STOCK PRICE MOVEMENT & FINANCIAL PERFORMANCE OF COMMERCIAL BANKS

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CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

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 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.

To develop the economy of a country, an efficient and effective capital market is needed. Capital market consists of security market and non-security market. Security market implies mobilization of the funds through issuance of securities: shares, bonds, and debentures by corporate sector and bonds, bills, and debentures by government. Securities traded in market are generally negotiable and hence can be traded in secondary market. Non-security market refers to the mobilization of the financial resources by the financial institutions such as banks in the form of deposits and loans. The stock market helps to enhance the marketability of the securities, rational allocation of investable funds, facilitate economic growth, wealth generation, liquidity and diversification of the investment. Promotion of stock market in sizable economic sector gives rise to the economic development through mobilization of investment into productive sectors if suitable environment for investment exists. Stock market is considered

as the moving wheels of finance. It supports the development of Nepalese business, enterprises and industries because mobilization of needed capital to listed companies has been made possible with the growth of share market in Nepal (Shrestha, 1992:13.16).

With the course of modernization, modern financial equipment and human activities are developing. Such development helped to develop investment sector in a disciplined manner. Many corporate bodies are raising their capital by issuing different means of capital like common stock, preferred stock, bond with attachment of warrant, and convertibles. The main objective of the capital market is to create an opportunity for maximum number of people to get benefits from the return obtained by directing the economy towards the productive sector through the mobilization of the long-term capital.

The stock market is a place where shares (parts of the ownership) of listed companies are bought and sold or transferred ownership from one hand to another at a fair-price through the organized brokerage system. Stock markets refer to the secondary markets for securities whereas primary markets refer to the market for new issue of shares. The major function of stock market is to provide a market for purchase and sales of securities at competitive price. Financial Market is the place where financial instruments are traded. Financial instrument include shares, bonds, debentures etc. Share or stock is a major component of the securities market. Stock market is a medium through which corporate sectors mobilize fund to finance productive projects by issuing shares in the market. The efficient collection of small amounts of saving and transferring funds into the competitive and efficient user requires a well functioning capital market to facilitate the process (Mahat, 1981:30-31).

Stock Market is a place where shares of listed companies are traded & transferred from one hand to another at a fair price through the organized

brokerage system. Principally stock market refers to the secondary market for securities where as primary market refers to the market for Initial Public Offerings (IPO) of the shares of any enterprise.

Nepal is one of the least developed countries in the world. Nepal launched economic development plan more than four decades ago and has been adapting the plan of economic development through liberalization for few years back. The history of security market is characterized by passing of law relating to company registration and regulation in 1936 AD, issuance of treasury bills in 1962, issuance of development bonds in 1964 AD, establishment of securities exchange center (SEC) in 1976. However, listing of shares in stock exchange and their daily trading in the secondary market the institutional brokerage system started only after the restoration of democracy in 1990.

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

Securities Exchange Center was established with an objective of facilitating and promoting the growth of capital markets. Before conversion into stock exchange it was the only capital markets institution undertaking the job of brokering, underwriting, managing public issue, market making for government bonds and other financial services.

Nepal Government, under a program initiated to reform capital markets converted Securities Exchange Center into Nepal Stock Exchange in 1993. Nepal Stock Exchange, in short NEPSE, is a non-profit organization, operating under Securities Exchange Act, 1983.

The establishment and operation of the Nepal Stock Exchange (NEPSE) in 1993 has opened door to investors. Although it has evolved slowly, it still is characterized by small number of listed securities (150 securities of 142 companies) by the end of 2006, traditional trading practice (open-outcry system), dominance of one type of securities (banks) in the market portfolio, least trading of government securities, absence of professional investment advisors, very low level of information disclosure and trading driven by rumors than systematic analysis. Capital market, at present, is profitable to the investors who can overlook the rule of game. It is yet to be rational to a discerning investor. Unless it is changed, capital market will not contribute in a desirable way to contribute to growth (Koirala and Bajracharya, 2004). This poses a great challenge for the rational investors of Nepal which indicate a need of systematic approach in investment decision.

Although the stock market of Nepal is in infant stage, all types of investors can benefit from the sound and in-depth knowledge of portfolio analysis which help them to diversify their investment risk. The systematic analysis of available portfolios and thereby selection of optimal portfolio help to diversify risk without adversely affecting the return. It also facilitates the mobilization of resources in all sector of the economy by inducing investors to invest in stocks of different industrial categories and thereby fosters the economy growth of the country. Investing in common stocks of commercial banks have been a major concern among Nepalese investors. In many instances, it has been found that during the Initial Public Offering (IPO) of common shares of such banks, as many as 125 times of the issued shares have been subscribed by the investors.

Modern Banking practices are of recent origin in Nepal. 'Tejarath Adda" is considered as father of modern banking institution in Nepal. The first bank to be initiated in Nepal is "Nepal Bank Ltd.(1937 AD).Subsequently another state

owned commercial bank , "Rastriya Banijya Bank" was established in 1965. The hoard of establishment of joint venture Public commercial banks came after the establishment of Nepal Arab Bank Ltd.(1984). Similarly, Nepal Investment Bank Ltd.(formerly Nepal Indosuez Bank Ltd.) and Standard Chartered Bank Nepal Ltd.(formerly Nepal Grindlayz Bank Ltd.) were established in 1984 respectively. Then after Himalayan Bank ltd, Nepal SBI Bank ltd, NB Bank Ltd and others were established subsequently. With the recent establishment of Global Bank Ltd. and Citizens Bank International, the Nepalese Banking Industry has at present 23 commercial banks.

Financial Market is the place where the financial instrument, shares, bonds and debentures etc, are traded (Gitman, 1988:30-31). It consists of series of channels through which savings of the community are made available to users of those funds. It provides a forum in which suppliers and demander of funds can transact business funds directly (Gitman, 1988:30-31). Financial market constitutes money market and capital markets. Money market is created by a suppliers and demanders of short-term funds with maturities of less than year. Capital market is created by a suppliers and demanders of long-term funds with maturities of more than one year. We can divide capital market into primary and secondary market.

Principally primary market refers to the market for new issues where as stock market refers to secondary market for securities. Generally brokers are the backbone of stock market growth as they perform primary role in exchange of commission. Capital Market is the market for long term borrowing and lending. It is concerned with long-term finance. It refers to the links between lenders and borrower of funds arranging a funds transfer process to seek each other benefits (Philips, 1985:8). It consists of series of channels through which savings of the community are made available for industrial and commercial enterprises and

public authorities. So it is vital part of economic development. Establishment of security exchange center in 1976 developed the concept of capital market. Negligible number of listed company and their trading, absence of professional brokers, early stage of growth and limited movement of investing people etc characterized it. Share or stock market is major component of the securities market. It is the one form of secondary market. Stock market is a place where shares of listed companies are traded and transferred from one hand to another at a fair price through the organized brokerage system. It is the medium, which bridges the corporate sector investors to individual or corporate sector saver. The stock market is a financial market, which probably has the greater glamour and is perhaps least understand. The efficient collection of small amounts of saving and transferring funds into the competitive and efficient uses requires a well functioning capital market to facilitate the process (.Mahat, 1981:30-31). Hence it creates and enhances liquidity in securities.

As government opened and brought broad financial policies in the process economic liberalization, the privatization of public entities have been started, various financial and insurance companies in the private sector are established with local and foreign investments. These companies have to issue some of their shares to the general public. Thus to give momentum a liquid market for shares, a strong competitive secondary market is necessary. In order to make the public issue more transparent and to facilitate buying and selling securities in the secondary market, the government has framed laws, by laws in this regard, and established Nepal Stock Exchange and also security exchange Board, which can be considered as the favorite steps towards the development of capital market in Nepal (Vaidy, 1999:117).

An efficient capital market is an essential pre - requisite of economic development of the country. Capital Market comprises two markets (a) Primary

Market (b) Secondary Market. Primary Market is concerned with arrangement of long term funds by issue of securities, public deposit, foreign investment etc. The secondary market deals with the arrangement of facilities for the investors for buying and selling of their assets, such as stock exchange. The constituents of capital market in Nepal are SEBON and NEPSE.

1.2 Statement of the Problem

Nepal has already spent more than four decades of its planed economic development strategies for the balanced development of the country. Recently the country is adopting liberal economic development strategy. However, country is still regarded as the world's least developed country. For the quick pace of economic growth, a large amount of investment is needed that is far from the access. Supply of capital fund is possible through banks and capital market. Banks and efficient capital market helps to mobilize financial resources. The growth of capital market in a country depends up on the amount of saving available. The banks accumulate small savings and make huge amount that can be invested to establish large enterprises. Similarly, the stock market provides good investment opportunity to investors with fair return and instant liquidity with minimum risk of loss. Both the banks and stock market help to mobilize financial resources for the investment in development projects and thereby it helps to economic development of the country in turn, further develop bank and the stock market.

Although the growth and regulation of stock market is not an old phenomenon in Nepalese context, it was in its flourished stage just half decade ago. Security market experienced both boom and depression soon after the beginning of securities trading through brokers' members in the stock exchange floor. Within this, the banking sector's trading in NEPSE was the brightest. However, Nepalese stock market could not continue its blooming stage for long period.

Since last some years, Nepalese stock markets including the banking sector getting worse result of its history.

Existing economic imbalances, political instability, ineffective implementation of liberal economic policy of the country have generated negative symbols in the economy. The prices of securities especially common stock have been randomly fluctuating and declining over the past years. Due to which some companies have been liquidated and some are operating hardly in the market. The problems of Nepalese stock market have not been diagnosed and identified.

The government polices to reform the capital market under the Extended Structural Adjustment Program (ESAP) have left some positive impact for the development of the stock market early in nineties. However, this also fell short due to improper implementation of policy. The studies show the miss valuation of the stock prices in the secondary market. The price earning information has not been made available timely to investors. The investor could not identify good and bad stocks. The price of some stocks, which have sustained loss for long period reached to peak level while other could not increase. The lack of value judgement to determine the stock prices is the serious problem of Nepal stock market. This mostly happened due to inability of regulatory bodies of stock market to regulate the market mechanism and failure to win the faith of investor. The Problem can be solved only when real determinants of stock prices are diagnosed and identified .The present study has been carried out to analyze the behavior of share price in Nepali stock market with relation to banking sector.

The research is based on the analysis of stock prices behavior in Nepal and therefore to shed light on the problems and to skin up the finding, this study mainly deals and concerned with following questions:

a) What are the causes affecting the share price?

b) Whether the price changes are the random phenomenon or not?
c) What is the condition of market price and market capitalization in relation to banking?
d) What is the nature of stock of commercial banks in relation to growth or value stock?
e) Are the share price changes correlated with its past price movements or not?

1.3 Objectives of the Study

The main objective of this study is to analyze the stock market trend and financial performance of commercial banks in Nepal. The specific objectives are as follows:

a) To analyze the movement of stock volume, stock price, market capitalization and NEPSE index of commercial banks.
b) To evaluate risk and return proportion on investments on stock of commercial banks.
c) To study group wise overall movement of NEPSE index.

1.4 Significance of the Study

Findings of this study are expected to be 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 signaling factors. This will be very useful to the scholars who are interested about the effect of signaling factors on price, volume and market capitalization of stock and NEPSE index. Moreover, report of this study will be an important literature in regarding field in Nepalese context.

Very few studies have been made in relation to stock price movement so this study is significant to all interested parties, stock analyst, researchers and brokers.

1.5 Limitations of the Study

This study has the following limitations:

a) The study is being carried out for the partial requirement of the degree of MBS, and basically secondary data collected from various publications, brochures, websites will be used to carry out the study.

b) Among the various commercial banks, the study will focus on stock price of five commercial banks only NABIL Bank (NABIL), Nepal investment Bank Ltd. (NIBL), Standard Chartered Bank Nepal Ltd. (SCBNL), Himalayan Bank Ltd. (HBL), and Everest Bank Ltd. (EBL).

c) Trading of the common shares of the selected banks for last nine years have been taken into consideration for the study.

