows that the performance of NABIL is not satisfactory. BOK has the average EPS of Rs. 46.38, which is higher than EPS of the first 3 year. However, in last 2 year, the EPS has get increased. It shows that BOK performance is satisfactory. Likewise, in case of HBL, its average EPS is Rs. 58.49. Except in year 2004/05, its EPS is above the average. It shows that its performance is improving over the study period. Likewise, EBL has average of Rs. 77.45. EPS is below the average in first 2 year and is in increasing trend till 2008/09. EBL has better performance as compared to other banks. Finally, SBI has average mean of Rs. 27.08. Its EPS is below the average in 2004/05 & 2005/06. Its EPS showed a increasing trend in last 3 year.

The CV of EPS in SBI is the highest, which means that SBI's common stocks are riskier as compared to other banks. The CV of HBL is lower as compared with others banks hence it is less risky among all.

Thus it could be concluded that HBL has better performance as compared to other banks, in regards of EPS.

**Fig no. 4.1**

**Earning Per Share of Concern Banks**
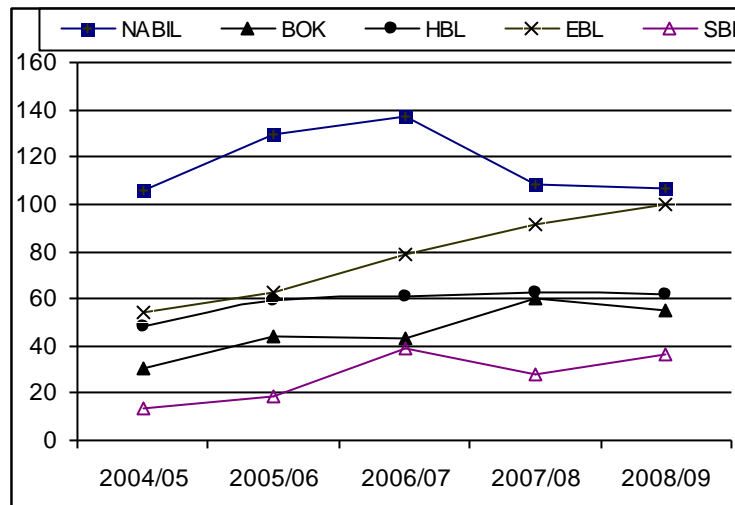


The above figure shows the Earning per share of NABIL, BOK, HBL, EBL & SBI of five years period. EPS of NABIL seems to be highest, followed by EBL, HBL, BOK & SBI with regards to average EPS. The higher level of EPS shows the company's good performance. Increase in performance means increase net profit. The higher level of EPS increases the market price of stock. The share price of the company is generally dependent on indicators like situation of the company, Earning per share and Price Earnings Ratio.

Thus, for the good performance and growth, sampled banks should increase their profit amount. One of the measures to increase profit amount can be increment in deposit collection.

### 4.2.2 Dividend per Share

The percentage of earning the firm pays in cash to its shareholders is known as dividend. Nothing is more important than dividends to stockholders. They buy shares of firm with the hope of sharing profit earned by firms. More profits mean more dividends coming in.

**Table No. 4.2**

**Dividend per Share of Concern Banks**

| Year | NABIL | BOK | HBL | EBL | SBI |
|------|-------|-----|-----|-----|-----|
| 2004/05 | 70.00 | 15.00 | 11.58 | 0.00 | 0.00 |
| 2005/06 | 85.00 | 18.00 | 30.00 | 25.00 | 5.00 |
| 2006/07 | 100.00 | 20.00 | 15.00 | 10.00 | 12.59 |
| 2007/08 | 60.00 | 2.11 | 25.00 | 20.00 | 0.00 |
| 2008/09 | 35.00 | 7.37 | 12.00 | 30.00 | 2.11 |
| Mean | 70.00 | 12.50 | 18.72 | 17.00 | 3.94 |
| SD | 0.22 | 6.74 | 7.44 | 10.77 | 4.70 |
| CV | 0.3143 | 0.5394 | 0.3975 | 0.6335 | 1.1930 |

*Source: Annual Reports of SEBON*

It is observed that DPS of NABIL in initial period is Rs. 70, which is equals to its average. It increases its EPS up to Rs. 100. But, in year 2008/09, decreases to Rs. 35, which is equal to half of its average. Its performance was good up to 2006/07, but currently, its performance is not so satisfactory. BOK has average DPS of Rs. 12.50. In the first 3 year, it has paid handsome DPS, but in last 2 year, its DPS is not so good. Thus, BOK is slightly deteriorating its performance than before year. Similarly, in case of HBL, it is observed that its DPS is in fluctuation stage. It is observed that DPS was below the average Rs. 18.72 in the initial study period. From the 2nd year, there occurred fluctuation in its DPS. In case of EBL, its average DPS is Rs. 17. It is observed that EBL hasn't paid any dividend in the initial period due to lower profit earning. However, in the 2nd year, its DPS rate became higher than its average. Then, again it get increased in 2007/08 & 2008/9 after decreasing below the average in 2006/07. It is observed that, the average DPS of SBI is Rs. 3.94 which is lower than other sampled banks. It hasn't paid any dividend in 2004/05 & 2007/08. However, its performance over the study period in 2005/06& 2006/07 had increased. But again, it is obliged to decrease its performance level due to lower DPS.

The CV of DPS of SBI is the highest and NABIL has the lowest. The CV of SBI is most risky as compared to other sampled banks. The least CV of NABIL indicates that NABIL has the highest consistency in paying dividend.

From the above analysis, it could be concluded that NABIL has better performance among the sampled banks.

**Fig no. 4.2**

**Dividend per Share of Concern Banks**
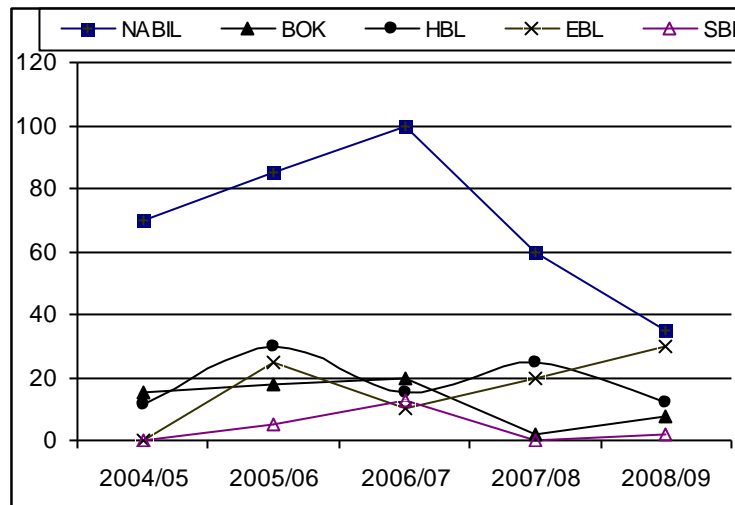


The above figure shows the DPS of sampled banks. With regards to average DPS, NABIL bank seems to be market leader in this segment too. Eventually, it is followed by HBL, EBL, BOK & SBI. Most companies pay out its earnings as dividend rather than to retain them for firm's growth. Dividends are periodic cash payment by the bank to its shareholders. Most of the shareholders invest their money in firm in return to have periodic dividend. Higher the dividend means higher the immediate cash flows to investor which is good.

It is believed that the declaration of dividend has positive impact on price of share. In Nepalese context, only the banking sector is regular on paying dividend. This may be one of the reasons for such high prices of banking sector in stock market.

### 4.2.3 Market price Per Share

The market price of any asset, indeed, depends on the future earning power of the assets. Once the shares issued in the primary market are listed in the stock exchange, investors are able to buy and sell the shares among themselves with the help of brokerage firm. The prices of shares are determined by demand and supply preferences. The average market price per share of the banks under study is presented in table as follows:

**Table No. 4.3**

**Market Price per Share of Concerned Banks**

| Year | NABIL | BOK | HBL | EBL | SBI |
|---|---|---|---|---|---|
| 2004/05 | 1505.00 | 430.00 | 920.00 | 870.00 | 335.00 |
| 2005/06 | 2240.00 | 850.00 | 1100.00 | 1379.00 | 612.00 |
| 2006/07 | 5050.00 | 1375.00 | 1740.00 | 2430.00 | 1176.00 |
| 2007/08 | 5275.00 | 2350.00 | 1980.00 | 3132.00 | 1511.00 |
| 2008/09 | 4899.00 | 1825.00 | 1760.00 | 2455.00 | 1900.00 |
| Mean | 3793.00 | 1366.00 | 1500.00 | 2053.20 | 1106.80 |
| SD | 1590.37 | 681.38 | 412.79 | 815.07 | 572.33 |
| CV | 0.4192 | 0.4988 | 0.2752 | 0.3970 | 0.5171 |

*Source: Annual Reports of SEBON*

From the above table, it is observed that, the MPS of entire bank are below the average of their respective MPS of the study period in 1st 2 year. However, in the last 3 year, their MPS are higher than their average MPS. It indicates that banks are improving their performance in recent years.

Thus, the above analysis shows that the average closing MPS and standard deviation of NABIL is the highest and that of SBI is the lowest too. CV of market price in SBI is higher among the sampled bank which indicates that there is high risk involved in market price of share for the investors and shareholders of this bank. The CV of MPS in HBL is low which indicates that there is less risk involved in market price of share and hence, the investors and share holders are less risky of this bank. There is less risk in HBL due to less fluctuation in dividend payment over the five years.

From the above analysis, it is observed that HBL has better performance among the sampled banks.

**Fig no. 4.3**

**Market Price per Share of Concern Banks**
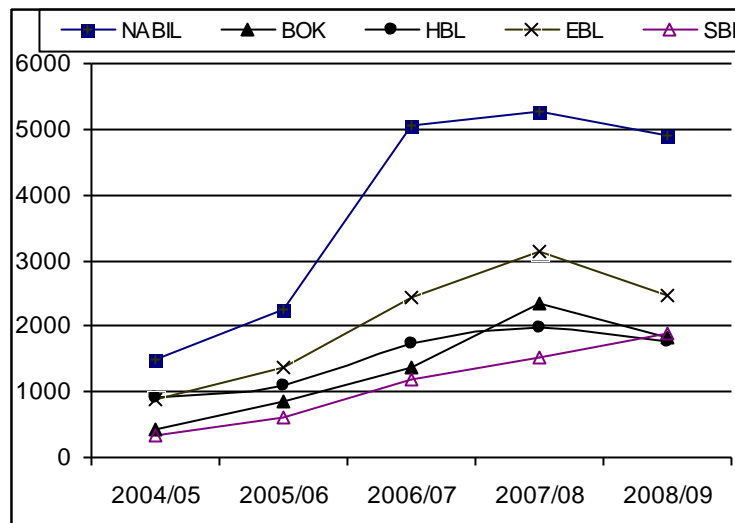


The above figure depicts the market price per share of concerned banks.

Most of the investors take the decision to invest in share market analyzing its MPS. High MPS means high investment in the stock of the concerned banks. Investors look over the market price and then only take buy/sell decision on it. Generally, a rise in dividend payment is viewed as a positive signal, conveying positive information about a firm's future earning prospects resulting in an increase in market price. Conversely a reduction in dividend payment is viewed as a negative signal about future earning prospects, resulting in a decrease in share price.

### 4.2.4 Book value Per Share

The firm's book value of equity includes common stock, share premium and retained earning. It represents owner's contribution to the firm, hence is known as the net worth of a firm. Book value is simply the amount per share of common stock to be received if all of the firm's assets are sold for their exact book value and all liabilities are paid.

**Table No. 4.4**

**Book Value per Share of Concerned Banks**

| Year | NABIL | BOK | HBL | EBL | SBI |
|------|-------|-----|-----|-----|-----|
| 2004/05 | 337.00 | 213.60 | 239.59 | 219.87 | 159.54 |
| 2005/06 | 381.00 | 230.67 | 228.72 | 217.64 | 151.78 |
| 2006/07 | 418.00 | 164.68 | 264.74 | 280.82 | 178.04 |
| 2007/08 | 354.00 | 222.51 | 247.95 | 321.77 | 160.57 |
| 2008/09 | 324.00 | 206.25 | 256.52 | 313.64 | 194.68 |
| Mean | 362.80 | 207.54 | 247.50 | 270.75 | 168.92 |
| SD | 33.55 | 22.95 | 12.60 | 44.02 | 15.48 |
| CV | 0.0925 | 0.1106 | 0.0510 | 0.1648 | 0.0916 |

*Source: Annual Reports of SEBON*

The above table shows the BVPS of five sampled banks over the five years period. NABIL has the average BVPS of Rs. 362.8. It is observed that BVPS was below the average in the initial study period. However, in year, 2005/06 & 2006/07, BVPS has get increased. Again in last year, it get decreased. Similarly, the average BVPS of BOK is Rs. 207.54.

It is improving its performance over the study period, except in year, 2006/07. The value get decrease in 3$^{rd}$ year, it again get increase in 2007/08 & slightly get decrease in last year. In HBL & EBL, its BVPS was below than the average in 1$^{st}$ two year, and is improving its performance over the study period. Finally, SBI has average mean of Rs. 168.92. Its BVPS is below the average in 2004/05 & 2005/06. Its BVPS showed increasing trend in last 3 year, though slightly decreases in 2007/08. From the above calculation and data, it is observed that the standard deviation of EBL is the highest whereas HBL has the lowest SD. With regards to C.V., EBL has the highest and HBL has the lowest CV of BVPS respectively. The CV of EBL shows that there is high fluctuation in BVPS and CV of HBL shows lower fluctuation among the sampled banks.

From the above analysis, it could be concluded that HBL has better performance among the sampled banks.

**Fig no. 4.4**

**Book Value per Share of Concerned Banks**
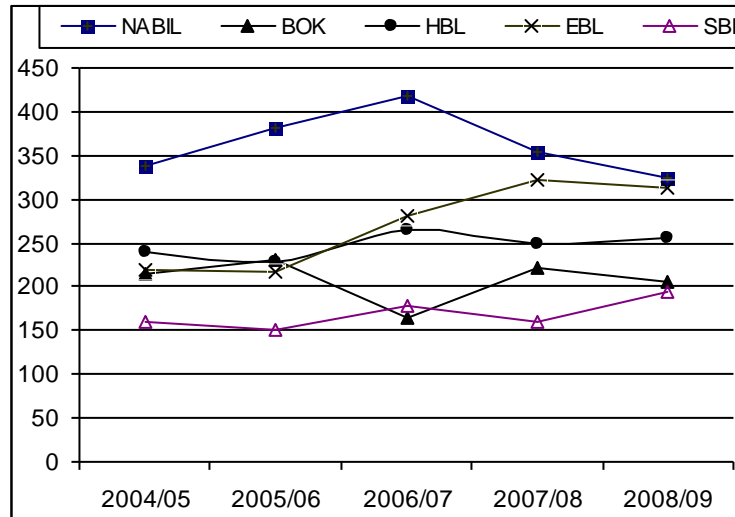


The above figure shows the book value per share of five sampled banks over the five year's period. With regards to average BVPS, NABIL bank seems to be market leader & SBI found to be weakest one. The BVPS of the banks also leads in increment of share price in stock market.

### 4.3 Relationship between EPS, DPS & BVPS to MPS

To analyze the relationship of EPS, DPS and BVPS to MPS, it is assumed that the market price of share is influenced with the changes in EPS, DPS and BVPS. So, MPS is the dependent variable, whereas EPS, DPS and BVPS are independent variables. Here in this section, relationship of EPS, DPS and BVPS with MPS is determined separately to each of the sampled listed companies. The correlation analysis is performed to determine the relationship of EPS, DPS and BVPS with MPS. To determine the effect of EPS, DPS and BVPS on MPS, simple correlation as well as their coefficient of determination are calculated. To determine the magnitude of the effects of the independent variables to the dependent variable, simple regression analysis is made.

**4.3.1 Correlation & Regression Analysis of NABIL Bank**

Table 4.5 shows the relationship (correlation) of EPS, DPS & BVPS to MPS of NABIL Bank along with the significance of such relationship.

**Table No. 4.5**

**Relationship of EPS, DPS and BVPS with MPS of NABIL**

| Variables | Coefficient of correlation (r) | Relationship | $r^2$ | P.E. | Significant/ Insignificant |
|---|---|---|---|---|---|
| MPS & BVPS | 0.16 | Positive | 0.03 | 0.29 | Insignificant |
| MPS & EPS | 0.08 | Positive | 0.01 | 0.30 | Insignificant |
| MPS & DPS | -0.22 | Negative | 0.05 | 0.29 | Insignificant |

*Source: Appendix2*

In the above table, we can see the relationship of EPS, DPS, BVPS with MPS of NABIL. The simple correlation coefficient shows the relationship between one dependent variable and other two independent variables. The correlation between MPS & BVPS is 0.16. It shows that MPS has low degree of positive correlation with BVPS. It indicates that when BVPS increases, MPS also increases & vice versa. The coefficient of determination is 0.03, which indicates that nearly 3% of the total change in MPS is due to the effect of BVPS and rest 97% change in MPS is due to other factors.

The correlation between MPS & DPS is -0.22. It shows that MPS has low degree of negative correlation with DPS. It indicates that when DPS increases, MPS decreases & vice versa. The coefficient of determination is 0.05, which indicates that nearly 4.84% of the total change in MPS is due to the effect of DPS and rest 95% change in MPS is due to other factors.

 The correlation between MPS & EPS is 0.08. It shows that MPS has low degree of positive correlation with EPS. It indicates that when EPS increases, MPS also increases & vice versa. The coefficient of determination is 0.01, which indicates that nearly 1% of the total change in MPS is due to the effect of EPS and rest 99% change in MPS is due to other factors.

The significance of relationship between the variables is measured by calculating P.E. of coefficient from the above table. The P.E. of coefficient of variables, EPS,

DPS & BVPS with MPS is insignificant, as coefficient of correlation(r) is smaller than P.E.

The linear relationship of EPS, DPS, BVPS and MPS of NABIL is presented in the figure 4.5

**Fig no. 4.5**

**Relationship of EPS, DPS, BVPS and MPS of NABIL**
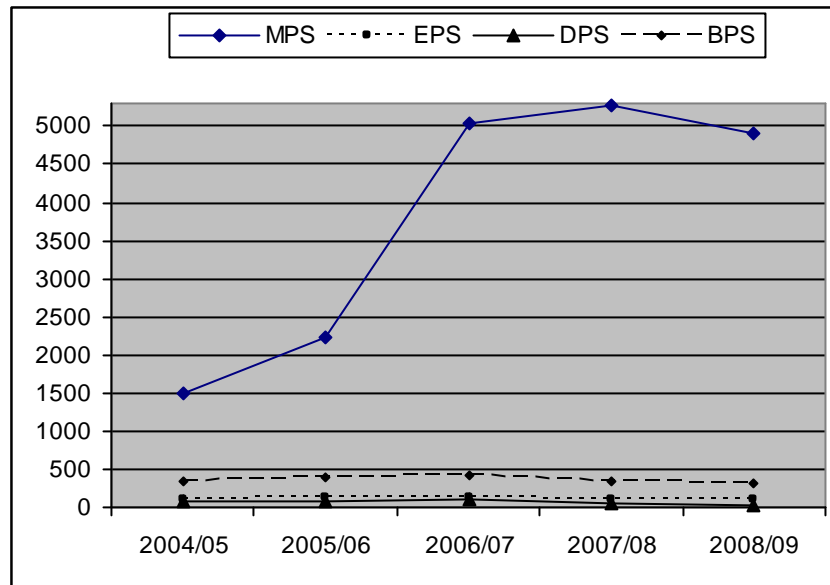


From the simple regression analysis, the regression equation is found (MPS) being dependent variable as:

MPS on EPS

MPS = 2651.90 + 9.73EPS

The regression constant 2651.90 implies that when EPS is zero, MPS is 2651.90. The constant for EPS 9.73 implies that when EPS increases by Rs. 1, MPS increases by Rs. 9.73 and vice versa. The simple correlation coefficient is 0.08.

MPS on BVPS

MPS = 945.82 + 7.85BVPS

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

MPS on DPS

MPS = 4911- 15.96 DPS

The regression constant 4911 implies that when DPS is zero, MPS is 4911. The constant for DPS -15.96 implies that when DPS increases by Rs. 1, MPS decreases by Rs. 15.96 and vice versa. The simple correlation coefficient is -0.22.

### 4.3.2 Correlation & Regression Analysis of BOK

Table 4.6 shows the relationship (correlation) of EPS, DPS & BVPS to MPS of BOK along with the significance of such relationship.

**Table No.  4.6**

**Relationship of EPS, DPS and BVPS with MPS of BOK**

| Variables | Coefficient of correlation (r) | Relationship | $r^2$ | P.E. | Significant/ Insignificant |
|---|---|---|---|---|---|
| MPS & BVPS | -0.05 | Negative | 0.00 | 0.30 | Insignificant |
| MPS & EPS | 0.96 | Positive | 0.92 | 0.02 | significant |
| MPS & DPS | -0.77 | Negative | 0.59 | 0.12 | Insignificant |

*Source: Appendix 1*

The simple correlation coefficient shows the relationship between one dependent variable and other two independent variables. The correlation between MPS & BVPS is -0.05. It shows that MPS has low degree of negative correlation with BVPS. It indicates that when BVPS increases, MPS get decreases & vice versa. The coefficient of determination shows that 0.00% of the change in MPS is elaborated by BVPS and rest 100% change in MPS is due to other factors. It means BVPS of BOK has no any affect upon the MPS of this bank. The correlation between MPS & DPS is -0.77. It shows that MPS has high degree of negative correlation with DPS. It indicates that when DPS increases, MPS gets decrease & vice versa. The coefficient of determination is 0.59, which indicates that 59% of the total change in MPS is due to the effect of DPS and rest 41% change in MPS is due to other factors. The correlation between MPS & EPS is 0.96. It shows that MPS has high degree of positive correlation with EPS. It indicates that when EPS increases, MPS also increases & vice versa. The coefficient of determination is 0.92, which indicates that 92 % of the total change in MPS is due to the effect of EPS and rest 8% change in MPS is due to other factors.

The significance of relationship between the variables is measured by calculating P.E. of coefficient from the above table. We can conclude the relationship between MPS & EPS of BOK is significant, since the coefficient of correlation (r) is greater than 6P.E. But in case of the relationship of BVPS & DPS with MPS, it is insignificant, as coefficient of correlation is smaller than P.E.

The linear relationship of EPS, DPS, BVPS and MPS of BOK is presented in the figure No 4.6

**Fig. No. 4.6**

**Relationship of EPS, DPS, BVPS and MPS of BOK**
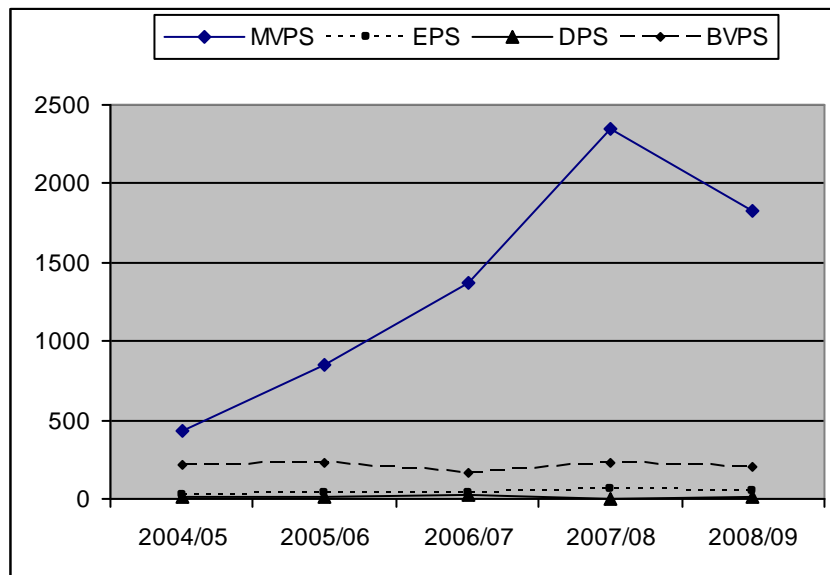


From the simple regression analysis, the regression equation is found (MPS) being dependent variable as:

MPS on EPS

MPS = -1569.26 + 63.29EPS

The regression constant -1569.26 implies that when EPS is zero, MPS is -1569.26. The constant for EPS 63.29 implies that when EPS increases by Rs. 1, MPS increases by Rs. 63.29 and vice versa. The simple correlation coefficient is 0.96.