1.6 Organization of the Study

The study has been divided into the following five chapters:

Chapter One: Introduction

The first introduction chapter deals with the subject mater of the study. This chapter deals with introduction, statement of the problem, objectives, significance, limitations and organizations of the study itself.

Chapter Two: Review of the Literatures

In this chapter a brief view of the related studies and findings are presented and various related literature are quoted, which include includes the conceptual

frameworks, review of foreign studies, review of Indian studies and review of Nepalese studies

Chapter Three: Research Methodology

Methodology used for the purpose of the study in this chapter explains research design; sources of data, selection of enterprise, data gathering procedure, population and sample size of the study, data processing procedures and financial and statistical tools are used.

Chapter Four: Presentations and Analysis of Data

In the fourth chapter the data are presented, analyzed and interpreted using various financial and statistical tools

Chapter Five: Summary, Conclusions and Recommendations

The final and last chapter contains the summery of' the whole study. The conclusion or the findings of the study have been presented and at last suitable and concrete measures are suggested in the form of recommendations. Bibliography and appendixes shall follow this chapter.

CHAPTER – TWO

REVIEW OF LITERATURE

2.1Conceptual Framework

The basic ideas about the study can be drawn from the review of related literatures like research writings, books, articles and dissertation. This chapter deals with the concepts and theories related to the theme of present study. 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. Reviews of concepts are the clue parts itself because the study be focused and centralized till finishing the study. Stock price movement is the central concept used throughout this thesis. Review of stock price movement and the theories in regarding field guides this study. The stock in terms of business and finance is a share of ownership in a corporation. Shares in a corporation can be bought and sold, usually on a public stock exchange. Consequently, the owner of shares can realize a profit or capital gain if the stock is sold at a price above what the owner originally paid for it. Numbers of other concepts namely: capital, capital market, primary capital market, secondary capital markets, securities market, stock market, common stock, preferred stock, are applied in this study.

2.1.1 Capital

Capital is a mean from which future income can be derived. The capital includes land, buildings, equipment, inventory, and raw materials, as well as stocks, bonds, and bank balances available or a company or enterprises. In the

traditional sense, the term capital does not refer to the homes, furnishings, cars, and other goods that are consumed for personal enjoyment (or the money set aside for purchasing such goods). The economists of 19th-century designated the term capital only to the segment of business wealth that was the product of past industry. However, for contemporary economists, the term capital refers to the aggregate of goods and monies that is used to produce more goods and monies. In the more precise way, capital is defined as the stock of property owned by an individual or corporation at a given time, as distinguished from the income derived from that property during a given period.

There are different forms of capital. All are more or less durable means of production, such as land, buildings, and machinery. They are fixed capital. However, nonrenewable goods, such as raw materials and fuel, and the funds required paying wages and other claims against the enterprise are circulating capital. Similarly, the capital that can be converted readily into cash, such as finished goods or stocks and bonds, are called liquid capital. Contrary to that, all assets that cannot be easily converted to cash, such as buildings and equipment, are considered as frozen capital. Further more, machines, raw materials, and other physical goods are called productive capital, and the claims against these goods, such as corporate securities and accounts receivable, are financial capital. Liquidation of productive capital reduces productive capacity, but liquidation of financial capital merely changes the distribution of income.

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 grater than one year. The institutions through which public savings are mobilized in the profitable project refer the capital market. In other words, it is the mechanism to invest public savings in industrial and business enterprises. Capital market investment plays major role in the development of country. 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.

Primary Capital Market: Primary capital market denotes the markets for the original sale of securities by an underwriter to the public. It is a market in which new companies' stocks are issued by the corporate sector. These securities can be offered by the method of public floatation or private placement. Moreover, primary market can issue additional shares of common stocks, these additional shares can be sold in the market and once the sale is completed the new shares will be distinguishable from the shares sold in the initial public offering.

Secondary Capital Market: Secondary capital market comprises the organized security exchanges. It deals with the previously issued shares mainly traded through the stock exchange. It means the secondary capital market is a market where the securities can be traded after securities purchased from the primary market. The major of all capital market transactions occurs in the secondary markets. The proceeds from the sale of securities in the secondary markets do not go to the organizational issues instead to the initial owners of the securities.

Securities market: A security market can be defined as a mechanism that brings buyers and sellers financial assets together in order to facilitate trading. Security markets are secondary markets, because the financial assets traded at security markets are issued at some previous points in time. One of their main functions is 'price discovery' that is, to cause price to reflect currently available information.

Stock Market: Stock market acts as a part of the capital market and can provide major resource for the investment in the economic development. It is a major component of the securities market. Stock market is a medium through which corporate sector mobilize funds to finance productive projects by issuing shares in the market. Moreover, stock market provides the best investment opportunity to the investors. The stock market is part and parcel of corporate development. The corporate business is a business organization established under company act consisting of billion of rupees of smaller ownership and debt certificates of the small denomination. Thus, for the effective collection of small amounts of savings and transferring funds into the competitive and efficient uses, a well functioning capital market is required.

2.2 Theories of Stock Price Movement

There are two approaches to explain share price fluctuations, namely; conventional approach and contrary approach. Both approaches are based on market efficiency. Conventional approach considers that the market is efficient, which includes technical analysis theory and fundamental analysis theory. On the contrary, the contrary approach argues that the market is efficient. Prior to the development of the efficient market theory, investors were generally divided into two groups i.e. fundamentalists and technicians (Reily, 1986:347).

In broad sense, there exist three theories namely a. Efficient Market Theory, b. Fundamental Analysis Theory, and c. Technical Analysis Theory, concerning stock price behavior. Those theories explain share price fluctuation in the stock market. Market efficiency is the premise for all of the theories.

2.2.1 Efficient Market Theory

The term efficiency may be defined in various ways for instance, allocative efficiency, operational efficiency, and information efficiency. The word ‘efficiency’ in security market has unfortunately been used to represent a variety of logically distinct concepts. In particular it may mean: exchange efficiency, production efficiency, and information efficiency. However, present study concerns only with information efficiency in the pricing of stocks. When the financial literature speaks on market efficiency, it exclusively speaks about informational efficiency in pricing the stocks. A market is said to be information efficient if the current market price is instantaneous and fully reflects all relevant available information. The market value of a particular share may be under or over valued. An efficient market is one where shares are always correctly priced and where it is not possible to outperform the market consistently.

Efficient market theory contends that in a free and perfect competitive market, stock price always reflects all the available information and adjusts with every influx of new information instantaneously. According to Fama, in efficient market securities prices fully reflect available information. In an efficient market, price changes would only occur form new information. According to Reilly, an initial and very important premise of an efficient market is that there are large numbers of knowledgeable and profit maximizing independent buyers and sellers, new information is generated randomly and investors adjust the information rapidly. Therefore, if market is efficient, it uses all available information to set price. The measure of efficiency evolved from the notion of perfect competition, which assumes free and instantly available information retinal investors with no taxes or transaction cost (Fama, 1977:133).

The efficient market theory is extreme hypothesis. Although the theory claims that prices fully reflect available all information, it cannot be tested in the empirical data. However, postulating pricing mechanism with the type of

information set being impounded in the stock market, it can be done. As efficient market theory concerned with the pricing mechanism of securities market, it has two dimensions of price adjustments one is the type of information reacting to, and another is the speed and quality of adjustment of security to the information. As any random infusion of information instantaneously and correctly adjusted in prices, there will be no subsequent dependencies or lags that are profitable. Pricing not only should be instantaneous but also, should discount accuracy of information so that the prices fluctuate closely around its intrinsic value.

There are three forms of efficient market theory depending upon type of information set impounded into the prices. If the pricing in the stock market has absorbed all the information available in the stock market, it is considered as weakly efficient and participation of technical analysis theory in the market becomes futile. In this market past information has already been discounted in price, so excess profit cannot be derived from the investment strategy based on past information. If current price of stock reflects all the publicly available information that is past prices and volume data and all the published accounting information, the market is semi-strong efficient. In the market, even fundamental analysis of the published accounting information has no value because it would have been discounted by participants accurately and instantaneously when they are disclosed. When stock prices fully reflect all the relevant information that is published and unpublished that has impact on the future prices, the strongly efficient market is hold. In this market, insider information can not beat the market because no single participant has monopolistic access to that kind of information.

2.2.2 Fundamental Analysis Theory

Generally, fundamental analysis theory refers to the formula and principle. Fundamental analysis approach involves analyzing different factors namely,

governmental action, firm's financial statement, its competitor and pertinent company's information like product demand, earnings, dividend and management in order to calculate an intrinsic value for firm's securities. This theory claims that at 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. According to Francis, the value of the common stock is simply the present value of all the future income which the owner of the share will receive. The actual price should reflect the intrinsic value of the stock that is good anticipation of cash flows and capitalization rates corresponding to future time period. But in practice, firstly, it is not known in advance what a stock's income will be in each future period, and secondly, it is not clear what the appropriate discount rate should be for particular stock. Consequently the fundamentalists attempt to reach best estimate of the intrinsic value of share by studying company's sales, profit, dividends, management competency, and numerous other economic and industrial factors which determine its future income and prospect of the business opportunities (Francis, 1986:398).

Price changes as anticipation changes which in turn changes as a result of new information. Whenever the stocks are priced over or under the true value of the stocks, the recommendation of sales or purchases is called for. In the opinion of Reilly after extensive analysis, the investor derives an estimate of the intrinsic value of the security, which is then compared to its market price. If the value exceeds the market price, the security should be acquired and vice versa. Following this rule, investors believe, above- average return can be attained, given that market is inefficient in pricing the share (Bhalla, 1983:283).

The objective of fundamental security analysis is to upraise the intrinsic value of a security. The intrinsic value is the true economic work of financial asset. The

actual price of security is considered to be a function of a set of anticipation. Price changes as anticipation changes with a result of new information. The analyst who believes on fundamental facts to determine the intrinsic value of stock is popularly known as fundamental analyst or fundamentalist. Although fundamental analysis theory is used by many security analysts or prospective investors to make a judgment of the stock's value with a risk-return framework based on earning power and the economic environment, it is hard and time consuming job. The fundamental theory works exceedingly well in determining the intrinsic value of a company. It recommends for the selection of the appropriate securities.

2.2.3 Technical Analysis Theory

Technical analysis is one of the important theory of price determination and interpretation of the stock. This is the modern and practical method to analyze the price fluctuation in the security market. Technical analysis is based on 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. Among many tools, technical analysis is one tool that is designed to measure demand and supply. 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 movements of a market index. And some are used to predict both the action of individual securities and market action.

Technical analyst discern past pattern on trends in which they believe in repetition in the future and recommend for the timely holding and disposing

mechanism which is profitable. The technician usually attempts to predict short-term price movement and thus makes recommendations concerning the timing of purchase and sale of either specific stocks or group of stocks. 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, 1990:683).

2.3 Review of Related Studies

Numbers of scholars and academic researchers have written many dissertations and research articles on the theme related to present study. Among them some are reviewed here to be familiar with research related matter in the theme.

Generally random walk literature is the corner stone for weakly efficient market hypothesis. The development of EMH could also be traced back from the random walk theory of stock market price behaviors. In the beginning, the share price changes showed random phenomenon. Although mathematically the empirical results were predictable, it lacked economic explanations. Then attempts were made to clothe the empirical result with economic contents, which led to the development of the efficient market theories. The empirical evidence in the random walk literature existed before the theory was established (Fisher and Jordon, 1995:539).

Louis Bachelor first tested the random walk model in 1900. He tested the model in commodity prices and found that these prices followed a random walk. He presented the evidence that the commodity speculation in France was a 'fair game'. He also concluded that current price of commodity was an unbiased estimate of its future price.