MPS on BVPS

MPS = 1669.01 -1.46BVPS

The regression 1669.01 constant implies that when BVPS is zero, MPS is 1669.01. The constant for BVPS -1.46 implies that when BVPS increases by Rs. 1, MPS decreases by Rs. 1.46 and vice versa. The simple correlation coefficient is 0.75.

MPS on DPS

MPS = 2339.69- 77.92DPS

The regression constant 2339.69 implies that when DPS is zero, MPS is 2339.69. The constant for DPS - 77.92 implies that when DPS increases by Rs. 1, MPS decreases by Rs. 77.92 and vice versa. The simple correlation coefficient is -0.49.

### 4.3.3 Correlation & Regression Analysis of EBL

Table 4.7 shows the relationship (correlation) of EPS, DPS & BVPS to MPS of EBL along with the significance of such relationship.

**Table No 4.7**

**Relationship of EPS, DPS and BVPS with MPS of EBL**

| Variables | Coefficient of correlation (r) | Relationship | $r^2$ | P.E. | Significant/ Insignificant |
|---|---|---|---|---|---|
| MPS & BVPS | 0.95 | Positive | 0.90 | 0.03 | significant |
| MPS & EPS | 0.89 | Positive | 0.79 | 0.06 | significant |
| MPS & DPS | 0.47 | Positive | 0.22 | 0.24 | Insignificant |

*Source: Appendix 4*

The simple correlation coefficient shows the relationship between one dependent variable and other two independent variables. The correlation between MPS & BVPS is 0.95. It shows that MPS has high degree of positive correlation with BVPS. It indicates that when BVPS increases, MPS also increases & vice versa. The coefficient of determination is 0.90, which indicates that 90% of the total change in MPS is due to the effect of BVPS and rest 10% change in MPS is due to other factors.

The correlation between MPS & EPS is 0.89. It shows that MPS has high degree of positive correlation with EPS. It indicates that when EPS increases, MPS also increases & vice versa. The coefficient of determination is 0.79, which indicates that 79% of the total change in MPS is due to the effect of EPS and rest 21% change in MPS is due to other factors.

The correlation between MPS & DPS is 0.47. It shows that MPS has high degree of positive correlation with DPS. It indicates that when DPS increases, MPS also increases & vice versa. It shows that MPS has low degree of positive correlation with DPS. The coefficient of determination shows that 0.22% of the change in MPS is elaborated by DPS and rest 78% change in MPS is due to other factors.

The significance of relationship between the variables is measured by calculating P.E. of coefficient from the above table. The relationship of EPS & BVPS with MPS is significant, as r is greater than 6P.E. But in case of relationship between MPS & EPS, the relationship is insignificant, though r is greater than P.E. but still lesser than 6P.E.

The linear relationship of EPS, DPS, BVPS and MPS of EBL is presented in the figure No 4.7

**Fig No. 4.7**

**Relationship of EPS, DPS, BVPS and MPS of EBL**
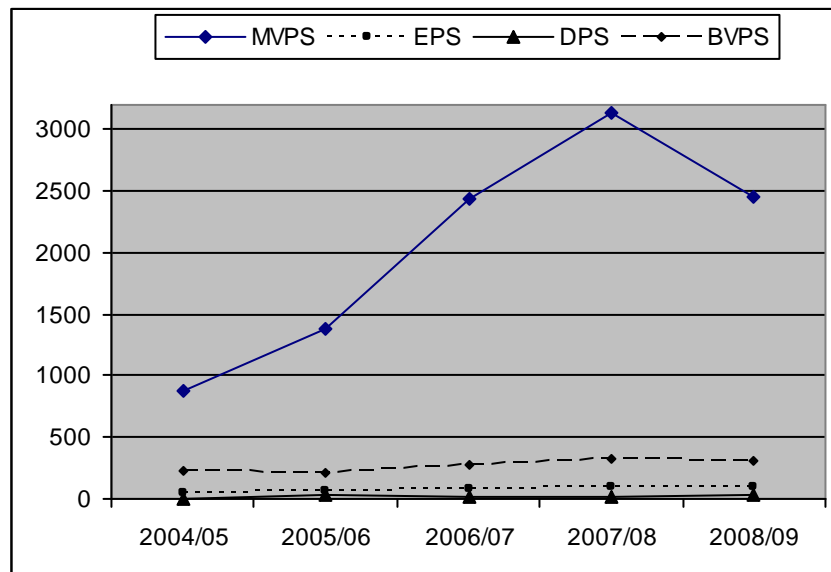


From the simple regression analysis, the regression equation is found (MPS) being dependent variable as:

MPS on EPS

MPS = -1228.19 + 42.37EPS

The regression constant -1228.19 implies that when EPS is zero, MPS is -1228.19. The constant for EPS 42.37 implies that when EPS increases by Rs. 1, MPS increases by Rs. 42.37 and vice versa. The simple correlation coefficient is 0.89.

MPS on BVPS

MPS = -2628.03 +17.29BVPS

The regression constant -2628.03 implies that when BVPS is zero, MPS is -2628.03. The constant for BVPS 17.29 implies that when BVPS increases by Rs. 1, MPS increases by Rs. 17.29 and vice versa. The simple correlation coefficient is 0.95.

MPS on DPS

MPS = 1451.06+35.42DPS

The regression constant 1451.06 implies that when DPS is zero, MPS is 1451.06. The constant for DPS 35.42 implies that when DPS increases by Rs. 1, MPS increases by Rs. 35.42 and vice versa. The simple correlation coefficient is 0.47.

### 4.3.4 Correlation & Regression Analysis of HBL

Table 4.8 shows the relationship (correlation) of EPS, DPS & BVPS to MPS of HBL along with the significance of such relationship.

**Table No. 4.8**

**Relationship of EPS, DPS and BVPS with MPS of HBL**

| Variables | Coefficient of correlation (r) | Relationship | $r^2$ | P.E. | Significant/ Insignificant |
|---|---|---|---|---|---|
| MPS & BVPS | 0.72 | Positive | 0.52 | 0.15 | Insignificant |
| MPS & EPS | 0.83 | Positive | 0.69 | 0.09 | significant |
| MPS & DPS | 0.00 | Zero | 0.00 | 0.30 | Insignificant |

*Source: Appendix 3*

The simple correlation coefficient shows the relationship between one dependent variable and other two independent variables. The correlation between MPS & BVPS is 0.72. It shows that MPS has high degree of positive correlation with BVPS. It indicates that when BVPS increases, MPS also increases & vice versa. The coefficient of determination is 0.52, which indicates that 52% of the total change in MPS is due to the effect of BVPS and rest 48% change in MPS is due to other factors.

The correlation between MPS & EPS is 0.83. It shows that MPS has high degree of positive correlation with EPS. It indicates that when EPS increases, MPS also increases & vice versa. The coefficient of determination is 0.69, which indicates that 69% of the total change in MPS is due to the effect of EPS and rest 31% change in MPS is due to other factors.

The correlation between MPS & DPS is 0.00. It shows that there is zero relation between MPS & DPS. The increase or decrease in DPS leads no change in MPS of this bank.

The significance of relationship between the variables is measured by calculating P.E. of coefficient from the above table. The relationship of MPS & EPS is

significant, as r is greater than 6P.E. But, the relationship of MPS & BVPS is insignificant, though r is greater than P.E, but is still lesser than 6P.E. And in the case of relationship between MPS & DPS, it is insignificant, as r is smaller than P.E. The linear relationship of EPS, DPS, BVPS and MPS of HBL is presented in the figure 4.8

**Fig No. 4.8**

**Relationship of EPS, DPS, BVPS and MPS of HBL**
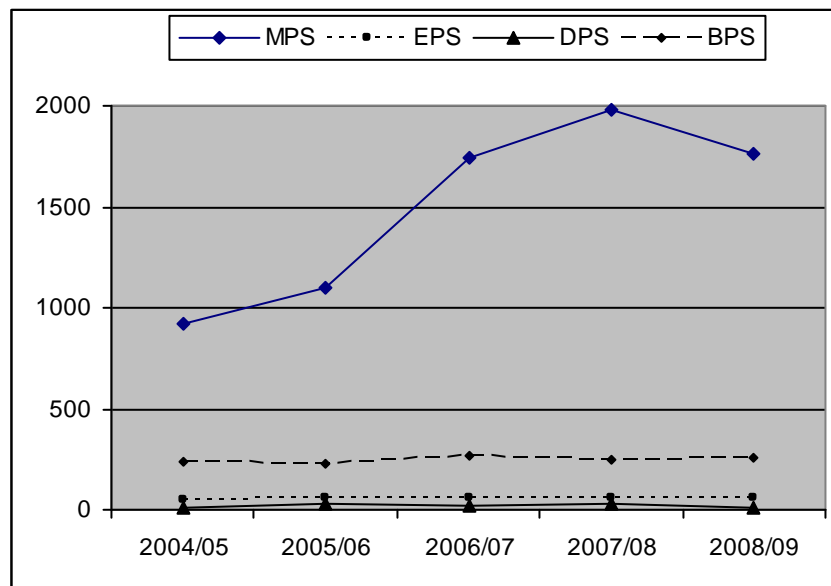


From the simple regression analysis, the regression equation is found (MPS) being dependent variable as:

MPS on EPS

MPS = -2196.57+ 63.20EPS

The regression constant -2196.57 implies that when EPS is zero, MPS is -2196.57. The constant for EPS 63.20 implies that when EPS increases by Rs. 1, MPS increases by Rs. 63.20 and vice versa. The simple correlation coefficient is 0.83.

MPS on BVPS

MPS = -4360.65 +23.67BVPS

The regression constant -4360.65 implies that when BVPS is zero, MPS is -4360.65. The constant for BVPS 23.67 implies that when BVPS increases by Rs. 1, MPS increases by Rs. 23.67 and vice versa. The simple correlation coefficient is 0.72.

MPS on DPS

MPS = 1499.76+0.013DPS

The regression constant 1499.76 implies that when DPS is zero, MPS is 1499.76. The constant for DPS 0.013 implies that when DPS increases by Rs. 1, MPS increases by Rs. 0.013and vice versa. The simple correlation coefficient is 0.

### 4.3.5 Correlation & Regression Analysis of SBI

Table 4.9 shows the relationship (correlation) of EPS, DPS & BVPS to MPS of SBI along with the significance of such relationship.

**Table No. 4.9**

**Relationship of EPS, DPS and BVPS with MPS of SBI**

| Variables | Coefficient of correlation (r) | Relationship | $r^2$ | P.E. | Significant/ Insignificant |
|---|---|---|---|---|---|
| MPS & BVPS | 0.75 | Positive | 0.56 | 0.13 | Insignificant |
| MPS & EPS | 0.82 | Positive | 0.67 | 0.10 | significant |
| MPS & DPS | 0.01 | Positive | 0.00 | 0.30 | Insignificant |

*Source: Appendix5*

The simple correlation coefficient shows the relationship between one dependent variable and other two independent variables. The correlation between MPS & BVPS is 0.75. It shows that MPS has high degree of positive correlation with BVPS. It indicates that when BVPS increases, MPS also increases & vice versa. The coefficient of determination is 0.56, which indicates that 56% of the total change in MPS is due to the effect of BVPS and rest 44% change in MPS is due to other factors.

The correlation between MPS & EPS is 0.82. It shows that MPS has high degree of positive correlation with EPS. It indicates that when EPS increases, MPS also increases & vice versa. The coefficient of determination is 0.67, which indicates that 67% of the total change in MPS is due to the effect of EPS and rest 33% change in MPS is due to other factors.

The correlation between MPS & DPS is 0.01. It shows that MPS has low degree of positive correlation with DPS. It indicates that when DPS increases, MPS also increases & vice versa. The coefficient of determination shows that 0.00% of the change in MPS is elaborated by DPS and rest 100% change in MPS is due to other factors. It means DPS of SBI has no any affect upon the MPS of this bank.

The significance of relationship between the variables is measured by calculating P.E. of coefficient from the above table. The relationship of MPS & EPS is significant, as r is greater than 6P.E. But, the relationship of MPS & BVPS is insignificant, though r is greater than P.E, but is still lesser than 6P.E. And in the case of relationship between MPS & DPS, it is insignificant, as r is smaller than P.E.

The linear relationship of EPS, DPS, BVPS and MPS of SBI is presented in the figure 4.9

**Fig No.  4.9**

**Relationship of EPS, DPS, BVPS and MPS of SBI**
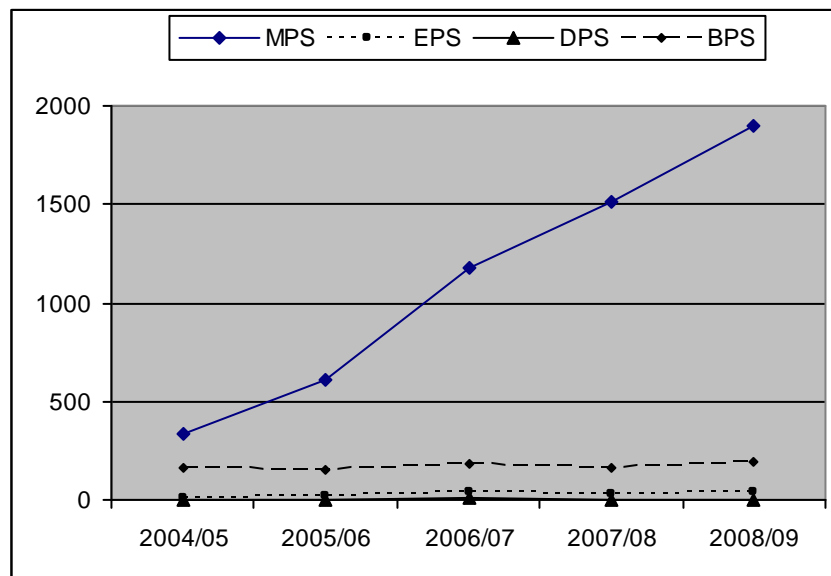


From the simple regression analysis, the regression equation is found (MPS) being dependent variable as:

MPS on EPS

MPS = -163.44+ 46.90EPS

The regression constant -163.44 implies that when EPS is zero, MPS is -163.44. The constant for EPS 46.90 implies that when EPS increases by Rs. 1, MPS increases by Rs. 46.90 and vice versa. The simple correlation coefficient is 0.82.

MPS on BVPS

MPS = -3602.75 + 27.88BVPS

The regression constant -3602.75 implies that when BVPS is zero, MPS is -3602.75. The constant for BVPS 27.88 implies that when BVPS increases by Rs. 1, MPS increases by Rs. 27.88 and vice versa. The simple correlation coefficient is 0.75.

MPS on DPS

MPS = 1109.32 -0.64DPS

The regression constant 1109.32 implies that when DPS is zero, MPS is 1109.32. The constant for DPS -0.64 implies that when DPS increases by Rs. 1, MPS decreases by Rs. 0.64 and vice versa. The simple correlation coefficient is 0.005.

## 4.4 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 under priced 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 of return on the stocks of listed companies have been summarized in table 4.10

**Table No. 4.10**

**Price situation of Common stock of listed companies**

| Name of the Company | $\beta$ | $R_f$ (%) | $R_m$ (%) | Risk Premium $(R_m – R_f)$ | Required Rate of Return | Average Rate of Return | Status of the Stock |
|---|---|---|---|---|---|---|---|
| NABIL | 1.24 | | | | 38.70 | 48.21 | Under Priced |
| BOK | 1.00 | | | | 31.89 | 52.53 | Under Priced |
| EBL | 0.98 | 3.5 | 31.89 | 28.59 | 31.32 | 35.06 | Under Priced |
| HBL | 0.69 | | | | 23.09 | 19.70 | Over Priced |
| SBI | 0.65 | | | | 21.95 | 48.21 | Under Priced |

*Source: Appendix 6 &7*

From Table 4.16, it has been observed that the overall average market return is 31.89 %. The Treasury bill rate is 3.5 %. The risk premium for the stocks of all the banks in the market is the difference between risk free rate and market rate of return i.e. 28.39 %.

The actual realized rate of return of NABIL is 48.21 % where as required rate of return during the study period is 38.70% 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 1.24 which is more than 1 which suggests that the stock of NABIL is aggressive.

Likewise actual realized rate of return of BOK is 52.53% where as required rate of return is only 31.89% which is below the actual return. Thus the stock of BOK is also underpriced. Beta coefficient of BOK is 1 which means it is fairly price stock.

The actual realized rate of return of EBL is 35.06 % where as required rate of return during the study period is 31.32 % which is below the actual realized rate of return. Therefore, the stock of EBL during the study period is underpriced. Beta coefficient of EBL is 0.98 which is less than 1 which suggests that the stock of EBL is defensive. Likewise actual realized rate of return of HBL is only 19.70% where as required rate of return is 23.09% which is above the actual return. Thus the stock of HBL is overpriced. Beta coefficient of HBL is 0.69 which is less than 1, so the stock of HBL is considered as defensive stock.

Likewise actual realized rate of return of SBI is 48.21% where as required rate of return is only 21.95% which is below the actual return. Thus the stock of SBI is also underpriced. Beta coefficient of SBI is 0.65 which is less than 1, so the stock of SBI is considered as defensive stock.

The stock of NABIL, BOK, EBL & SBI are attractive to the investors and need to be bought by them rather than to sell. But the stock of HBL should be sold as it is under priced. Over priced stocks are unattractive to investors.

Thus, the stock of NABIL, BOK, EBL & SBI are considered as underpriced stock. The price of such underpriced stock increases in the future to meet the average rate of return. The required rate of return would increase in near future to be in equilibrium with the average rate of return. And the investors should buy it, to be benefited from potential capital gain.

The stock of HBL is considered as overpriced stock. The average rate of return would increase in near future to be in equilibrium with the required rate of return.

Thus, the investors should sell it currently before occurrence of loses, when its price falls down.

**4.5 Primary Data Analysis and Presentation**

Another measure applied to gather information relevant to the topic is questionnaire method. For collecting primary data, a questionnaire having a set of 7 questions were prepared and presented to 20 respondents. The respondents were selected randomly from the group of share known personalities especially from the share buyer/ purchasers and college students

**4.5.1 Classification of Respondents**

A total of 20 respondents were surveyed randomly to conclude the movement of share price of Nepalese Commercial Banks. Among these, 10 respondents were public investors of share investment, 5 were potential investors who are willing to invest in share but have not invested yet and rests 5 were bank personnel.

<div align="center">

**Table No. 4.11**

**Classification of Respondents**

</div>

| Basis of classification | Number | Percentage |
|---|---|---|
| Public Investors | 10 | 50 |
| Potential investors | 5 | 25 |
| Bank Personnel | 5 | 25 |
| Total | 20 | 100 |

A number of questions were put by means of copies of questionnaire.

**1.  Have you ever hold the shares from the primary market?**

The first question asked the respondents that, whether they have held the share from primary market or not. Table No.4.18 shows the result of the responses.

<div align="center">

**Table No. 4.12**

**Number of Respondents holding the share in share market**

</div>

| S.N. | Responses | No. of respondents | Percentage |
|---|---|---|---|
| 1. | Yes | 15 | 75 |
| 2. | No | 5 | 25 |
| Total | | 20 | 100 |

The above table shows the number of respondents holding the share in share market. Majority of respondents i.e. 75% have hold the shares from primary market through IPO. Still 25% are unknown about the share price and its capital gain. To know the

reasons of holding the share, respondents holding the shares were asked the question, "What are the reasons for holding the shares from primary market?. Their responses can be presented in table below:

**Table No. 4.13**

**Reasons for holding the share in share market**

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|---------------------|------------|
| 1. | For dividend | 10 | 67 |
| 2. | Social status | 0 | 0 |
| 3. | For capital gain | 5 | 33 |
| 4. | Please, Specify if any other | 0 | 0 |
| | Total | 15 | 100 |

It is observed that 67 % of respondents hold the shares to have dividend amount in near future. 33 % of respondents hold the shares to have benefited over capital gain. They stated that they buy the shares at par value and sold it when share price goes higher, to have benefited over the period.

Most of the investors are aware about dividend payment by the company. Huge dividend payment means huge investors attracted to the company, which is good for the company. The capital gain is uncertain in near future but dividend is certain. So, investors always look for the huge dividend payment.

To know the answer of not holding the shares from primary market, a question was asked among the respondents, "What may be the reasons for not holding the shares? The responses given by the respondents are tabulated below:

**Table No. 4.14**

**Reasons for not holding the share in share market**

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|---------------------|------------|
| 1. | Unaware of receiving dividend | | |
| 2. | Unaware about the procedures of share application | 3 | 60 |
| 3. | Over fluctuation of share price | 2 | 40 |
| 4. | Please, Specify if any other | 0 | 0 |
| | Total | 5 | 100 |

The above table depicts that 60% of respondents don't invest in primary market because of unawareness about the procedures of share application. They don't know

how to apply on it. Remaining 40% of respondents responded that there seems no benefit for holding the shares. Share price always do fluctuates. They are fear of losing their par amount too due to bearish market trend.

The political instability, liquidity crunch, economic slowdown and the rumor of the banking and financial sector collapsing are the main reasons for bearish market trend. Because of it, investors are fast losing hope. They sell their shares for whatever price they get and proceed in other business. It has brought the market shares to decline.

**2. Do you agree that there is volatility in share price?**

There is great fluctuation in share price. A rapid up down movement in stock price leads to change in economic condition too. To know whether there is volatility in stock price, a question was asked among the respondents. Their respondents are tabulated as:

**Table No. 4.15**

**No. of Respondents on Volatility in share price**

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|--------------------|------------|
| 1. | Yes | 20 | 100 |
| 2. | No | 0 | 0 |
| | Total | 20 | 100 |

From the table, it is observed that 100 % of the respondents agreed with the volatility of the share price. To know the reason why there is volatility on the share price, a question was asked "What are the major factors for share volatility? Its causes can be tabulated as follows:

**Table No. 4.16**

**Factors for share price volatility**

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|--------------------|------------|
| 1. | Distribution of dividend | 2 | 10 |
| 2. | Signaling factors | 8 | 40 |
| 3. | Government Policies | 10 | 50 |
| 4. | Please, Specify if any other | 0 | 0 |
| | Total | 20 | 100 |

Majority of the respondents believe that, these up down movement is caused due to unstable political policies. Political instability has being main cause for any type of

problem occurred. 40% of respondents believe that share volatility is caused due to signaling factors which may be positive and negative both. Positive signal means positive information about a firm which results in increase market share price. And negative signal means negative information about a firm which results in reduction in market share price. 10% of respondents believe that rise in dividend payment conveys increase in market share and reduction in dividend payment conveys decrease in market share.