After the first discovery of the random walk model in 1900 by Louis Bachelor, empirical testing of the model in numbers of studies almost remained stagnant until 1960 s. There are large numbers of studies most of which are briefly reviewed below. In 1927, Slutsky proved that the randomly generated price changes look like share price changes and that they appear to exhibit cycles and other pattern (Gupta, 1989: 33).His work did not receive much attention. Alfred Cowles (1933) found little evidence that stock market analysis could predict future prices. In 1934, Hol Brook working extensively analyzed commodity prices and noted that speculative price patterns might be shown to be random comparing with artificially generated series of price. Even the random artificial series of price changes from apparent trends and patterns. On the contrary, in 1937, Alfred Cowles and Herbert E. Jones reported that share prices moved with predictable trends. They gave a controversy to the random walk model as a valid share price behaviors model in USA. This finding remained a challenge against the random walk hypothesis for more than two decades.

After the working had pointed out an error in their analysis, they withdrew their previous conclusion in 1960. Actually the error occurred because, where each unit of time series even where the original series is an average of points within that unit, the effect of such averaging will be to introduce positive first-order correlation in the first difference of such a series even where the original series a random chain. So on, he pointed out, in the study of serial correlation in price series it is important to bear in mind that the use of the average can introduce correlation not present in the original series.

Kendal (1953) made important progress in the study of random walk model. He examined the behavior of weekly changes in 19 indices of British industrial share prices and spot price series of cotton (New York) and wheat (Chicago). He extensively analyzed data by autocorrelation and found that successive changes

are statistically independent or share price movement follows random walk. To sum up, the review of literature suggests that share prices, really, follow a random walk prior to 1959. The modern concern in the random walk did not begin until 1959. Roberts (1959) conducted simulation tests by comparing the accumulation of random numbers and the Dow Jones Industrial Average (DIJA) for 52 weeks starting from December 30, 1955 to December 28, 1956. He also found that the first differences of artificially generated series seemed very much like the first differences of share price series. Thus, he showed that probably all the classical patterns of technical analysis can be generated artificially by a suitable random number table. His work was important in that he gave a number of methodological suggestions for testing what he calls the chance model. In particular, he suggested runs analysis for testing independence of price changes.

In another study of 1959, Osborne reported a very high degree of conformity between the movement of share prices and the law governing "Brownian motion" which in fact, supports the RWH. He found the consistency between the Brownian motion and share prices movements and gave rise to the supports on random walk hypothesis. Moore, in 1962, studied weekly price changes of 30 randomly selected stocks for the period 1951-58 and found an average serial correlation coefficient 0.006. The value was extremely low and indicated that the weekly change data had almost no power in predicting future price changes.

Alexander (1961) reported empirical results of the filter technique for filter ranging in size from 5 to 50 percent. His tests covered different time periods form 1897 to 1959 and involved closing prices for two indices, the Dow – Jones Industrial Average (DIJA) from 1887-1929 and standard and Poor's Industrial Average (S&P) from 1929 to 1959. In general he indicated that filter rules produced better results than those earned by a simple buy and hold policy. This led him to conclude that the independence assumption of the random walk model

was not up held by his data. Cootner in 1962 tested the randomness of the series by means square successive difference tests on the weekly prices of 45 stocks the New York stock Exchange. He found that one-week interval share prices move as a random walk. However he also found some dependencies in the data at 14-week interval. The serial correlation coefficients at one-week interval and 14 week interval are - 0.047 and 0.131 respectively. He gives due emphasis on the importance of the 'differencing interval' while testing the randomness in share price behavior. He contended that there was not one random walk model, but one for every definition of past and future (Gupta, 1989:34).

In another study carried out by Granger and Morgenstrn (1963) applied spectral method of analysis to the weekly, monthly and volume series from the New York stock market which involves of Dow- Jones, standard and poor, and various indices as well as price series of individual stocks. The result coffined the ration walk hypothesis for weekly and monthly price data from the New York stock market. Again, Godfrey, Granger and Morgenstern tested the same method broadly and found the random walk model a reasonable one.

Mandelbrot (1963), however, discovered a imperfection in Alexander previous work. In particular, he did not consider the transaction costs. Also, he neglected dividends in calculating trading profits for all of his mechanical trading rules. In a latter paper, however, Alexander (1964) derived a biased factor and corrected the errors of his earlier work.

Fama's study in 1965, on the Random walk model was one of the best definite and comprehensive ever study conducted. He observed the daily proportionate prices of the 30 individual stocks of the Dow Jones Industrial Average. The time periods covered started from end of 1957 to 26, September 1962. He employed the statistical tools such as serial correlation and runs tests to draw inference about dependence of the prices series. He calculated auto – correlation

coefficient for daily changes in log prices 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 + .03, which is near to zero. But on the daily prices changes, 11 out of 30 stocks had correlation coefficients more than twice their computed standard errors. The coefficients ranged from smallest + .06 to largest 0.123. However, Fama concluded, "dependence as such a small order of magnitude is, from a practical point of view, probably unimportant for both the statistician and investor."

Fama also calculated serial correlation for lag from 1 to 5 for non-overlapping differencing intervals of four, nine, and sixteen days to examine the possibility if price changes across longer interval show dependence. All the results are again not significantly different form zero. He further investigated the data by run analysis by total numbers of runs, number of runs by sign and distribution of runs by length. This method also agreed with the independence hypothesis of successive price changes to each other. In fact, he found the total actual number of runs is less than the expected number, which is consistent with the positive correlation coefficient, was positive for 23 out of 30 stocks. Though, there exist dependencies in the series: the departure from randomness was not significant. So, Fama asserts, “There is little evidence, either from the serial correlation or from the various runs tests, of any large degree of dependence in the daily, four day, nine day, and sixteen day price changes. He further says that these test are concerned, there is no evidence of important dependence from either an investment or a statistical point of view. King in 1966 investigated on the monthly price changes from 1927 to 1960 of 63 stocks and authenticated the random walk model. The estimated average serial correlation coefficient was +0.018, which is close to zero. Praetz (1969) investigated the three sets of price data of Australian shares. He used the serial correlation and runs tests and concluded that the RWH is a useful first approximation as a description of the

series of price changes. Dryden (1970) studied three London indices for approximately 4 years in Britain. He found that the first order serial correlation coefficients were statistically significant. However, most of the higher order coefficients were insignificant. In a latter study, Dryden (1970) analysed daily closing prices of 15 individual British shares. Again, his test were based on serial correlation, run tests and filter rules and supported the random walk model.

In another study of British stock market , Kemp and Reid (1971) used non-parametric tests on daily closing prices of 51 individual equity shares and one financial times (FT) industrial index for period from October 28,1968 to January 10,1969. They reported that share price movement s were conspicuously non random over the period considered. However, since their study used only non parameter tests and the period of the study was very short, their evidence should be used with caution. In one the studies of a comparatively smaller stock market, Niarchoas (1972), studied 15 individual stocks and two indices from the Athens stock exchange (Greece) form January 1957 to December 1968 which found an average value of 0.036 for the first order serial correlation coefficient for the individual share price series. The coefficients of individual stocks were close to zero. One index out of two followed random walk model. Additionally, runs tests also supported the autocorrelation outcomes. Conard and Juttner (1973) analyzed the daily closing prices of 54 German stocks during January 1968 to April 1971. They used both serial correlation and runs test and found that the random walk theory is inappropriate to describe the recent share price behavior in Germany. Law (1982) tested the weak form efficient market hypothesis (WEMH) on Hong Kong stocks. He investigated daily price series of 56 stocks for a period form January 1978 to December 1979. The statistical tools applied were: serial correlation, runs test and regression analysis. He reported that 32 out of 56 stocks were non random, within which 19 stocks were strictly random and additional 5 stocks were slightly random.

The study conducted by French Schwert and Stambaugh (1987) found a significant negative relationship between returns and un expected changes in volatility as well as significant positive relationship between returns and expected volatility under the GARCM – M procedure. Sweeney's study (1988) developed a filter rule that was able to earn modest profit. He replicated Fama and Blume's tests and found that the part of their filter rule that resulted in the short positions usually generated the trading losses. In contrast, Sweeney found that the long run were often profitable. Turner, Startz and Nelson (1989) have developed and tested a model in which stock market volatility is assured to shift between two statuses high and low. Using monthly data on the Standard and Poor's 500 stock index, they determine the probability or being in either state within a given month. In the most general form of their model, which allows for learning by the market within a given month, they found no evidence for the hypothesis that the risk premium increases in magnitude with the level of volatility.

The study conducted by Xin-Wong Cheung and Lilian K. NG (1992) documented that the sampled AMEX, NYSE stocks exhibit a negative relation between stock price and future stock volatility, a phenomenon commonly attributable to the leverage effect. Results show that small firms stock volatility tends to be more responsive to change in their stock price. Further , conditional variances of stock returns on average have become less sensitive to changes in stock prices.

The review of above mentioned studies carried out in western countries shows many interesting finding on price behavior. However, question arises as to what extent these findings are pertinent for Nepal. They all may not be applicable for Nepal where the stock market is small and underdeveloped. The more pertinent studies would be the studies conducted in India, since Nepalese and Indian

companies are operating under similar conditions. Hence, the following section attempts to analyze the studies under the context of India.

There are some empirical studies conducted to test efficient market hypothesis (EMH) in India. In one of the earlier studies, Rao and Mukerjee (1971) applied spectral analysis to weekly prices of an aluminum company's share and found no evidence contrary to random walk model. Sharma and Kennedy (1977) tested the random walk model, by runs test and spectral analysis, against representative stock market indices of the Bombay (BVDISI), New York (S & P 425) and London (F.T.-A.500) stock exchanges, during 1963-73. They found that stocks on the Bombay Stock Exchange obey a random walk and are equivalent in this sense to the behavior of share prices in the markets of developed countries.

Gupta (1985) analysed the equity share price behavior in India during the period January 1971 to March 1976 and extensively tested the RWH using daily and weekly prices of 39 individual shares and two indices. He employed the serial correlation analysis and runs test and found evidence in support of RWH. He also concluded model even for the less developed country like India to describe share price behavior.

Pandey and Bhat (1988) surveyed market participants attitude and perceptions in the understanding and acceptance of EMH. They sent the questionnaire to 600 persons who were divided into four groups: (1) the chief financial executive; (2) academicians; (3) chartered accountants; and (4) cross section of investors and brokers. Only 160 questionaire were returned duly filled by the respondents. Their analysis denied the existence of market efficiency in any of its three forms. Rao (1988) employed the autocorrelation analysis, runs test and filter rule to the week end closing prices of 10 blue chip stocks over the period 1983 to 1987. His study supported the RWH.

Mahapatra (1995) tested the WEMH using rank correlation analysis based on relative strength. His sample consisted of month end closing prices of 26 stocks form Bombay stock Exchange during the period January 1989 to December 1992. He argued that the Indian stock market is less efficient in the short run, but more efficient in the long run.

In Nepal very few numbers of studies have been conducted for the Nepalese stock market and the price behavior, which can be outlined briefly as bellows.

Pradhan, (1992) studied on "Stock Market Behavior in Nepal" is conducted by collecting the data of 17 enterprises from 1956 to 1990. The major objectives of the study are:

- To assess the stock market behavior in Nepal
- To examine the relationship of market equity, market value to book value, price earning and dividend with liquidity profitability, leverage, assets turnover and interest coverage.

The major findings of the study are:

- The higher the earning on stocks, the larger the ratio of dividend per share to market price per share.
- Stock with large ratio of DPS to MPS has lower leverage ratios.
- Positive relationship between dividend payout and profitability; positive relationship between dividend payout and turnover ratio; positive relationship between dividend payout and liquidity; positive relationship between dividend payout and interest coverage.
- DPS and MPS are positively correlated.

Aryal, (2007) conducted study on “The General Behavior of Stock Market", using serial correlation analysis and runs tests on daily closing prices of 21

stocks during 13 Jan, 2004 to 13 september,2004 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 whole.
- To examine whether the successive price changes of stock market are independent of each other or not.

The main finding of the study is:

- 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 behavior in Nepal Stock exchanges. 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 behavior 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 changes. Therefore the investing publics are

not aware of the information available publicly, appropriately in adjusting with the actual market price.

Timilsina, (2007) studied on “Dividend and Stock Price” which was carried out by the data for 16 enterprises from 2000 to 2004. 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 shares 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 main 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.

Shrestha, (2007) studied on "Share prices Behavior in Nepal" was conducted with the following objectives:

- To examine the efficiency of stock market of Nepal.
- To determine whether the sequence of price changes are consistent with changes of the series of random number expected under the independent Beunoulli process.

- To determine the efficiency of the stock market through the theoretical model of "efficient market hypothesis" in the stock market.

He examined daily closing prices of 30 stocks during the period from 13 Jan, 2004 to mid-July 2007 by means of serial correlation and runs tests found that the successive price changes are dependent.

The main finding of the study is:

- The Prices changes of the past and present can be very helpful to forecast future price changes. Therefore there exits the sufficient amount of opportunities for the sophisticated investors.
- When logs days increases, the mean value of serial correlation of coefficient is lower, that indicates that the past price changes may have low power to predict the future price changes in the long run.
- The price changes in the present and future stock market may not be independent of the price changes in the past and present respectively.
- There exist no profitable trading rules to make greater profit than they would make under the naive- buy – and – hold strategy in their speculation through the information of past price changes.
- Nepal stock market is not efficient in pricing shares.

Paudel, (2008) studied on "A study on share price movements of joint venture Commercial Banks in Nepal" is undertaken by using financial and statistical tools (standard deviation, correlation, beta, t- test etc) . The major objectives of the study are:

- To examine Nepal Stock exchange market and to judge whether the market shares of different banking indicators (book value per shares and major financial ratio) explain the share price movements.

- To analyze the scenario why the share s of selected banks emerge as blue chips to the potential investors and to make a conclusion on the basis of the financial ratios analysis.
- To examine how risky the investment in commercial banks share are.

The major findings are:

The market shares of these banks do not capture the market share and the growth rates of different banking indicators used.

- The ordinary least square equation of book value per share on market value per share. Share reveals that the independent variable doesn't fully explain the dependent variable on the basis of the above-mentioned two points. Nepal stock exchange operates in a weak form of efficient market hypothesis, indicating that the market price move randomly.
- Having good track record of the financial position, the market potential investors buy the shares of Joint Venture commercial banks. Therefore, the shares of joint venture commercial banks emerge as blue chips in the Nepalese stock market.
- The Beta coefficient, which measures the risky ness of individual security in relative term, suggests that none of shares of eight sampled banks are risky. The shares of publicly quoted joint venture commercial banks are less risky as compared to other average stocks traded in the stock exchange.

Dahal, (2008) studied on "Stock Market Behavior of Listed Joint Venture Company" describes the Nepalese stock market as follows:

The main objective of this study is to study, examine and analyze the stock market behavior. The specific objectives are:

- To study and analyze stock price trend and volume of stock traded on the secondary market.
- To study and analyze the rate of listing of new companies and maintenance of listed company in Nepal Stock Exchange Ltd.
- To study and analyze the investors views regarding the decision on stock investment.
- To study and examine the signaling factors impact on stock price with the help of NEPSE index.

In his conclusion Dahal said that stock Market is the backbone of investment sector of the country. Nepal stock exchange is not providing facilities for investors such as general awareness about investment, investment procedure for general public and movement of stock trend in different periods and their cause are not explained. Most of investors are complaining that the market makers, brokers, and NEPSE s staffs are making coalition for fraudulent activities towards investors. So NEPSE should clear this type of charge for the development of stock market.

2.4 Research Gap

Very few studies have been conducted in the field of share price movement. The government policy to reform capital market under the extended structural program (ESAP) and modern system of open- cry- cut in F/Y 1993/94 had significantly positive impact on stock market development. After the restoration of democracy the government has launched liberalization policy, which build the expectation of the establishment of multinational companies but unfortunately lack of proper implementation, it is seems useless in stock market development. So such studies have needed for promoting the stock market time to time since share price is the crucial phenomenon in the stock market and there is an increasing trend in the common stock investment.

Present study tries to analysis stock price movement of commercial banks by applying those various facts using secondary data. It can be very useful or important in this area. Thus, present study will be fruitful to those interested person, parties, scholars, professor, students, businessman and government for academically as well as policy perspective. Hope this study will help to others in future in the related field.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Research Design

The research design refers to the entire process of planning and carrying out a research study. To conduct the study descriptive cum analytical research approach is adopted. Descriptive approach is utilized for conceptualization, problem identification, conclusion and suggestion for the research. Analytical approach is followed for conducting parametric and non-parametric test. The study is based on recent historical data, which covers nine years periods from F/Y 2000/01 to 2008/09.

3.2 Nature and Source of Data

The study is based on secondary data. This secondary data are extensively used in this study. The data are collected from different sources. The sources are:

- Previous studies and reports
- Published and unpublished official records (Concerned Bank manual report & NEPSE annual reports)
- Newspaper and magazines
- Books, Journal and articles
- Internet websites.

3.3 Population and Sample

Presently there are altogether 27 commercial banks. Out of which two are partly or wholly owned by the government. Only 20 commercial banks have issued their shares to general public. To fulfill the partial requirement only five commercial banks have been considered, which are NABIL Bank (NABIL),

Nepal investment Bank Ltd. (NIBL), Standard Chartered Bank Nepal Ltd. (SCBNL), Himalayan Bank Ltd. (HBL), and Everest Bank Ltd. (EBL).

Table: 3.1

Number of Observations selected for the study

S.N.	NAME OF BANKS	YEARS	OBSERVATIONS
1	NABIL BANK (NABIL)	2000-2009	9
2	Standard chartered bank Nepal Ltd (SCBNL)	2000-2009	9
3	Nepal Investment Bank Ltd. (NIBL)	2000-2009	9
4	Himalayan Bank Ltd. (HBL)	2000-2009	9
5	Everest Bank Ltd.(EBL)	2000-2009	9
TOTAL OBSERVATION			45

Source: Security Board of Nepal

Therefore the study uses five commercial banks for the study from the leading enterprise and they seem to have representative of Nepalese commercial banks as a whole to analyze the market prices per shares from period of year 2000/01-2008/09. Published annual report, annual general meeting, unpublished office records, journal, newspaper, government and university publication and related internet sites have been sources of secondary information. The required data and concerned documents for this study were prepared especially on based on SEBON and NEPSE 's report. In process of completion of data processing, the data were processed in computer through Ms excel, SPSS program and then classified and tabulation was done according to need of the study.

3.4 Method of Analysis

Analysis is the careful study of available facts so that we can understand and draw conclusion from them on the basic of established principles and sound logic. Hence the collected data will be classified, tabulated and analyzed through statistical and financial tools. The statistical tools used in the study are regression model, correlation co efficient, concerned financial techniques are security

market line, capital asset pricing model, sensitive analysis, ratio, book value to market value & price earning ratio etc.

3.4.1. Run Test

It is widely accepted techniques for a non- parametric test and have been developed to test the hypothesis that a sample is random or not. Due to this reason, it is applied here to test the market price per share quoted in NEPSE reports is either random or not. To complete this test sixty market prices (per month closing prices for 5 years) have been taken and computed the value of Z as below mentioned procedure.

Step 1

The medium of each sample bank under the sample period is calculated by (N+1) Th / 2

Step 2

The calculated median is then subtracted from consecutive price. In this way positive and negative of signs are appeared.

Step 3

Counting the numbers of each sign, the number of positive signs is denoted by n_1 (say) and the number of negative signs is denoted by n_2 (say). The number of fluctuations is plus and minus is denoted by r (say). If either n_1 or n_2 is larger than 20, the sample is called large sample.

Step 4

Developing the hypothesis:

Null Hypothesis; Ho: The order or sequence of market share price of stocks of sample bank was random.

Alternative Hypothesis: H1: The order or sequence of market share price of stock of sample bank was not random.

Step 5

Computing the value of Z under the large samples.

$$z \; X \frac{r \; Z(2n_1n_2 / n_1 \; \Gamma \; n_2 \; \Gamma 1)}{\sqrt{\frac{2n_1n_2(2n_1n_2 \; Z n_1 \; Z n_2)}{(n_1 \; \Gamma \; n_2)^2(n_1 \; \Gamma \; n_2 \; Z1)}}}$$

Where, r is the number of runs, n_1 and n_2 are the number of price changes of each sign. (i.e. positive and negative)

Step 6

Rejection region. According to the normal curve distribution, if the calculated value of Z is { 1.96 then the probability occurs 0.025 and for the two-tailed probability, it would be doubled 0.05 (i.e. 2 | p = 2 | 0.025). Therefore, the calculated value of Z in simple sample is if greater than { 1.96 the two tailed probability associated with occurrence under H 0 would be less than the 5 % level of significance (~ = 0.05).

Step 7

If the value of calculated Z is less than the tabulated value of Z (as accordance of Normal curve distribution) accept null hypothesis and vice versa.

3.4.2. Correlation Coefficient

It is the statistical tools generally used to measure the degree to which one variable is related to another. It is performed to test how long the MPS is correlated with BVPS, EPS and DPS as well as market capitalization (MC) with deposit collection (DC) and investment (Inv.). Simple correlation test has been applied between MPS dependent variable and remaining indicators considered as independent variables which is denoted by R. In other hand multiple correlation coefficient has been applied between three variables; MPS, EPS and DPS where as MPS is dependent variables and EPS and DPS are independent which is denoted by R1.23

Simple Correlation Coefficient

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

Multiple Correlation Coefficients

$$R = \sqrt{\frac{r^2_{12} + r^2_{13} - 2r_{12}r_{13}r_{23}}{1 - r^2_{23}}}$$

3.4.3 Coefficient of Determination

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

3.4.4 Regression Analysis

Regression is the statistical tool, which presents the linear relationship between two or more variables. Statistically, such variables can be presented in mode of linear equation.

Simple regression of MPS on BVPS is expressed as

MPS = a + b BVPS

Where a and b are called regression parameters.

$$a = \bar{x}Z \quad \overline{by}$$

$$b = \frac{N \quad XY\ Z(\quad X)(\quad Y)}{N \quad Y^2\ Z(\quad Y^2)}$$

Multiple regression equations of (I) MPS on EPS and DPS, (II) MC on DC and Inv.

MPS on EPS and DPS;

MPS = a+b1 EPS + b2 DPS

MC on DC and Inv;

MC = a+ b1DC +b2 Inv

T – test has been performed to test the parameter of correlation and regression are significant or not whereas F- test has been performed for the simple regression or multiple regression equation.

3.4.5 Standard error of estimation

It measures the accuracy of the estimated figures, which was practically impossible in the regression equation. The smaller the value of standard error of estimate, the closer will be the data of regression equation and better the estimate based on the equation for this line. Whereas zero standard error of estimates indicate that the correlation is perfect.

CHAPTER FOUR
PRESENTATION AND ANALYSIS OF DATA

This chapter deals with data presentation, analysis and interpretation following the research methodology dealt with in the third chapter. In this course of analysis, it has three sections; section one deal with assessing the randomness of share prices of commercial banks, section two evaluate the return and risk proportion of investment on stocks of commercial banks and section three examine the relationship of share prices with financial variables.

4.1 Randomness of Share Prices

A Run test is used for testing the randomness of sequence of sample events on the basis of the order of sample events. The sequence or order of sample events may be defective and no defective events, rise and fall of stream. It is based on the order or sequence on which the individual scores or observations originally were obtained (Manandhar, 2000:158).