**3. Do you know that future share price can be predicted?**

Investors invest in share market in return of capital gain. Capital gain is received when share price get increased. Every investor desires for capital gain. So wants future prediction to protect from future loss. Respondents were asked the question about future prediction of share price. Their responses are presented in table below:

**Table No. 4.17**

**No. of Respondents on Prediction of Future share price**

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|--------------------|------------|
| 1.   | Yes       | 20                 | 100        |
| 2.   | No        | 0                  | 0          |
|      | Total     | 20                 | 100        |

From the table, it is observed that 100 % of the respondents agreed with the prediction of future share price. To know the reason how future share price could be predicted, a question was asked "What are the major factors that would help to predict the market price? The answers provided by the respondents are tabulated below:

## Table No. 4.18

### Factors to predict the future share price

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|--------------------|------------|
| 1. | Historical price | 0 | 0 |
| 2. | Market analysis | 12 | 60 |
| 3. | Financial Data | 8 | 40 |
| 4. | Please, Specify if any other | 0 | 0 |
| | Total | 20 | 100 |

From the above table, it is observed that 60 % of respondents predict future share price by analyzing current market trend. The increasing market trend in current situation helps to predict increasing share price in future. Only 40% believe that financial data could be taken as one of the factor for share price prediction.

Thus, for better prediction of share price, the bank or the company should disclose their true and faithful financial information.

### 4. Is there any measure to increase net profit?

Net profit is one of the measuring rods of company success. The responses of the respondents regarding measures to increase net profit are summarized and presented below.

## Table No. 4.19

### Number of respondents to increase net profit

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|--------------------|------------|
| 1. | Yes | 20 | 100 |
| 2. | No | 0 | 0 |
| | Total | 20 | 100 |

From the table, it is observed that 100 % of the respondents agreed that there are measures that would help to increase net profit of the company. To know the measures of profit increment, a question was asked "What could be the measures to increase net profit? The answers provided by the respondents are tabulated below:

**Table No. 4.20**

**Measure to increase net profit**

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|--------------------|------------|
| 1. | High deposit collection | 1 | 5 |
| 2. | Deduction in Expenditures | 8 | 40 |
| 3. | High margin in the rate of interest among deposit and loan issue | 10 | 50 |
| 4. | Please, Specify if any other | 1 | 5 |
| | Total | 20 | 100 |

The respondents accepted that there are certain factors that would help to increase net profit of the firm/company. 50 % of respondents accepted for, high margin in the rate of interest between deposit and loan issue as major factors for increment of net profit. 40 % of respondents also considered reduction in expenditures as one of the factors for net profit increment. Only 5 % believe the high deposit collection as other factors for increase in profit. Besides these, one of the respondents believed that there should be high investment by utilizing the deposit so collected that leads to increase in net profit.

**5. Do you know that the share price gets decreased?**

The market share price of any asset depends on the earning power of the assets. The prices of shares are determined by demand and supply preferences. To know the answer whether the price of the share gets decrease, a question was asked. The respondents given by the respondents are tabulated below:

**Table No. 4.21**

**No. of Respondents on Reduction of share price**

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|--------------------|------------|
| 1. | Yes | 20 | 100 |
| 2. | No | 0 | 0 |
| | Total | 20 | 100 |

From the above table, it is observed that 100 % of respondents are aware about change occur in share price. There is loss if the share price gets reduced below the par value. Investors invest in share price in order to gain return from capital gain or increased share price. They will get loss, if share price get decreased. To know the

reason of share price decrement, a question was asked "What are the reasons why share price are decreased? The answers provided by the respondents are tabulated below:

**Table No. 4.22**

**Factors for share price reduction**

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|--------------------|------------|
| 1. | Political instability | 13 | 65 |
| 2. | Delay in trading mechanism | 5 | 25 |
| 3. | High interest rate on loan | 2 | 10 |
| 4. | Please, Specify if any other | 0 | 0 |
| | Total | 20 | 100 |

From the table, it is observed that the main reason for share price reduction is political instability. 65 % of respondents accepted that political instability is the main reason for the decreasing in share price followed by trading mechanism and high interest on loan, the third one respectively. It has brought crisis on every scope of economic condition. Investors are losing hope to have effective return in such situation. They have started selling their shares for whatever price they get and proceed in other businesses. 10% of respondents stated that it has caused due to high interest on loan that leads to liquidity crisis to the banking sector. General people have no money to invest in share market. 25 % stated that investors generally have to waste a lot of time in trading mechanism of share price. So, they generally don't want to invest in share price.

For the better trading mechanism, there also should be online buying and selling of shares in order to facilitate the investors.

6. **Do you know that Company distributes dividend?**

Dividend is the part of net profit. Investors invest in share market in return of high dividend payment. To know whether respondents were aware about the dividend distribution, a question was asked, "Do you know that Company distributes dividend". The responses indicated by the respondents are tabulated below:

**Table No. 4. 23**

**No. of Respondents knowing on Dividend distribution**

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|--------------------|------------|
| 1. | Yes | 20 | 100 |
| 2. | No | 0 | 0 |
| Total | | 20 | 100 |

From the table, it is observed that 100 % of the respondents agreed with the distribution of dividend. To know the reason of dividend distribution, a question was asked "What are the reasons for dividend distribution? The answers provided by the respondents are tabulated below:

**Table No. 4. 24**

**Reasons for Dividend distribution**

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|--------------------|------------|
| 1. | High profit | 14 | 70 |
| 2. | To attract investors | 6 | 30 |
| 3. | To increase DPS | 0 | 0 |
| 4. | Please, Specify if any other | 0 | 0 |
| Total | | 20 | 100 |

From the table, it is observed that 70% of respondents argued on distribution of dividend when the company is in profit. Only the higher profit earning company distributes dividend. None of the respondents stated for increasing DPS because they clarified that high DPS means high profit. 30 % of respondents stated that company distributes dividend to attract investors.

But in real context, only high profit earning company distributes dividend. To earn high profit, the company should adopt different measures for it. Due to high dividend distribution, the investors are attracted towards the company, which is really good for the company.

**7. Have you ever invested your money in secondary market?**

Majority of the people invest in primary market, but only minority of the people do invest in secondary market. To know the number of investors in secondary market, a

question was asked, "Have you ever invested your money in secondary market?" The responses regarding the investment of money in share market are presented below:

**Table No. 4.25**

**No. of Respondents investing in secondary market**

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|--------------------|------------|
| 1. | Yes | 8 | 40 |
| 2. | No | 12 | 60 |
| Total | | 20 | 100 |

From the table, it is observed that, only 40% invest their money in secondary market. 60 % respondents are still unfamiliar about secondary market. To know the different factors that helped in decision making before investing in secondary market, 40% respondents were asked a question, "What factors play the major role in decision making before its investment?" The factors as indicated by respondents are presented below:

**Table No. 4.26**

**Factors for decision taking**

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|--------------------|------------|
| 1. | Current market  price | 6 | 75 |
| 2. | Expert analysis | 0 | 0 |
| 3. | Own analysis | 2 | 25 |
| 4. | Please, Specify if any other | 0 | 0 |
| Total | | 8 | 100 |

There are various factors that would depend on their decisions. 75% of respondents take decisions based on the current market price. Before investing in share market, they first look over the market trend. Increasing market trend indicates selling decision and decreasing market trend indicates buying decision. None of the respondents have accepted for expert advice. Rather 25 % of respondents like to take their own analysis. If investors are made aware about trading mechanism of secondary market, 40% can be raised to higher.

To know the reasons of unfamiliar about secondary market, a question was asked, among the 60% respondents "What may be the reasons for not investing in secondary market?" Their responses regarding this question are tabulated below:

**Table No. 4.27**

**Number of Respondents not investing in secondary market**

| S.N. | Responses | No. of respondents | Percentage |
|------|-----------|--------------------|------------|
| 1. | Unaware about procedures of secondary market | 2 | 17 |
| 2. | Delay procedures of secondary market | 6 | 50 |
| 3. | For achievement of benefits | 4 | 33 |
| 4. | Please, Specify if any other | 0 | 0 |
| | Total | 12 | 100 |

50% of respondents responded that they are not interested to invest in secondary market due to its delaying procedures. Though there had been automated computerized system, than before open-out cry system, there is still delay in procedures. 33% of respondents hold the shares from primary market in achievement of benefits like dividend, bonus shares, right share etc. They don't want to lose it, by selling their shares. They have lost their expectation on increment of share price in near future. 17% respondents are unknown about the procedures of secondary market, though it is in delay. They are unaware about the different procedures of buying and selling shares in secondary market.

**4.6 Major Findings of the study**

∫ From the secondary data analysis, it is known that, there is not consistent performance in the relationship of MPS with EPS, DPS & BVPS for the five sampled banks over the five year period. With regards to EPS, BVPS & MPS, it is found that HBL has good performance and with regards to DPS, EBL has good performance.

∫ From the above analysis, it is observed that stock of NABIL, BOK, EBL & SBI are underpriced stocks as its average rate of return is higher than required rate of return. And of HBL is overpriced stock as average rate of return is lower than its required rate of return.

) From the primary data analysis, it is shown that mostly public investors hold the shares for dividend. Majority of respondents believe that an unstable political policy has been main cause for share volatility. Due to unstable government policies, market price is in fluctuating trend. Signaling factors are also the one of the cause of share price volatility. Positive signaling results in increase in market share and negative signaling results in reduction in share price.

# CHAPTER V

## SUMMRY, CONCLUSION AND RECOMMENDATION

The first chapter presented earlier about a brief introduction of the study and the review of literature with possible review of journals, ideas and thesis have also been presented in the second chapter. Total of the available data are presented and analyzed in fourth chapter and methodology for the study has also been described earlier in the third chapter.

Now in this chapter, focuses on some selected action oriented findings, conclusion and recommendation on the basis of analysis. This chapter is very important in the sense that:

) It shows the result what was observed during research.

) It concludes the findings in an understandable form and

) It provides clues of suggestions to the concerned authorities as well as practioners and academicians. The recommendation is presented in the last part of this considering major findings.

### 5.1 Summary

Nepal has adopted the path of economic development through liberalization. Andy strategy, however, for development requires a steady supply of medium to long-term capital funds for productive investment. Companies raise required funds by issuing securities in regulated money and the capital market. The mostly used securities are share, debentures and bonds. The share includes common shares and preferences shares.

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 on the mobilization of capital in national economy, in the case of Nepal, it is still crawling towards the betterment.

NYSE was the first stock market in the history of global investment literature. The US government issued debt certificates in 1790, then the market for securities expanded widely and trading became more active. The share market in Nepal began with the establishment of Biratnagar Jute Mill Ltd and Nepal Bank Ltd. in 1937. Introduction Company Act in 1964, the first issuance of Government Bond in 1964 and the establishment of Securities Exchange Center Ltd. in1976 were other

significant developments regarding the Capital Market. But the stock market in Nepalese context is a recent phenomenon. Listing of shares in the secondary market through the institutional brokerage system started only after the restoration of democracy in 1990. SEC was bifurcated into two distinct entities i.e. SEBON and NEPSE in 1998. thus, the stock market in Nepal is in its infancy stage.

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 are regulated. Besides, government has not prioritized the development of capital market sufficiently.

The prime objective of this study is to find out the stock price movement and financial performance of listed companies in NEPSE. Hence, 5 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 EPS, DPS and BVPS. For each 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 respondent has been analyzed thoroughly in this thesis.

For the convenience, the study has been divided in five main chapters, viz. 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:

ʃ It can be concluded that among the five sampled banks, the financial strength and performance of HBL is the highest with regards to EPS, BPS & MPS. And with regards to DPS, NABIL has good one.

ʃ The regression analysis shows that MPS of all the banks are influenced by its EPS. NABIL bank is least affected by its EPS and highly affect to BOK.

Thus, to increase its share price, sampled companies should do better on improving its EPS.

) The correlation analysis shows that there is high degree of positive relationship of MPS with EPS among all other different variable. Though, there is positive relationship, there is insignificant relationship of MPS and EPS of NABIL. The above data shows the insignificant relationship between MPS and DPS among all banks over the five years period. There is insignificant relationship between MPS and BPS among all banks except EBL. EBL has significant relationship between MPS and BPS.

) The average rate of return of four stocks is higher than required rate of return. So, these stocks are under priced and should be bought and held in order to gain profit from price gain. And the stock of HBL is lower than required rate of return. It is overpriced and should be sold. Investors generally preferred to buy under priced stock and hold it in future too. The stock of HBL is overpriced and is unattractive to buyers. Thus, to make it better, its required rate of return should be decreased and cash flows should be increased.