A run is defined as a succession of identical symbols, which are followed and preceded by different symbols or by no symbols at all. The run test examines a series of prices changes and designates each change as a +, -, or 0 as figure which obviously depicts the sequences of price changes and outcomes of different runs. Positive price changes are designated by +, negative changes by -, and no changes as 0. A run occurs when consecutive positive or consecutive negative price changes occurs more than once when the price changes then positive, negative and no changes of signs are appeared, the researchers then count the number of positive sign is denoted by n_1 and number of negative signs is denoted by n_2. Before measuring n_1 and n_2 the median of each sample under the sample period is subtracted from the consecutive price if either n_1 or n_2 is

larger than 20. H0 (Null hypothesis: the order of market share price of stock was random) may be tested by (Siegel, 1956: 70).

$$Z = \frac{r - \frac{2n_1 n_2}{n_1 + n_2} + 1}{\sqrt{\frac{2n_1 n_2 (2n_1 n_2 - n_1 - n_2)}{(n_1 + n_2)^2 (n_1 + n_2 - 1)}}}$$

The observed value obtained from above formulae may be determined by reference to the normal curve table which gives the one tailed probabilities associated with occurrence under H0 of values as extreme as an observed Z and for two tailed test the probabilities should do twice of one tailed probabilities. The below table is constructed for tabulating the finding and results derived from SPSS program.

Table: 4.1

Run Test Finding

H0 : The order of market share price of stock was random/ independent								
H1 : The order of market share price of stock was not random / dependent								
Banks	Sample Size	r	n1	n2	(Z)	Z tab	Decision criteria (Z) < 1.96 :H0 (Z)>1.96 : H1	Accept
NABIL	108	22	55	53	6.379	1.96	6.379>1.96	H1
NIBL	108	10	56	52	8.699	1.96	8.699>1.96	H1
SCBNL	108	28	59	49	5.176	1.96	5.176>1.96	H1
HBL	108	12	54	54	8.314	1.96	8.314>1.96	H1
EBL	108	20	57	51	6.756	1.96	6.756>1.96	H1

Source: Annex 1

The table reveals that the run test has been done under 108 samples (108 MPS of each sample banks) where 54:54 positive (+) and negative (-) signs were observed in HBL. The market share price of SCBNL fluctuates more rather than

other banks due to covering higher run (r = 28), following NABIL, EBL, HBL and NIBL, covering 22,20,12 and 10 respectively. High fluctuation in MPS of SCBNL is 2006/07, securing the high P-E ratio the banks of EBL, HBL and NABIL keep themselves in first by 27.273, secondly by 21.250 , third by 18.182 respectively rather than other five banks.

The P-E ratio of EBL is 27.273 means the stockholders were ready to pay for grab one rupee earning after paying 27.273 rupees. To judge whether it is appropriate or not varying variables and financial indicators must essentially considered. Such gap between MPS and EPS would not continue in long run period because stockholders were divert to other company stock attaining of null hypothesis and acceptance of alternative hypothesis which depicts that the order or sequence of market share price of stock was not randomly moving.

So that regarding to this aspect, all the sampled commercial banks Z value under run test has found the greater value than + / - 1.96 which implies the market share price of the stocks of sampled banks was not randomly move. In order words the market prices of share of sample banks imply positive dependence, i.e. the movement of share price of sample banks occurs on the base of historical data. The finding from the above test was similar with that of Aryal (1997). To examine whether the successive price changes of stock market are independent of each other's or not? He took sample data of 21 companies and found that the share prices changes are dependent on each other's.

4.2 Evaluation of the Return and Risk Proportion on Stocks Investment

Risk and Return are two crucial phenomenon’s in world of investment. There is always linear relationship between risk and return. As the return goes in increasing, the risk also increases. Hence, a rational investor has to consider the various aspects relating to risk and return associated with investment while

taking an investment decision. In following section, various aspects of risk and return have been briefly explained in response to the five sampled companies. The following analysis is based upon the Upadyay (2001).

Table: 4.2

Summary of Risk and Return Analysis

Particulars	NABIL	NIBL	SCBNL	HBL	EBL
E (R)	25.000	27.000	18.000	11.000	43.000
δ_R	46.860	42.170	30.000	32.900	64.000
C.V.	187.400	156.200	167.000	299.000	148.000
β_j	1.529	1.050	0.833	0.868	1.670
ρ	0.950	0.720	0.810	0.770	0.760
ρ^2	0.600	0.510	0.800	0.690	0.350
$1-\rho^2$	0.400	0.490	0.200	0.310	0.650
K_j	11.470	9.200	8.200	8.300	12.130
Remark	E (R) > K j	E (R) > K j	E (R) > K j	E (R) > K j	E (R) > K j
	Under priced	Under priced	Under priced	Under priced	Under priced
Mkt Return (Rm) = 9.0, Total Mkt. risk (δm) = 29.44, Risk free rate (R f) = 4.320, C.V. = 327.2 , Beta Coeff. (β_m) = 1					

Source: Annex 2

4.2.1 Expected Rate of Return, E (r)

It is 25.0, 27.0, 18.0, 11.0 and 43.0 percent for the NABIL, NIBL, SCBNL, HBL and EBL respectively. It is obvious from above figure that EBL common stock is realizing the highest percent of return (43.0 %) where as it is the lowest in the case of HBL's stock (11.0%). In relation to other SCBNL, NABIL and NIBL have 18.0%, 25.0% and 18.0 % respectively. The investors who seek for value maximization prefer the stock of EBL as the shareholders of EBL get 43.0 % of possible returns over the nine years holding period.

4.2.2 Total Risk / Standard Deviation (δ R)

Standard deviation is a strong statistical device to measure the total risk involved in an investment, which consists of both market risk and diversifiable risk. It denotes the volatility of the rate of return that is required. Regarding to this less standard deviation indicates less risk and vice versa. Further more, it explains the degree of variation of the expected rate of return. The total risks of sampled banks are 46.86%, 42.17%, 30.0 %, 32.9 % and 64.0 % respectively.

The risk associates in EBL stock observed maximum of 64.0% and minimum of 30.0 % in SCBNL stock. In case of HBL it has less return among samples and has less risk. Similarly EBL's is position found well because of having more risk. It notices that stocks having less risk less return and vice versa. The standard deviation of EBL is 64.0 % means there is 64.0 % of variability of possible to achieve 43.0 % of return in case of EBL stock. But it is not solely the yardstick to taking decision which banks have less risk.

For nine years of study, there is 9.0 percent of the average market rate of return, where as the risk free rate of return has remained only 4.32 percent on average. The standard deviation of market return is 29.44 %, which denotes that the market rate of return, 9.0 % can be deviated by 29.44 %, This is an average percentage if individual company's standard deviation is considered. Hence, there exist an average volatility or risk level in the market return than in the individual common stock investment.

4.2.3 The Coefficient of Variation (CV)

The coefficient of variation is used to standardize the risk per unit of return. As regards the coefficients of variation of the sampled companies, the highest is 299.0 % and the lowest of 148.0 % in the case of HBL and EBL respectively.

This implies that there exists the highest 299% risk per unit of return for HBL where as it is lowest 148% for EBL.

4. 2.4 Beta Coefficient (β j)

Standard deviation measures the total risk of an investment, whereas the beta coefficient measures only the market sensitivity or systematic risk of an investment. Analysis of market sensitivity means analysis of beta coefficient, which gives a very useful insight in the analysis and the selection procedure of the common stock in the secondary market. In this beta coefficient of individual stock is computed and compared with average market as a whole and the similar companies in the same industry. An average stock is defined as one that lends to move up and down in step with general market as measured by some index, which is only available by NEPSE index in Nepalese context.

The analysis of beta coefficient explains the sensitivity of market where the stock is categorized into aggressive and defensive. It defines that one percent variation in the market rate of return either leads variation or not in an individual stock. If the beta coefficient is less than one then such types of stock is categorized into defensive stock i.e. less volatile than the market and otherwise categorized into aggressive stocks i.e more volatile than the market. Beta is a measurement of systematic risk, which can't be diversifiable and directly associated with market phenomenon.

According to the table, it is observed that the beta coefficients are 1.529, 1.05, 0.8325, 0.8680 and 1.67 of NABIL, NIBL, SCBNL, HBL and EBL respectively of sampled banks. The all stock of sampled banks can be categorized as aggressive stocks because of having more than market beta coefficient. The beta coefficient of EBL is 1.67 that indicate highly sensitive in the market and implies that one percent variation in the market rate of return leads to 1.67

percent of variation in its 43.0 % of expected rate of return. From the investors point of view it should be evaluated while taking decision to hold stocks or to make portfolio, higher the expected return with less CV and with beta coefficient having near value to one.

4.2.5 Correlation (ρ)

The correlation coefficient, denoting the relationship between the market rate of return and rate of return on individual stock investment are 0.95, 0.72, 0.81, 0.77 and 0.76 respectively. This shows that there exists a positive relationship between market return and investment return of common stock of all sampled companies. Moreover it seems there is highest positive relationship between market return and NABIL return and is the lowest positive relationship between market return and NIBL return. That indicates they move toward same direction, it means while market return increases that leads to an increase in their return in common stock of sampled banks.

4.2.6 Systematic Risk (ρ^2)

The percentage of risk that is correlated with the market is said to be the systematic portion of risk. As market changes guide this portion of risk, it is difficult to get 2006/07, securing the high P-E ratio the banks of EBL, HBL and NABIL keep themselves in first by 27.273, secondly by 21.250 , third by 18.182 respectively rather than other five banks.

The P-E ratio of EBL is 27.273 means the stockholders were ready to pay for grab one rupee earning after paying 27.273 rupees. To judge whether it is appropriate or not varying variables and financial indicators must essentially considered. Such gap between MPS and EPS would not continue in long run period because stockholders were divert to other company stock attaining of SCBNL has maximum portion of systematic risk (80%) whereas lowest

systematic risk consists in the stock of EBL (35%). So while in job of taking decision regarding to this, lowest of the systematic risk has been preferable due to undiversifiable nature of risk.

4.2.7 Un – Systematic Risk (1- ρ^2)

It is that portion of risk, which is concerned, with the internal factors of individual firm or industry not concerned with the ups and downs taken place in the market. It arises due to internal weakness or inefficiencies so it can be minimized or eliminated with effective management. Out of the total risk associates with common stock investment of sampled companies 0.40, 0.49, 0.20, 0.31 and 0.65 percent of risk are unsystematic or diversifiable respectively. Here EBL stocks consist of highest 65.0 percent of such risks, where as SCBNL common stock lowest 20.0 percent.

4.2.8 Required Rate of Return (K j)

The required rate of return is the minimum expected rate of return needed to induce an investor to invest his /her fund. It is always more than risk less rate of return. Normally, when an individual investment is giving higher return, i.e. the expected rate of return is higher than its required rate of return, this type of investment is known as under priced investment (assets). Such under priced assets should be purchased. On the other hand, if the realized rate of return is lesser than the required rate of return of a particular asset, it is said to be overpriced assets. Such asset should not be purchased; instead, if one is holding such asset, it should be sold immediately.

Hence the required rates of return for the sampled banks are 11.47, 9.2, 8.2, 8.3 and 12.13 percent respectively. All sampled banks expected rate of return is greater than their required rate of return, their companies' common stocks are worth purchasing as they are realizing greater rate of return than needed. The

common stock of EBL is the highest of 12.13 % among the sampled banks and SCBNL required rate of return is the least only 8.2 percent.

4.3 Analysis of the Relationship of Share Prices with Financial Variables

4.3.1 Correlation of Market Price with Book Value, Earning and Dividend and Capitalization with Deposit and Investment

The following analysis is performed to analyze the relationship between MPS and various financial indicators, their significance test and coefficient of determination. As we know the correlation coefficient helps to determine whether there exist any relationship among different variables, statistical test to test the significance of correlation coefficient and the coefficient of determination to explain the variation in dependent variable due to the variation in independent variable. This unit is performed to test how long the MPS is correlated with BVPS, EPS and DPS as well as market capitalization (MC) with deposit collection (DC) and Investment (Inv.) based on the Poudel (2003) study. Therefore MPS has been taken as dependent variable and BVPS, EPS and DPS have been taken as independent variables. In the same courses, market capitalization (MC) has been taken as dependent and Deposit collection (DC) and Investment (Inv.) have been taken as independent variables.

The below table depicts the result derived from this analysis of sample banks over sampled period.

Table: 4.3

Out put of the Correlation Coefficient Analysis

Banks	Description	BVPS	EPS	DPS	DC	INV.
NABIL	Correlation Coefficient	0.334	0.574	0.631	0.3	0.324
	Coefficient of Determination	0.111	0.329	0.398	0.09	0.104
NIBL	Correlation Coefficient	0.425	0.67	0.113	0.64	0.648
	Coefficient of Determination	0.18	0.448	0.012	0.409	0.419
SCBNL	Correlation Coefficient	0.613	0.461	0.216	0.222	-0.412
	Coefficient of Determination	0.375	0.212	0.046	0.049	0.169
HBL	Correlation Coefficient	0.81	0.798	0.13	0.697	0.679
	Coefficient of Determination	0.656	0.636	0.016	0.485	0.461
EBL	Correlation Coefficient	0.539	0.507	0.433	0.813	0.784
	Coefficient of Determination	0.29	0.257	0.187	0.66	0.6149

Note: * Correlation is significant at the 0.05 level (2 tailed)
Source: Annex 3

NABIL

The correlation coefficient of MPS with BVPS, EPS and DPS are 0.334, 0.574 and 0.631 respectively. MPS and BVPS have weakly positive correlation but on the other hand MPS and EPS; MPS and DPS have high positive correlation. The coefficient of determination are 11.1, 32.9 and 39.8 % of MPS with BVPS, EPS and DPS that can be interpreted as 11.10 % of total variation in MPS is caused by BVPS, 32.9 % of total variation by EPS and 39.8 % of total variation by DPS respectively. While considering the correlation coefficient of market capitalization (MC) with deposit collection (DC) and investment (Inv.) are 0.30 and 0.324 respectively. It seems there exists positive high correlation of MC with DC and positive correlation of MC with Inv. Similarly the coefficient of

determination indicates 9.0 % and 10.49 % of variation of MC are due to variation in DC and Inv. MPS of NABIL has positive and strong relationship with DPS and EPS but positive and weak relationship with BVPS and insignificant. However MC of NABIL has positive relationship with Investment but positively weak relationship with DC.

NIBL

The correlation coefficient of MPS with indicators of BVPS, EPS and DPS are 0.425, 0.670 and 0.113 respectively. The MPS have positive correlation with BVPS, EPS and DPS respectively but it has low positive correlation with BVPS and DPS and high positive correlation with EPS. It reflects that lower extent of variation in MPS is influenced by BVPS and DPS and EPS highly influenced the MPS of NIBL. The coefficient of determination of MPS with BVPS, EPS and DPS are 18.06%, 44.89% and 1.27% respectively which implies that 18.06%, 44.89% and 1.27% of variation in MPS may be due to variation in BVPS, EPS and DPS respectively.

2006/07, securing the high P-E ratio the banks of EBL, HBL and NABIL keep themselves in first by 27.273, secondly by 21.250 , third by 18.182 respectively rather than other five banks.

The P-E ratio of EBL is 27.273 means the stockholders were ready to pay for grab one rupee earning after paying 27.273 rupees. To judge whether it is appropriate or not varying variables and financial indicators must essentially considered. Such gap between MPS and EPS would not continue in long run period because stockholders were divert to other company stock attaining ositive weak correlation ship with DC and Inv.

SCBNL

The correlation coefficient of MPS with BVPS, EPS and DPS are 0.613, 0.461 and 0.216 respectively. The MPS and BVPS have high positive correlation while

coefficient of determination is 37.57 % which means 37.57% variation in MPS may be due to variation in BVPS. The correlation between MPS and DPS is low positive correlation and the coefficient of determination between MPS and DPS is 4.66 %, which means that the minor portion of variation in MPS is caused by DPS. The correlation coefficient of MPS with EPS is 0.461, which indicates they move to same direction due to positive correlation. The coefficient of determination is 21.25 % which reveals that 21.25% of variation in MPS may due to positive variation in EPS.

In other hand, the correlation coefficient of MC with DC and Inv. are 0.222 and -0.412 respectively. This indicates there exists positive and negative correlation between them. Similarly the coefficient of determination of 4.92%, between MC and DC explain that 4.92% change occurs in MC is as result of changes in DC and 16.97 % between MC and Inv explains that 16.97% changes occur in MC is as a result of change in Inv. respectively. So MPS of SCBNL has positively correlated with BVPS, EPS and DPS and insignificant; whereas MC has positive correlation with DC and negatively correlated with Inv. respectively.

HBL

The correlation coefficient of MPS with financial indicators of BVPS, EPS and DPS are 0.810, 0.798, and 0.130 respectively. There is highly positive correlation of MPS with BVPS and EPS. It implies that MPS and BVPS; MPS and EPS move toward the same direction, while their coefficient of determination are 65.61%, and 63.68% respectively. The relationship between MPS with EPS is statistically significant at 5 % level of significance while correlation coefficient of MPS and DPS is positive but lower than BVPS and EPS with coefficient of determination 1.69% which means 1.69% variation in MPS will be due to variation in DPS.

In other side the correlation coefficient of MC with DC and Investment are 0.697and 0.679 % respectively. It seems there is positive correlation of MC with DC and Inv. The value of coefficient of determination of 0.4858 and 0.4610 say that 48.58% and 46.10% of the variation in MC may be due to the variation in DC and Inv. respectively.

So MPS of HBL has highly positively correlation with BVPS and EPS, statistically significant at 5% level of significance and weakly positively correlation with DPS. MC of HBL has positive correlation with DC and Inv respectively.

EBL

The correlation coefficient of MPS with BVPS, EPS and DPS are 0.539, 0.507 and 0.433 respectively. The correlation coefficient of MPS with EPS is 0.507and Coefficient of determination is 0.2570, which means minor portion of variation in MPS is caused by EPS. The correlation between MPS with BVPS and DPS are positive which shows these indicators move towards the same direction. The coefficient of determination of MPS with BVPS and DPS are 29.05% and 18.74%, which means major portion of variation in MPS is influenced by BVPS by 29.05% and by DPS with 18.74%.

In other hand the correlation coefficient of MC with DC and Investment are 0.813 and 0.784 respectively. These indicate that there exist positive relationship between MC, DC and Inv. Similarly the coefficient of determination of 0.6609 between MC and DC explains that 66.09 % change occurs in MC is as result of change in DC and 0.6146 between MC and Investment explain that 61.46% change occurs in MC is as result of change in Inv. respectively. So EBL's MPS has strong positive correlation with BVPS and EPS whereas it has weak correlation with DPS. MC of EBL has positive correlation with DC and Investment respectively.

4.3.2 Regression Analysis of Market Price on Book Value

The linear relationship between MPS (dependent variable) and independent variable BVPS is written as

$MPS = a + b_1 BVPS$

The following analysis is done with an objective to find the statistical relationship between market price per shares and book value per share of sampled banks for nine financial years. It indicates whether variation in book value per share affect the market price per share of sampled banks or not. The following table shows the simple regression analysis of MPS on BVPS of the sampled banks. The major results of the analysis have been interpreted briefly for each company separately.

Table: 4.4

Out put of the Simple Regression Analysis (MPS = a + b_1 BVPS)

Banks	Description	A	B1	R	R 2	SEE	F- Value	Sig F
NABIL	Coefficient Variable	234.362	3.302	0.33	0.112	506.4	0.879	0.38
	Standard Error	1051.028	3.522					
	T' Value	0.223	0.938					
NIBL	Coefficient Variable	461.596	1.772	0.43	0.181	221.8	1.544	0.254
	Standard Error	424.799	1.426					
	T' Value	1.087	1.243					
SCBNL	Coefficient Variable	-2447.995	11.999	0.61	0.376	655.4	4.216	0.254
	Standard Error	2160.252	5.844					
	T' Value	-1.113	2.053					
HBL	Coefficient Variable	119.459	3.675	0.81	0.655	187.7	13.312	0.008
	Standard Error	281.75	1.007					
	T' Value	0.424	3.649					
EBL	Coefficient Variable	-910.939	10.34	0.54	0.29	295.7	2.86	0.135
	Standard Error	963.024	6.115					
	T' Value	-0.946	1.691					

Source: Annex- 4

NABIL

The regression coefficient of BVPS (B1) is 3.302, which imply that an increase of one rupee in BVPS increases MPS by 3.302 on average. But standard error indicates that it may vary by 3.522. The regression constant is 234.362, which shows that when value of BVPS is zero then MPS will be of 234.362, but this could not be practical, because MPS should not go down the level of zero. Further more, this value has led the variation by 1051.028. The regression model explains the variation of MPS by 33.40% due to variation BVPS, as indicated by coefficient variation. The value of A and B1 are statistically insignificant because respective significance ‘t‘ value are greater. The result obtained from model may give deviation by 506.4165. The regression model of MPs on BVPS is statistically insignificant due to higher significance of F value.

There is no statistical linear relationship between MPS and BVPS, which indicates MPS, do not move as variation occurs in BVPS.

NIBL

The regression coefficient of BVPS (B1) is 1.772, which means that one rupee increase in BVPS increases MPS by 1.772 rupees, but this may deviate by 1.426. The regression constant is 461.596, which shows that when value of BVPS is zero then MPS will be 461.596 but this may also deviate by 424.799 as shown by standard error. The prediction of this model yields clear variation of 221.7724 as shown by 221.7724 standard error of estimate. The‘t ‘value for A and B1 are 1.087 and 1.243 that is the lesser than the level of significant which imply the coefficients mentioned above are statistically insignificant. The regression model explains the variation of MPS by 18.10% due to variation in BVPS as indicated by coefficient of variation. The regression model of MPS on BVPS is statistically insignificant due to lesser F calculated value of significance.

There is no statistical linear relationship between MPS and BVPS, that indicates MPS, do not move as variation occurs in BVPS.

SCBNL

The slope of regression line of BVPS is 11.999, which shows that a one-rupee increase in BVPS leads to an increase in MPS by 11.999. Similarly the regression constant is -2447.995, which shows that when values of BVPS are zero then MPS will be negative by -2447.995. But this could not be practical because MPS should not go down the level of zero. The prediction of A and B1 deviate by 2160.25 and 5.844 respectively. The‘t ‘value of A and B1 indicates that it is statistically insignificant. The coefficient of determination, which shows 37.60% changes in MPS, is influenced by BVPS and the remaining portion may be due to other factors. The result obtained by this model may give the deviation

of 655.3529. This regression model of MPS on BVPS is statistically significant because of higher calculated significance of F- value.

There is no statistical linear relationship between MPS and BVPS, which indicates variation in BVPS, do not affect MPS.

HBL

The slope of regression line of BVPS is 3.675, which shows that when other variables are excluded, a one-rupee increase in BVPS leads to an increase in MPS by 3.675 rupees. Similarly the regression constants are 119.459, which shows that when value of BVPS is zero, then MPS will be negative 119.459. The prediction of A and B1 may deviate by 281.750 and 1.007 respectively. The significant‘t’ values of A and B1 are 0.424 and 3.649 that means the slope of regression equation is statistically insignificant. As per coefficient of determination 65.50%, which means 65.50% changes in MPS, is due to BVPS. The simple regression model of MPS on BVPS is statistically significant due to higher significance of F calculated value.

There is no statistical linear relationship between MPS and BVPS that indicates variation in BVPS do not affect MPS.

EBL

The regression model of BVPS is 10.340, which indicate that one rupee increase in BVPS leads to an increase in MPS by 10.340 rupees. Similarly regression 2006/07, securing the high P-E ratio the banks of EBL, HBL and NABIL keep themselves in first by 27.273, secondly by 21.250 , third by 18.182 respectively rather than other five banks.