) When primary questionnaire were asked among the public investors, it was known that most investors were unknown about share procedure including both primary and secondary market. The general investors generally hold the share of the market in return of dividend. It is known that, they also hold the share in return of extra benefits like bonus shares, right shares etc.

) The market trend analysis has been major factor before investing in secondary market. They usually prefer the stock to invest, whose market price is higher.

## 5.3 Recommendation

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 performance of commercial banks is better than the other sector 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. Online buying and

selling of the shares should be made possible in order to facilitate the investors.

) True, scrutinized and credible information about the listed companies are not available because of absence 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 to confident picture of financial health and future prospects of company.

) Frequent seminars organized by the company can help to draw the attention of the company management and concerned authorities to explore practical way and means of restoring the rights and safeguarding the interest of shareholders.

) In current political situation, Nepalese capital market cannot function well. Stable government and proper rules and regulation in capital market are the prime necessity.

) SBI Bank is suggested to maintain the higher EPS by using its owner's equity effectively.

) The MPS of HBL shows good performance, so it is recommended to maintain at least the same position in near future.

) Operational efficiency and profitability of companies should be improve to regain the shareholder's confidence so that they will have automatic demand for shares of companies and thereby raise the share price.

) SEBON should protect the interest and right of investors and should work as per too. As investors play the key role on the performance of securities market.

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# Appendix 1

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

| Year | MPS(X) | EPS(Y) | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| 2061/62 | 430 | 30.1 | 184900 | 906.01 | 12943 |
| 2062/63 | 850 | 43.67 | 722500 | 1907.07 | 37119.5 |
| 2063/64 | 1375 | 43.5 | 1890625 | 1892.25 | 59812.5 |
| 2064/65 | 2350 | 59.94 | 5522500 | 3592.80 | 140859 |
| 2065/66 | 1825 | 54.68 | 3330625 | 2989.90 | 99791 |
| N = 5 | 6830 | 231.89 | 11651150 | 11288.03 | 350525 |

From the above table,

N = 5,   X = 6830,   Y = 231.89,   $X^2$ = 11651150,   $Y^2$ = 11288.03,   XY = 350525

r = 0.96 (calculation made through excel worksheet)

$r^2$ = 0.92

Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

Y = Independent variable

The values of a and b determined from the normal equation

  X = na + b   Y…… (ii)

  XY = a   Y + b   $Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

6830 = 5a + b231.89……  (iv)

350525 = a231.89 + b11288.03…… (v)

Again, solving it, we get,

a = -1569.26

b = 63.29

Substituting the values of a and b in equation (i), we get regression equation as,

X = -1569.26 + 63.29 Y

OR

MPS = -1569.26 + 63.29 EPS

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

| Year | MPS(X) | DPS(Y) | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| 2061/62 | 430 | 15 | 184900 | 225 | 6450 |
| 2062/63 | 850 | 18 | 722500 | 324 | 15300 |
| 2063/64 | 1375 | 20 | 1890625 | 400 | 27500 |
| 2064/65 | 2350 | 2.11 | 5522500 | 4.45 | 4958.5 |
| 2065/66 | 1825 | 7.37 | 3330625 | 54.32 | 13450.25 |
| N = 5 | 6830 | 62.48 | 11651150 | 1007.77 | 67658.75 |

From the above table,

N = 5, X = 6830, Y = 62.48, $X^2$ = 11651150, $Y^2$ = 1007.77, XY = 67658.75

r = -0.77(calculation made through excel worksheet)

$r^2$ = 0.59


Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

Y = Independent variable

The values of a and b determined from the normal equation

X = na + b Y…… (ii)

XY = a Y + b $Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

6830 = 5a + b62.48…… (iv)

67658.75 = a62.48 + b1007.77…… (v)


Again, solving it, we get,

a = 2339.69

b = -77.92

Substituting the values of a and b in equation (i), we get regression equation as,

X = 2339.69 - 77.92Y

OR

MPS = 2339.69 - 77.92DPS

### iii. Simple Correlations and Regression Analysis between Market Price per Share and Book value per Share of BOK

| Year | MPS(X) | BVPS(Y) | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| 2061/62 | 430 | 213.6 | 184900 | 45625.0 | 91848 |
| 2062/63 | 850 | 230.67 | 722500 | 53208.6 | 196069.5 |
| 2063/64 | 1375 | 164.68 | 1890625 | 27119.5 | 226435 |
| 2064/65 | 2350 | 222.51 | 5522500 | 49510.7 | 522898.5 |
| 2065/66 | 1825 | 206.25 | 3330625 | 42539.1 | 376406.3 |
| N = 5 | 6830 | 1037.71 | 11651150 | 218002.9 | 1413657 |

From the above table,

N = 5,　X = 6830,　Y = 1037.71,　$X^2$ = 11651150,　$Y^2$ = 218002.9

　XY =1413657

r = -0.049 (calculation made through excel worksheet)

$r^2$ = 0


Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

　　　Y = Independent variable

The values of a and b determined from the normal equation

　X = na + b　Y…… (ii)

　XY = a　Y + b　$Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

6830 = 5a + b1037.71……　(iv)

1413657 = a1037.71 + b218002.9…… (v)


Again, solving it, we get,

a = 1669.01

b = -1.46

Substituting the values of a and b in equation (i), we get regression equation as,

X = 1669.01 - 1.46

OR

MPS = 1669.01 - 1.46BVPS

# Appendix 2

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

| Year | MPS(X) | EPS(Y) | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| 2061/62 | 1505 | 105.49 | 2265025 | 11128.14 | 158762.5 |
| 2062/63 | 2240 | 129.21 | 5017600 | 16695.22 | 289430.4 |
| 2063/64 | 5050 | 137.08 | 25502500 | 18790.93 | 692254 |
| 2064/65 | 5275 | 108.31 | 27825625 | 11731.06 | 571335.3 |
| 2065/66 | 4899 | 106.76 | 24000201 | 11397.70 | 523017.2 |
| N = 5 | 18969 | 586.85 | 84610951 | 69743.04 | 2234799 |

From the above table,

$N = 5$, $X = 18969$, $Y = 586.85$, $X^2 = 84610951$, $Y^2 = 69743.04$, $XY = 2234799$

r = 0.08(calculation made through excel worksheet)

$r^2 = 0.0064$

Regression Equation of X on Y

$X = a + bY$…… (i)

Where, X = Dependent variable

Y = Independent variable

The values of a and b determined from the normal equation

$X = na + b \ Y$…… (ii)

$XY = a \ Y + b \ Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

$18969 = 5a + b586.85$…… (iv)

$2234799 = a586.85 + b69743.04$…… (v)

Again, solving it, we get,
a = 2651.90

b = 9.73

Substituting the values of a and b in equation (i), we get regression equation as,

$X = 2651.90 + 9.73Y$

OR

MPS = 2651.90 + 9.73EPS

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

| Year | MPS(X) | DPS(Y) | $X^2$ | $Y^2$ | XY |
|------|--------|--------|---------|--------|---------|
| 2061/62 | 1505 | 70 | 2265025 | 4900 | 105350 |
| 2062/63 | 2240 | 85 | 5017600 | 7225 | 190400 |
| 2063/64 | 5050 | 100 | 25502500 | 10000 | 505000 |
| 2064/65 | 5275 | 60 | 27825625 | 3600 | 316500 |
| 2065/66 | 4899 | 35 | 24000201 | 1225 | 171465 |
| N = 5 | 18969 | 350 | 84610951 | 26950 | 1288715 |

From the above table,

N = 5,   X = 18969,   Y = 350,   $X^2$ = 84610951,   $Y^2$ = 26950,   XY = 1288715

r = -0.22 (calculation made through excel worksheet)

$r^2 = 0.0484$

Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

Y = Independent variable

The values of a and b determined from the normal equation

  X = na + b   Y…… (ii)

  XY = a   Y + b   $Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

18969 = 5a + b350……  (iv)

1288715 = 350a + b26950…… (v)

Again, solving it, we get,

a = 4911

b = -15.96

Substituting the values of a and b in equation (i), we get regression equation as,

X = 4911 - 15.962Y

OR

MPS = 4911-15.96DPS

### iii. Simple Correlations and Regression Analysis between Market Price per Share and Book value per Share of NABIL

| Year | MPS(X) | BVPS(Y) | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| 2061/62 | 1505 | 337 | 2265025 | 113569 | 507185 |
| 2062/63 | 2240 | 381 | 5017600 | 145161 | 853440 |
| 2063/64 | 5050 | 418 | 25502500 | 174724 | 2110900 |
| 2064/65 | 5275 | 354 | 27825625 | 125316 | 1867350 |
| 2065/66 | 4899 | 324 | 24000201 | 104976 | 1587276 |
| N = 5 | 18969 | 1814 | 84610951 | 663746 | 6926151 |

From the above table,

N = 5,   X = 18969,   Y = 1814,   $X^2$ = 84610951,   $Y^2$ = 663746,   XY = 6926151

r = 0.16 (calculation made through excel worksheet)

$r^2$ = 0.026

Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

Y = Independent variable

The values of a and b determined from the normal equation

  X = na + b  Y…… (ii)

  XY = a  Y + b  $Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

18969 = 5a + b1814……  (iv)

6926151 = a1814+ b663746…… (v)

Again, solving it, we get,

a = 945.82

b = 7.85

Substituting the values of a and b in equation (i), we get regression equation as,

X = 945.82 + 7.85Y

OR

MPS = 945.82 + 7.85BVPS

# Appendix 3

### i. Simple Correlations and Regression Analysis between Market Price per Share and Earning Per Share of HBL

| Year | MPS(X) | EPS(Y) | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| 2061/62 | 920 | 47.91 | 846400 | 2295.368 | 44077.2 |
| 2062/63 | 1100 | 59.24 | 1210000 | 3509.378 | 65164 |
| 2063/64 | 1740 | 60.66 | 3027600 | 3679.636 | 105548.4 |
| 2064/65 | 1980 | 62.74 | 3920400 | 3936.308 | 124225.2 |
| 2065/66 | 1760 | 61.9 | 3097600 | 3831.61 | 108944 |
| N = 5 | 7500 | 292.45 | 12102000 | 17252.3 | 447958.8 |

From the above table,

N = 5,   X = 7500,   Y = 292.45,   $X^2$ = 12102000,   $Y^2$ = 17252.3,   XY = 447958.8

r = 0.83 (calculation made through excel worksheet)

$r^2$ = 0.69

Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

Y = Independent variable

The values of a and b determined from the normal equation

X = na + b   Y…… (ii)

XY = a   Y + b   $Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

7500 = 5a + b292.45……  (iv)

447958.8 = a292.45 + b17252.3…… (v)

Again, solving it, we get,
a = -2196.57

b = 63.20

Substituting the values of a and b in equation (i), we get regression equation as,

X = -2196.57 + 63.20Y

OR

MPS = -2196.57 + 63.20EPS

## ii. Simple Correlations and Regression Analysis between Market Price per Share and Dividend per Share of HBL

| Year | MPS(X) | DPS(Y) | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| 2061/62 | 920 | 11.58 | 846400 | 134.0964 | 10653.6 |
| 2062/63 | 1100 | 30 | 1210000 | 900 | 33000 |
| 2063/64 | 1740 | 15 | 3027600 | 225 | 26100 |
| 2064/65 | 1980 | 25 | 3920400 | 625 | 49500 |
| 2065/66 | 1760 | 12 | 3097600 | 144 | 21120 |
| N = 5 | 7500 | 93.58 | 12102000 | 2028.096 | 140373.6 |

From the above table,

N = 5, X = 7500, Y = 93.58, $X^2$ = 12102000, $Y^2$ = 2028.096, XY = 140373.6

r = 0 (calculation made through excel worksheet)

$r^2 = 0$

Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

Y = Independent variable

The values of a and b determined from the normal equation

X = na + b  Y…… (ii)