The P-E ratio of EBL is 27.273 means the stockholders were ready to pay for grab one rupee earning after paying 27.273 rupees. To judge whether it is

appropriate or not varying variables and financial indicators must essentially considered. Such gap between MPS and EPS would not continue in long run period because stockholders were divert to other company stock attaining deviates by 295.6629. This regression model of MPS on BVPS is not statistically significant due to lesser significance of F calculated value.

There is no statistical linear relationship between MPS and BVPS, which indicates MPS, do not move as variation occurs in BVPS.

From the above regression analysis there were no statistical relationship found between MPS and BVPS in sampled banks, which indicates that variation in BVPS, do not affect the MPS of sampled banks. Only the MPS of HBL, SCBNL and EBL stocks were found depended on BVPS by high coefficient of determination and small standard error of estimate.

4.3.3 Multiple Regression Analysis

This analysis has been completed with developing of two multiple regression equation. In the first equation MPS is taken as dependent variable and EPS and DPS are taken as independent variables. Similarly, in the second equation market capitalization is assumed, as dependent variable and deposit collection and investment are independent variable. The following analysis is also based upon the study of Poudel (2003). The multiple regression equation are presented as

1. $\mathbf{MPS = a + b_1 EPS + b_2 DPS}$
2. $\mathbf{MC = a + b_1 DC + b_2 Inv.}$

4.3.3.1 Regression analysis of Market Price on Earning and Dividend

MPS = a + b1 EPS + b2 DPS

The following analysis is done to analysis the effect of earning price per share and dividend per share on market price of share. It attempts to analyze the regression model of MPS on EPS and DPS is fitted for the each sampled banks or not as according to higher F- value than the assigned level of significance.

Table: 4.5

Out put of Multiple Regression Analysis of MPS on EPS and DPS

$MPS = a + b_1 EPS + b_2 DPS$

Banks	Description	A	B1	B2	R	R 2	SEE	F val	Sig F
NABIL	Coefficient value	-2.828	-2.067	29.828	0.632	0.399	449.91	1.991	0.217
	Standard error	829.675	28.145	35.801					
	't' value	-0.003	0.0713	0.833					
	Sig 't' value								
NIBL	Coefficient value	166.581	22.337	-7.061	0.738	0.544	178.72	3.579	0.095
	Standard error	312.077	8.45	6.321					
	't' value	0.534	2.644	-1.117					
	Sig 't' value								
SCBNL	Coefficient value	-3020.7	20.71	21.41	0.481	0.231	785.49	0.904	0.454
	Standard error	5929.98	17.24	55.928					
	't' value	-0.509	1.201	0.383					
	Sig 't' value								
HBL	Coefficient value	67.2884	18.049	-5.305	0.874	0.764	167.73	9.715	0.013
	Standard error	247.593	4.141	2.956					
	't' value	0.272	4.359	-1.795					
	Sig 't' value								
EBL	Coefficient value	138.16	15.435	7.416	0.572	0.327	311.01	1.455	0.305
	Standard error	406.187	13.851	9.417					
	't' value	0.34	1.114	0.788					
	Sig 't' value	0.081	0.288	0.087					

Source: Annex- 5

NABIL

The regression coefficient of EPS (B1) is -2.067 which implies that an increase of one rupee in EPS reduces MPS by 2.067 on average if other factors hold constant, where as regression coefficient of DPS (B2) is 29.828 which implies that 2006/07, securing the high P-E ratio the banks of EBL, HBL and NABIL keep themselves in first by 27.273, secondly by 21.250 , third by 18.182 respectively rather than other five banks.

The P-E ratio of EBL is 27.273 means the stockholders were ready to pay for grab one rupee earning after paying 27.273 rupees. To judge whether it is

appropriate or not varying variables and financial indicators must essentially considered. Such gap between MPS and EPS would not continue in long run period because stockholders were divert to other company stock attaining (SEE) is 449.91, which states that the prediction of this model yields a clear variation of about 449.91. The multiple regression models of MPS on EPS and DPS are not statistically significant because the calculated F value is lesser than F tabulated.

The Regression model of MPS on EPS and DPS is not fitted for the NABIL banks, which explains that there is not certainty of variation in MPS due to variation in EPS and DPS as according to F statistics.

NIBL

The slope of regression line of EPS is 22.237, which shows that when other variable are constant, a one rupee increase in EPS leads to increase in MPS by 22.237 rupees. Like wise, the slope of regression line of DPS is 7.061, which indicates that an increase of one rupee in DPS leads to increase in MPS by 7.061 if other variables remain constant. Similarly the regression constant indicates that if EPS and DPS are zero, the minimum value of MPS will be 166.581. The prediction of A, B1 and B2 may deviate by 0.534, 2.644 and -1.117 respectively. Similarly the value of A, B1 and B2 are statistically insignificant because the respective significant t value are lesser. The coefficient of determination, which shows 54.40% changes in MPS, is influenced by EPS and DPS and the remaining portion may be due to other factors. The result obtained by this model may give the deviation of 178.7178. The multiple regression of MPS on EPS and DPS are statistically significant because the calculated F value is greater than the pre-assigned level of significance ($\backslash$ = 0.05)

The Regression model of MPS on EPS and DPS is fitted for the NIBL banks that explain that variation in MPS will be not due to variation in EPS and DPS as according to F statistics.

SCBNL

The value of A, B1 and B2 are -3020.686, 20.710 and 21.410 respectively which shows that MPS doesn't fall below 3020.686 even if EPS and DPS are zero and that an one rupee increase in EPS leads to 20.710 increase in MPS, when other variables remain constant and an increase of one rupee in DPS leads to a increase in MPS by 21.410 rupees, on average, if other variables remain constant. But the value of A, B1 and B2 may vary by 5929.976, 17.240 and 55.928 respectively. The 't' value of EPS and DPS are statistically insignificant as it's calculated value is less than t0.05. This model yields weak results since the influence of EPS and DPS on MPS is 23.10%, which is off course less. The result of this model may deviate by 785.4936 rupees. The multiple regressions of MPS on EPS and DPS are not statistically significant because F calculated value is lesser than the significance level.

The Regression model of MPS on EPS and DPS is not fitted for the SCBNL banks, which explain variation in EPS and DPS will not affect the MPS as according to F statistics.

HBL

The slope of regression line of EPS is 18.049 which shows that when other variables are constant a one rupee increase in EPS leads to increase MPS by 18.049 rupees. In the mean time, the slope of regression line of DPS is 5.305, which indicates that an increase of one rupee in DPS increases MPS by 5.305 rupees if other variables remain constant. Similarly the regression constant is 67.288, which shows that when values of EPS and DPS are zero, then MPS will

be 67.288, which may not be possible. The ‘t’ value of A, B1 and B2 are 0.272, 4.359 and -1.795 respectively which are statistically insignificant.

The prediction of A, B1 and B2 may deviate by 247.593, 4.141 and 2.956 respectively. The coefficient of determination, which shows that 76.4% changes in MPS, is influenced by EPS and DPS and the remaining portion may be due to other factors. The multiple regression models of MPS on EPS and DPS are statistically significant because the significance F calculated value is greater than the Pre assigned level of significance (\ = 0.05), which implies MPS of HBL, is linearly correlated with EPS and DPS. The Regression model of MPS on EPS and DPS is fitted for the HBL banks, which explains that there is certainty of variation in MPS due to variation in EPS and DPS.

EBL

The slope of regression line of EPS is 15.434, which shows that when other variables are constant, a one-rupee increase in EPS leads to a increase in MPS by 15.434 rupees. In the mean time, the slope of regression line of DPS is 7.416 which indicates that an increase of one rupee in DPS lead to increase MPS by 7.416 rupees if other variable remain constant. Similarly regression constant is 138.160, which shows that when value of EPS and DPS is zero then MPS will be positive of 138.160.

The prediction of A, B1 and B2 may deviate by 406.187, 13.851 and 9.417 respectively as indicated by standard error. The ‘t ‘ value of A, B1and B2 are 0.340, 1.114 and 0.788 respectively which are statistically insignificant. The 2006/07, securing the high P-E ratio the banks of EBL, HBL and NABIL keep themselves in first by 27.273, secondly by 21.250 , third by 18.182 respectively rather than other five banks.

The P-E ratio of EBL is 27.273 means the stockholders were ready to pay for grab one rupee earning after paying 27.273 rupees. To judge whether it is appropriate or not varying variables and financial indicators must essentially considered. Such gap between MPS and EPS would not continue in long run period because stockholders were divert to other company stock attaining value is lesser than the pre assigned level of significance (\ = 0.05).The Regression model of MPS on EPS and DPS is not fitted for the EBL banks which explains that there is not certainty of variation in MPS due to variation in EPS and DPS.

The regression model of MPS on EPS and DPS is not fitted for each sampled banks, which explains there is not certainty of variation in MPS of sampled banks due to variation in EPS and DPS as according to lesser F value than the pre assigned level of significance. MPS of NIBL and HBL stock have highest dependency upon EPS and DPS as indicated by higher coefficient of determination and small standard of error.

4.3.3.2 Regression Analysis of Market Capitalization on Deposit and Investment

MC = a + b 1 DC + b 2 Investment

The following analysis is done to analysis the effect of deposit collection and investment on market price of share. It attempts to analyze the regression model of MC on DC and Inv. is fitted for the each sampled banks or not , which explains whether market capitalization is dependent upon deposit and investment or not?.

Table: 4.6

Output of Multiple Regression Analysis of MC on DC and Investment

$MC = a + b_1 DC + b_2 Inv.$

Banks	Description	A	B 1	B 2	R	R 2	SEE	F val.	Sig. F
NABIL	Coefficient Values	1983.37	0.0098	0.179	0.324	0.105	2331.66	0.35	717
	Standard Error	5303.12	0.815	0.574					
	't' Value	0.374	0.012	0.311					
	Sig 't' value								
NIBL	Coefficient Values	1240.39	0.015	0.505	0.648	0.42	1715.77	2.17	0.196
	Standard Error	14166.8	1.535	1.571					
	't' Value	-0.088	0.01	0.321					
	Sig 't' value								
SCBNL	Coefficient Values	8741.83	-0.107	-0.066	0.427	0.183	2280.24	0.67	0.546
	Standard Error	6762.71	0.348	0.067					
	't' Value	1.293	-0.307	-0.989					
	Sig 't' value								
HBL	Coefficient Values	-9223.8	0.287	0.0072	0.697	0.486	1695.54	2.84	0.136
	Standard Error	36204.7	0.537	0.42					
	't' Value	-0.255	0.535	0.017					
	Sig 't' value								
EBL	Coefficient Values	-1432.56	2.348	-1.842	0.864	0.746	8537.58	8.82	0.016
	Standard Error	890.804	1.332	1.301					
	't' Value	-1.608	1.763	-1.416					
	Sig 't' value								

Source: Annex -6

NABIL

The regression coefficient of DC (B1) is 0.0098 which implies that an increase of one rupee in DC increases the MC by 0.0098 rupee on average if other factors hold constant, whereas regression coefficient of Investment (B2) is 0.179 which implies that increase of one rupee in Inv decreases MC by 0.179 rupee on average if other factors remain constant. But the prediction of B1 and B2 may vary by 0.815 and 0.574 respectively as indicated by standard error. The regression constant is 1983.37 which shows that when values of DC and Inv. are zero then MC will be negative 1983.37, which may not be possible. The ‘t ‘

values of A, B1 and B2 are 0.374, 0.012 and 0.311 of which significant ‘t ‘ values are lesser, so the coefficient mentioned above are insignificant .The regression model explains the variation of MC by 10.5% due to variation in DC and Inv as indicated by the coefficient of determination.