XY = a  Y + b  $Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

7500 = 5a + b93.58…… (iv)

140373.6 = a93.580+ b2028.096…… (v)

Again, solving it, we get,

a = 1499.76

b = 0.013

Substituting the values of a and b in equation (i), we get regression equation as,

X = 1499.76+ 0.013Y

OR

MPS = 1499.76 + 0.0136 DPS

### iii. Simple Correlations and Regression Analysis between Market Price per Share and Book value per Share of HBL

| Year | MPS(X) | BVPS(Y) | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| 2061/62 | 920 | 239.59 | 846400 | 57403.37 | 220422.8 |
| 2062/63 | 1100 | 228.72 | 1210000 | 52312.84 | 251592 |
| 2063/64 | 1740 | 264.74 | 3027600 | 70087.27 | 460647.6 |
| 2064/65 | 1980 | 247.95 | 3920400 | 61479.2 | 490941 |
| 2065/66 | 1760 | 256.52 | 3097600 | 65802.51 | 451475.2 |
| N = 5 | 7500 | 1237.52 | 12102000 | 307085.2 | 1875079 |

From the above table,

N = 5,   X =7500,   Y = 1237.52,   $X^2$ =12102000,   $Y^2$ =307085.2,   XY = 1875079

r = 0.72 (calculation made through excel worksheet)

$r^2$ = 0.52

Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

Y = Independent variable

The values of a and b determined from the normal equation

X = na + b   Y…… (ii)

XY = a   Y + b   $Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

7500 = 5a + b1237.52……  (iv)

1875079 = a1237.52 + b307085.2…… (v)

Again, solving it, we get,

a = -4360.65

b = 23.67

Substituting the values of a and b in equation (i), we get regression equation as,

X = -4360.65 + 23.67Y

OR

MPS = -4360.65 + 23.67BVPS

# Appendix 4

### i. Simple Correlations and Regression Analysis between Market Price per Share and Earning Per Share of EBL

| Year | MPS(X) | EPS(Y) | $X^2$ | $Y^2$ | XY |
|------|--------|--------|-------|-------|-----|
| 2061/62 | 870 | 54.22 | 756900 | 2939.81 | 47171.4 |
| 2062/63 | 1379 | 62.78 | 1901641 | 3941.33 | 86573.6 |
| 2063/64 | 2430 | 78.42 | 5904900 | 6149.70 | 190560.6 |
| 2064/65 | 3132 | 91.82 | 9809424 | 8430.91 | 287580.2 |
| 2065/66 | 2455 | 99.99 | 6027025 | 9998.00 | 245475.5 |
| N = 5 | 10266 | 387.23 | 24399890 | 31459.75 | 857361.3 |

From the above table,

N = 5,   X = 10266,   Y = 387.23,   $X^2$ = 24399890,   $Y^2$ = 31459.75

   XY = 857361.3

r = 0.89(calculation made through excel worksheet)

$r^2$= 0.79


Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

        Y = Independent variable

The values of a and b determined from the normal equation

   X = na + b   Y…… (ii)

   XY = a   Y + b   $Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

10266 = 5a + b387.23……  (iv)

857361.3 = a387.23 + b31459.75…… (v)

Again, solving it, we get,
a = -1228.19

b = 42.37

Substituting the values of a and b in equation (i), we get regression equation as,

X = -1228.19 + 42.37Y

OR

MPS = -1228.19 + 42.37EPS

**ii. Simple Correlations and Regression Analysis between Market Price per Share and Dividend per Share of EBL**

| Year | MPS(X) | DPS(Y) | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| 2061/62 | 870 | 0 | 756900 | 0 | 0 |
| 2062/63 | 1379 | 25 | 1901641 | 625 | 34475 |
| 2063/64 | 2430 | 10 | 5904900 | 100 | 24300 |
| 2064/65 | 3132 | 20 | 9809424 | 400 | 62640 |
| 2065/66 | 2455 | 30 | 6027025 | 900 | 73650 |
| N = 5 | 10266 | 85 | 24399890 | 2025 | 195065 |

From the above table,

$N = 5$, $X = 10266$, $Y = 85$, $X^2 = 24399890$, $Y^2 = 2025$, $XY = 195065$

r = 0.47 (calculation made through excel worksheet)

$r^2 = 0.22$

Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

Y = Independent variable

The values of a and b determined from the normal equation

  X = na + b  Y…… (ii)

  XY = a  Y + b  $Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

10266 = 5a + b85……  (iv)

195065 = a85 + b2025…… (v)

Again, solving it, we get,

a = 1451.06

b = 35.42

Substituting the values of a and b in equation (i), we get regression equation as,

X = 1451.06 + 35.42Y

OR

MPS = 1451.06 + 35.42DPS

### iii. Simple Correlations and Regression Analysis between Market Price per Share and Book value per Share of EBL

| Year | MPS(X) | BVPS(Y) | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| 2061/62 | 870 | 219.87 | 756900 | 48342.8 | 191286.9 |
| 2062/63 | 1379 | 217.64 | 1901641 | 47367.2 | 300125.56 |
| 2063/64 | 2430 | 280.82 | 5904900 | 78859.9 | 682392.6 |
| 2064/65 | 3132 | 321.77 | 9809424 | 103535.9 | 1007783.64 |
| 2065/66 | 2455 | 313.64 | 6027025 | 98370.0 | 769986.2 |
| N = 5 | 10266 | 1353.74 | 24399890 | 376475.8 | 2951574.9 |

From the above table,

N = 5,   X = 10266,   Y = 1353.74,   $X^2$ = 24399890,   $Y^2$ = 376475.8,   XY = 2951574.9

r = 0.95 (calculation made through excel worksheet)

$r^2$ = 0.90

Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

Y = Independent variable

The values of a and b determined from the normal equation

  X = na + b   Y…… (ii)

  XY = a   Y + b   $Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

10266 = 5a + b1353.74……  (iv)

2951574.9 = a1353.74 + b376475.8…… (v)

Again, solving it, we get,
a = -2628.03

b = 17.29

Substituting the values of a and b in equation (i), we get regression equation as,

X = -2628.03 + 17.29Y

OR

MPS = -2628.03 + 17.29 BVPS

# Appendix 5

**i. Simple Correlations and Regression Analysis between Market Price per Share and Earning Per Share of SBI**

| Year | MPS(X) | EPS(Y) | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| 2061/62 | 335 | 13.29 | 112225 | 176.624 | 4452.2 |
| 2062/63 | 612 | 18.27 | 374544 | 333.793 | 11181.2 |
| 2063/64 | 1176 | 39.35 | 1382976 | 1548.423 | 46275.6 |
| 2064/65 | 1511 | 28.33 | 2283121 | 802.589 | 42806.6 |
| 2065/66 | 1900 | 36.18 | 3610000 | 1308.992 | 68742.0 |
| N = 5 | 5534 | 135.42 | 7762866 | 4170.421 | 173457.6 |

From the above table,

N = 5, X = 5534, Y = 135.42, $X^2$ = 7762866, $Y^2$ = 4170.421, XY = 173457.6

r = 0.82 (calculation made through excel worksheet)

$r^2$ = 0.67

Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

Y = Independent variable

The values of a and b determined from the normal equation

X = na + b  Y…… (ii)

XY = a  Y + b  $Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

5534 = 5a + b135.42……  (iv)

173457.6 = a135.42 + b4170.421…… (v)

Again, solving it, we get,
a = -163.44

b = 46.90

Substituting the values of a and b in equation (i), we get regression equation as,

X = -163.44 + 46.90Y

OR

MPS = -163.44 + 46.90 EPS

**ii. Simple Correlations and Regression Analysis between Market Price per Share and Dividend per Share of SBI**

| Year | MPS(X) | DPS(Y) | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| 2061/62 | 335 | 0 | 112225 | 0 | 0 |
| 2062/63 | 612 | 5 | 374544 | 25 | 3060 |
| 2063/64 | 1176 | 12.59 | 1382976 | 158.5081 | 14805.84 |
| 2064/65 | 1511 | 0 | 2283121 | 0 | 0 |
| 2065/66 | 1900 | 2.11 | 3610000 | 4.4521 | 4009 |
| N = 5 | 5534 | 19.7 | 7762866 | 187.9602 | 21874.84 |

From the above table,

N = 5,   X = 5534,   Y = 19.7,   $X^2$ = 7762866,   $Y^2$ = 187.9602,   XY = 21874.84

r = 0.005 (calculation made through excel worksheet)

$r^2$ = 0

Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

        Y = Independent variable

The values of a and b determined from the normal equation

  X = na + b   Y…… (ii)

  XY = a   Y + b   $Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

5534 = 5a + b19.7……  (iv)

21874.84 = a19.7+ b187.9602…… (v)

Again, solving it, we get,

a = 1109.32

b = -0.64

Substituting the values of a and b in equation (i), we get regression equation as,

X = 1109.32 - 0.64Y

OR

MPS = 1109.32 - 0.64 DPS

### iii. Simple Correlations and Regression Analysis between Market Price per Share and Book value per Share of SBI

| Year | MPS(X) | BVPS(Y) | $X^2$ | $Y^2$ | XY |
|---|---|---|---|---|---|
| 2061/62 | 335 | 159.54 | 112225 | 25453.0 | 53445.9 |
| 2062/63 | 612 | 151.78 | 374544 | 23037.2 | 92889.4 |
| 2063/64 | 1176 | 178.04 | 1382976 | 31698.2 | 209375.0 |
| 2064/65 | 1511 | 160.57 | 2283121 | 25782.7 | 242621.3 |
| 2065/66 | 1900 | 194.68 | 3610000 | 37900.3 | 369892.0 |
| N = 5 | 5534 | 844.61 | 7762866 | 143871.4 | 968223.6 |

From the above table,

N = 5, X = 5534, Y = 844.61, $X^2$ = 7762866, $Y^2$ = 143871.4, XY = 968223.6

r = 0.75 (calculation made through excel worksheet)

$r^2$ = 0.56

Regression Equation of X on Y

X = a + bY…… (i)

Where, X = Dependent variable

Y = Independent variable

The values of a and b determined from the normal equation

X = na + b Y…… (ii)

XY = a Y + b $Y^2$…… (iii)

Now, substituting the values in equation (ii) and (iii), we get,

5534 = 5a + b844.61…… (iv)

968223.6 = a844.61 + b143871.4…… (v)

Again, solving it, we get,

a = -3602.75

b = 27.88

Substituting the values of a and b in equation (i), we get regression equation as,

X = -3602.75 + 27.88

OR

MPS = -3602.75 + 27.88 BVPS

# Appendix 6

## Calculation of Market Return (R$_m$)

| Year | NEPSE Index | Annual Return (R$_m$) | R$_m$-$\overline{R}_m$ | (R$_m$-$\overline{R}_m$)$^2$ |
|------|-------------|----------------------|------------------------|------------------------------|
| 2060/61 | 222.04 | | | |
| 2061/62 | 286.67 | 0.2911 | -0.0279 | 0.0008 |
| 2062/63 | 386.83 | 0.3494 | 0.0305 | 0.0009 |
| 2063/64 | 683.95 | 0.7681 | 0.4492 | 0.2017 |
| 2064/65 | 963.36 | 0.4085 | 0.0896 | 0.0080 |
| 2065/66 | 749.1 | -0.2224 | -0.5413 | 0.2931 |
| | | R$_m$= 1.5947 | | (R$_m$-$\overline{R}_m$)$^2$ = 0.5045 |

Where,

$$R_m = \frac{\text{Ending NEPSE Index-Beginning NEPSE Index}}{\text{Beginning NEPSE Index}}$$

Average Market Return ($\overline{R}_m$) = $\dfrac{R_m}{N}$ = $\dfrac{1.5947}{5}$ = 0.3189 = 31.89 %

Standard Deviation of Market Return ($\sigma_m$) = $\sqrt{\dfrac{(R_m - \overline{R}_m)^2}{N}}$ = $\sqrt{\dfrac{0.5045}{5}}$ = 0.3176

Variance of Market Return ($\sigma^2_m$) = 0.3176$^2$ = 0.1009

**i. Calculation of Actual Rate of Return and Required Rate of Return of BOK**

| Year | Closing Price | Cash Dividend | $R_j$ | $\overline{R_m}-\overline{R}_m$ | $R_j-\overline{R}_j$ | $(R_m-\overline{R}_m)(R_j-\overline{R}_j)$ |
|------|------|------|------|------|------|------|
| 2060/61 | 295 | | | | | |
| 2061/62 | 430 | 15 | 0.5085 | -0.0279 | -0.0169 | 0.0005 |
| 2062/63 | 850 | 18 | 1.0186 | 0.0305 | 0.4933 | 0.0150 |
| 2063/64 | 1375 | 20 | 0.6412 | 0.4492 | 0.1158 | 0.0520 |
| 2064/65 | 2350 | 2.11 | 0.7106 | 0.0896 | 0.1853 | 0.0166 |
| 2065/66 | 1750 | 7.37 | -0.2522 | -0.5413 | -0.7775 | 0.4209 |
| | | | $R_j$ =2.6267 | | | $(R_m-\overline{R}_m)(R_j-\overline{R}_j) = 0.5050$ |

Where,

$$R_j = \frac{\text{Ending Price - Beginning Price + Cash Dividend}}{\text{Beginning Price}}$$

$$\text{Average Actual Rate of Return } (\overline{R}_j) = \frac{R_j}{N} = \frac{2.6267}{5} = 0.5253 = 52.53 \text{ \%}$$

$$\text{Co-Variance, Cov } (R_j, R_m) = \frac{[(R_j-\overline{R}_j) (R_m-\overline{R}_m)]}{N} = \frac{0.5050}{5} = 0.101$$

$$\text{Beta Coefficient } (\beta) = \frac{Cov(R_m R_j)}{\text{Variance } (R_m)} = \frac{0.101}{0.1009} = 1.00$$

Required Rate of Return, $(K_i) = R_f + \{R_m- R_f\} \times \beta = 3.5 + (31.89-3.5) \times 1.00 = 31.32$

**ii. Calculation of Actual Rate of Return and Required Rate of Return of NABIL**

| Year | Closing Price | Cash Dividend | $R_j$ | $\overline{R_m}-\overline{R}_m$ | $R_j-\overline{R}_j$ | $(R_m-\overline{R}_m)(R_j-\overline{R}_j)$ |
|------|------|------|------|------|------|------|
| 2060/61 | 1000 | | | | | |
| 2061/62 | 1505 | 70 | 0.575 | -0.0279 | 0.0929 | -0.0026 |
| 2062/63 | 2240 | 85 | 0.5449 | 0.0305 | 0.0627 | 0.0019 |
| 2063/64 | 5050 | 100 | 1.2991 | 0.4492 | 0.8170 | 0.3669 |
| 2064/65 | 5275 | 60 | 0.0564 | 0.0896 | -0.4257 | -0.0381 |
| 2065/66 | 4899 | 35 | -0.0646 | -0.5413 | -0.5468 | 0.2960 |
| | | | $R_j$ =2.4107 | | | $(R_m-\overline{R}_m)(R_j-\overline{R}_j) = 0.6241$ |

Where,

$$R_j = \frac{\text{Ending Price - Beginning Price + Cash Dividend}}{\text{Beginning Price}}$$

Average Actual Rate of Return $(\overline{R}_j) = \frac{R_j}{N} = \frac{2.4107}{5} = 0.4821 = 48.21\%$

Co-Variance, Cov $(R_j, R_m) = \frac{[(R_j - \overline{R}_j)(R_m - \overline{R}_m)]}{N} = \frac{0.0.6241}{5} = 0.1248$

Beta Coefficient $(\beta) = \frac{\text{Cov}(R_m\, R_j)}{\text{Variance}(R_m)} = \frac{0.1248}{0.1009} = 1.24$

Required Rate of Return, $(K_i) = R_f + \{R_m - R_f\} \times \beta = 3.5 + (31.89 - 3.5) \times 1.24 = 38.70$

### iii. Calculation of Actual Rate of Return and Required Rate of Return of HBL

| Year | Closing Price | Cash Dividend | $R_j$ | $R_m - \overline{R}_m$ | $R_j - \overline{R}_j$ | $(R_m - \overline{R}_m)(R_j - \overline{R}_j)$ |
|---|---|---|---|---|---|---|
| 2060/61 | 840 | | | | | |
| 2061/62 | 920 | 11.58 | 0.1090 | -0.0279 | -0.0880 | 0.0025 |
| 2062/63 | 1100 | 30 | 0.2283 | 0.0305 | 0.0312 | 0.0010 |
| 2063/64 | 1760 | 15 | 0.6136 | 0.4492 | 0.4166 | 0.1871 |
| 2064/65 | 1980 | 25 | 0.1392 | 0.0896 | -0.0578 | -0.0052 |
| 2065/66 | 1760 | 12 | -0.1051 | -0.5413 | -0.3021 | 0.1635 |
| | | | $R_j = 0.9851$ | | $(R_m - \overline{R}_m)(R_j - \overline{R}_j) = 0.3489$ | |

Where,

$$R_j = \frac{\text{Ending Price - Beginning Price + Cash Dividend}}{\text{Beginning Price}}$$

Average Actual Rate of Return $(\overline{R}_j) = \frac{R_j}{N} = \frac{0.9851}{5} = 0.1970 = 19.70\%$

Co-Variance, Cov $(R_j, R_m) = \frac{[(R_j - \overline{R}_j)(R_m - \overline{R}_m)]}{N} = \frac{0.3489}{5} = 0.0698$

$$\text{Beta Coefficient } (\beta) = \frac{\text{Cov}(R_m \, R_j)}{\text{Variance }(R_m)} = \frac{0.0698}{0.1009} = 0.69$$

Required Rate of Return, $(K_i) = R_f + \{R_m - R_f\} \times \beta = 3.5 + (31.89 - 3.5) \times 0.69 = 23.09$

### iv. Calculation of Actual Rate of Return and Required Rate of Return of EBL

| Year | Closing Price | Cash Dividend | $R_j$ | $R_m - \overline{R}_m$ | $R_j - \overline{R}_j$ | $(R_m - \overline{R}_m)(R_j - \overline{R}_j)$ |
|---|---|---|---|---|---|---|
| 2060/61 | 680 | | | | | |
| 2061/62 | 870 | - | 0.2794 | -0.0279 | -0.0712 | 0.0020 |
| 2062/63 | 1379 | 25 | 0.6138 | 0.0305 | 0.2632 | 0.0080 |
| 2063/64 | 2430 | 10 | 0.7694 | 0.4492 | 0.4188 | 0.1881 |
| 2064/65 | 3132 | 20 | 0.2971 | 0.0896 | -0.0535 | -0.0048 |
| 2065/66 | 2455 | 30 | -0.2066 | -0.5413 | -0.5572 | 0.3016 |
| | | | $R_j = 1.7531$ | | $(R_m - \overline{R}_m)(R_j - \overline{R}_j) = 0.4949$ | |

Where,

$$R_j = \frac{\text{Ending Price - Beginning Price + Cash Dividend}}{\text{Beginning Price}}$$

$$\text{Average Actual Rate of Return } (\overline{R}_j) = \frac{R_j}{N} = \frac{1.7531}{5} = 0.3506 = 35.06 \, \%$$

$$\text{Co-Variance, Cov } (R_j, R_m) = \frac{[(R_j - \overline{R}_j)(R_m - \overline{R}_m)]}{N} = \frac{0.4949}{5} = 0.0990$$

$$\text{Beta Coefficient } (\beta) = \frac{\text{Cov}(R_m \, R_j)}{\text{Variance }(R_m)} = \frac{0.0990}{0.1009} = 0.98$$

Required Rate of Return, $(K_i) = R_f + \{R_m - R_f\} \times \beta = 3.5 + (31.89 - 3.5) \times 0.98 = 31.32$

**v. Calculation of Actual Rate of Return and Required Rate of Return of SBI**

| Year | Closing Price | Cash Dividend | $R_j$ | $R_m - \overline{R}_m$ | $R_j - \overline{R}_j$ | $(R_m - \overline{R}_m)(R_j - \overline{R}_j)$ |
|---|---|---|---|---|---|---|
| 2060/61 | 307 | | | | | |
| 2061/62 | 335 | - | 0.0912 | -0.0279 | -0.3926 | 0.0109 |
| 2062/63 | 612 | 5 | 0.8418 | 0.0305 | 0.3580 | 0.0109 |
| 2063/64 | 1176 | 12.59 | 0.9421 | 0.4492 | 0.4584 | 0.2059 |
| 2064/65 | 1511 | - | 0.2849 | 0.0896 | -0.1989 | -0.0178 |
| 2065/66 | 1900 | 2.11 | 0.2588 | -0.5413 | -0.2249 | 0.1218 |
| | | | $R_j = 2.4188$ | | $(R_m - \overline{R}_m)(R_j - \overline{R}_j) = 0.3317$ | |

Where,

$$R_j = \frac{\text{Ending Price - Beginning Price + Cash Dividend}}{\text{Beginning Price}}$$

Average Actual Rate of Return $(\overline{R}_j) = \dfrac{R_j}{N} = \dfrac{2.4188}{5} = 0.4838 = 48.38\ \%$

Co-Variance, Cov $(R_j, R_m) = \dfrac{[(R_j - \overline{R}_j)(R_m - \overline{R}_m)]}{N} = \dfrac{0.3317}{5} = 0.0663$

Beta Coefficient $(\beta) = \dfrac{\text{Cov}(R_m\ R_j)}{\text{Variance }(R_m)} = \dfrac{0.0663}{0.1009} = 0.65$

Required Rate of Return, $(K_i) = R_f + \{R_m - R_f\} \times \beta = 3.5 + (31.89 - 3.5) \times 0.65 = 21.95$

# Appendix- 8

## Pro- forma of Structured Questionnaire

## A survey of share price movement in Commercials Banks

Name:……………………………..

Position:…………………………………..

Institution…………………………………

1. Have you ever hold the shares from the primary market?

    Yes                                          No

  I. If yes, what are the reasons for holding the share?

    a.   Social status

    b.   For dividend

    c.   For capital gain

    d.   Please, Specify if any others

  II. If not, what may be the reasons for not holding share?

    a.   Unaware of receiving dividend

    b.   Unaware about the procedures of share application

    c.   Over fluctuation of share price

    d.   Please, Specify if any others

2. Do you agree that there is volatility in share price?

    Yes                                          No

  I. If yes, what are the major factors for share volatility?

    a.   Distribution of dividend

    b.   Signaling factors

    c.   Political instability

    d.   Please, Specify if any others

3. Do you know that future share price can be predicted?

    Yes                                          No

  I. If yes, what are the major factors that help to predict its market price?

    a.   Historical price

    b.   Market analysis

    c.   Financial Data

    d.   Please, Specify if any others

4. Is there any measure to increase net profit?

   Yes                                              No

   I. If yes, what could be the measure to increase net profit?

   a.  High deposit collection

   b.  Deduction in Expenditures

   c.  High margin in the rate of interest among deposit and loan issue

   d.  Please, Specify if any others


5. Do you know that the share price gets decreased?

   Yes                                              No

   I. If yes, what are the reasons why to share price are increased?

   a.  Political instability

   b.  Delay in trading mechanism

   c.  High Interest on loan

   d.  Please, Specify if any others


6. Do you know that Company distributes dividend?

   Yes                                              No

   I. If yes, what are the reasons for dividend distribution?

   a.  High Profit

   b.  To attract Investors

   c.  To increase DPS

   d.  Please, Specify if any others


7. Have you ever invested your money in secondary market?

   Yes                                              No

   I. If yes, what factors play the major role in the decision making before its investment?

   a.  Current market price

   b.  Expert advice

   c.  Own analysis

   d.  Please, Specify if any others

   II. If not, what may be the reasons for not investing in secondary market?

   a.  Unaware about procedures of secondary market

   b.  Delay procedures of secondary market

   c.  For achievement of benefits

   d.  Please, Specify if any others