The figure of standard error of estimate (SEE) is 2331.66, which states that the prediction of this model yields a clear variation of about 2331.66. The multiple regression models of MC on DC and Inv. are not a statistically significant because the calculated F value is lesser than the pre assigned level of significance (\ = 0.05). It implies that there is not the presence of linear relationship between MC on DC and Inv.

The Regression Model of MC on DC and Inv is not fitted for NABIL bank that explains the market capitalization is not dependent upon deposit collection and investment done by banks.

NIBL

The regression coefficient of DC (B1) is 0.015, which implies that an increase of one rupee in DC decrease MC by 0.015 rupees on average if other factors hold constant, whereas regression coefficient of Inv (B2) is 0.505 which implies that increase of one rupee in Inv increase MC by 0.505 rupee on average if other factor remain constant. But the prediction of B1 and B2 may vary by 1.535 and 1.571 respectively as indicated by standard error. The regression constant is 1240.39, which shows that when values of Dc and Inv are zero then MC will be of 1240.39 but this may not be possible. The t values of A, B1and B2 are -0.088, 0.010, 0.321 respectively are statistically insignificant. The regression model explains the variation of MC by 42.0% due to the variation in DC and Inv as indicated by coefficient of determination. The figure of standard error of estimate (SEE) is 1715.768, which states that the prediction of this model yields a clear variation of about 1715.768 rupees. The multiple regression model of MC

on DC and Inv are not statistically significant because the calculated F value is lesser than the pre assigned level of significance ($\alpha = 0.05$).

The Regression Model of MC on DC and Inv is not fitted for NIBL bank that explains the market capitalization is not dependent upon deposit collection and investment done by banks.

SCBNL

The slope of regression line of DC is -0.107, which shows that when other variables are constant, as one rupee increase in DC leads to decrease in MC by 0.107 rupees. In the mean time, the slope of regression line of Investment is 0.066, which indicates that an increase of one rupee in Investment increase MC by 0.066 rupee if other variable remain constant. Similarly the regression constant indicates that if DC and Investment are zero, the minimum value of MC will be 8741.83, which could not be practical.

The prediction of A, B1 and B2 may deviate by 1.293, -0.307 and -0.989 respectively. The value of A, B1 and B2 are statistically insignificant because the respective significance ‘t ‘ calculated value are lesser. The Coefficient of determination shows about 18.30% DC and Investment influence% change in MC and the remaining portion may be due to other factors. The result obtained by this model may give the deviation of 2280.24. The F statistics for multiple regression of MC on DC and Investment is 0.670, which reflects insignificance due to lesser significance calculated F value.

The Regression Model of MC on DC and Investment is not fitted for SCBNL bank that explains the market capitalization is not dependent upon deposit collection and investment done by banks.

HBL

The slope of regression line of DC is 0.287, which shows that when other variable are constant, a one-rupee increase in DC leads to an increase in MC by 2006/07, securing the high P-E ratio the banks of EBL, HBL and NABIL keep themselves in first by 27.273, secondly by 21.250 , third by 18.182 respectively rather than other five banks.

The P-E ratio of EBL is 27.273 means the stockholders were ready to pay for grab one rupee earning after paying 27.273 rupees. To judge whether it is appropriate or not varying variables and financial indicators must essentially considered. Such gap between MPS and EPS would not continue in long run period because stockholders were divert to other company stock attaining Investment influence the coefficient of determination, which shows 48.60% changes in MC, and the remaining portion may be due to other factors. The multiple regression model of MC on DC and Inv. are not statistically significant because the calculated F value is lesser than the pre assigned level of significance ($\backslash$ = 0.05).

The Regression Model of MC on DC and Investment is not fitted for HBL bank that explains the market capitalization is not dependent upon deposit collection and investment done by banks.

EBL

The slope of regression on line of DC is 2.348, which shows that when other variations are constant, a one-rupee increase in DC leads to decrease in MC by 2.348. In the mean time, the slope of regression line of Investment is 1.842, which indicates that an increase of one rupee in investment increases MC by 1.842 if other variable remain constant. Similarly the regression constant is -1432.56, which shows that when value of DC and Investment are zero, then MC will be negative of 1432.56. But this could not be practical because MC should not go down the level of zero.

The prediction of A, B1and B2 may deviate by 890.804, 1.332 and 1.301 respectively as indicated by standard error. Similarly the value of A, B1and B2 are statistically insignificant because the respective significant 't' calculated values are lesser. DC and Investment influence the coefficient of determination, which shows 74.60% change in MC, and the remaining portion may due to other factors. The regression model may deviate by 8537.58 as indicated by standard error of estimate (SEE). The multiple regression model of MC on DC and Investment are not statistically significant because the calculated F value is greater than the pre assigned level of significance ($\backslash = 0.05$).

The Regression Model of MC on DC and Investment is not fitted for EBL bank that explains the market capitalization is not dependent upon deposit collection and investment done by banks. The regression model of MC on DC and Investment is not fitted for each sampled banks that explains the market capitalization is not dependent upon deposit collection and investment done by banks.

4.3.4 Market value to Book value Ratio

It is defined as the ratio of market price per share to book value per share. It is the important ingredient to compare MPS with BVPS at particulars financial years. In general MPS is greater than BVPS; under this study BVPS are also found smaller than MPS over sample period. Symbolically, it can be expressed as PBVR ratio. The PBVR ratio implies the high MPS at given BVPS. The below table is constructed to display PBVR ratio.

Table: 4.7

Market value to book value ratio (PBVR)

Banks/Year	NABIL	NIBL	SCBNL	HBL	EBL
2000/01	3.379	4.477	5.475	2.573	3.234

2001/02	2.128	3.654	3.448	3.364	2.468
2002/03	3.714	5.639	4.683	5.731	3.797
2003/04	4.237	5.255	3.759	4.335	3.270
2004/05	3.155	4.258	4.545	2.848	2.468
2005/06	2.996	4.069	3.371	2.967	3.681
2006/07	4.292	4.794	3.818	4.503	2.922
2007/08	5.648	5.819	3.710	5.800	3.704
2008/09	7.442	9.461	4.453	8.017	5.101

Source: Annex-7

The above table presents results of these ratios and make complex to decide whether which bank secures high PBVR. The result varies from 2.128 to 9.461 over the sample period. In case of NABIL bank, it has gradually increased from 2.128 and then decreased to 3.155 at the end of sample period it increased to 7.442. It has increased to 4.237 in 2003/04 and then decreased to 2.996 in 2005/06. The trend of SCBNL is similar to NABIL. It secures 3.371 in 2005/06 and 5.475 in 2000/01 which is highest and then gradually decreased to 3.71 at the end of sample period. In case of other banks NIBL secures minimum 3.654 in 2001/02 and maximum 9.461 in 2008/09, HBL secures 2.573 in 2000/01 and maximum 8.017 in 2008/09 and EBL in 2.468 in 2004/05 and 2001/02 and maximum 5.10 in 2008/09. While observing the trend of this ratio, it is concluded that NIBL has satisfactory results than other banks. It has highest PBVR ratio than other banks i.e. 9.461 in 2003/04.

According to this ratio, the SCBNL get 5.475 PBVR ratios, which implies that the stockholders are prepared to pay 5.475 times excess than book value.

2006/07, securing the high P-E ratio the banks of EBL, HBL and NABIL keep themselves in first by 27.273, secondly by 21.250 , third by 18.182 respectively rather than other five banks.

The P-E ratio of EBL is 27.273 means the stockholders were ready to pay for grab one rupee earning after paying 27.273 rupees. To judge whether it is

appropriate or not varying variables and financial indicators must essentially considered. Such gap between MPS and EPS would not continue in long run period because stockholders were divert to other company stock attaining

4.3.5 Price Earning Ratio

The price earning ratio is the ratio of market share price of a stock to its annual earning per share and commonly known as P-E ratio. It is an important element to compare the market share price of stocks of a sample bank at the rate of their EPS. MPS is greater than EPS, So P-E ratio implies greater then 1, but negative earning make the results in term of negative earnings. The below table depicts the P-E ratio of sample bank.

Table: 4.8

Price Earning (P-E) ratio

Banks/Year	NABIL	NIBL	SCBNL	HBL	EBL
2000/01	15.077	11.572	14.444	12.941	18.491
2001/02	10.294	10.962	14.493	19.381	24.176
2002/03	16.667	17.261	20.482	28.000	25.944
2003/04	25.424	16.882	15.957	50.000	33.788
2004/05	13.364	10.993	16.667	13.030	22.353
2005/06	9.412	11.007	17.061	14.833	19.875
2006/07	18.182	12.376	14.000	21.250	27.273
2007/08	17.741	15.738	18.776	30.000	20.513
2008/09	24.086	26.215	22.449	30.644	24.706

Source: Annex -7

According to above table except NABIL and NIBL all the banks have slightly increased the P-E ratio. P-E ratio of NABIL has increased from 10.294 in 2001/02 to 13.364 in 2004/05 and then decreased to 9.412 in 2005/06, which is smaller among other remaining banks. NIBL P-E ratio increased from 11.572 in 2000/01 to 16.882 in 2003/04 and then decreased to 10.993 in 2004/05.

In FY 2008/09 HBL, NIBL, and EBL stands higher at first, second, third position in relation to secure P-E ratio of 30.644, 26.215 and 24.706 respectively.

In FY 2007/08 HBL ousted NIBL and EBL by attaining 30.00 P-E ratio and 20.513 and 15.738 respectively. While other SCBNL and NABIL secures 18.776 and 17.741 respectively.

In FY 2005/06 EBL secured first position by attaining 19.875 P-E ratio , SCBNL secured second position by attaining 17.061 and by achieving 11.007 P-E ratio NIBL attended third position.

In FY 2006/07, securing the high P-E ratio the banks of EBL, HBL and NABIL keep themselves in first by 27.273, secondly by 21.250 , third by 18.182 respectively rather than other five banks.

The P-E ratio of EBL is 27.273 means the stockholders were ready to pay for grab one rupee earning after paying 27.273 rupees. To judge whether it is appropriate or not varying variables and financial indicators must essentially considered. Such gap between MPS and EPS would not continue in long run period because stockholders were divert to other company stock attaining similar nature if other things remain same and that made decrease in MPS of former traded banks stock

4.3.6 Growth Versus Value Analysis

There are no hard and fast rules on how the common stocks are divided and in what category certain stocks belong to distinguish as growth stock or value stock.

4.3.6.1. Book Value to Market Value ratio:

Table: 4.9

Book Value to Market Value ratio

Banks/Year	NABIL	NIBL	SCBNL	HBL	EBL
2000/01	0.296	0.223	0.183	0.389	0.309
2001/02	0.470	0.274	0.290	0.297	0.405
2002/03	0.269	0.177	0.214	0.174	0.263
2003/04	0.236	0.190	0.266	0.231	0.306
2004/05	0.317	0.235	0.220	0.351	0.405
2005/06	0.334	0.246	0.297	0.337	0.272
2006/07	0.233	0.209	0.262	0.222	0.342
2007/08	0.177	0.172	0.270	0.172	0.270
2008/09	0.134	0.106	0.225	0.125	0.196

Source: Annex -7

Regarding the book value to market value ratio and earning to price ratio can be applied although having existent of disagreement. The book value of common stock is divided by the market capitalization to arrive of BV/MV ratio. The book value to market value ratio of each bank has presented above. Relatively low values of this ratio characteristic growth stocks and relatively high values characteristics value stocks.

In year 2001/02 the stocks of NABIL and SCBNL are value stocks with 0.470 and 0.274 respectively as they possess relatively higher values of BV/MV ratio and EBL, HBL and NIBL are growth stocks with 0.297, 0.290 and 0.274 respectively as they have relatively low value of BV/MV ratio than NABIL.

In year 2005/06, the stocks of NABIL and SCBNL are value stocks with 0.334 and 0.337 respectively as they possess relatively higher BV/MV ratio and HBL, NIBL and EBL are growth stocks with 0.272, 0.246 and 0.297 respectively.

In year 2006/07 EBL and SCBNL stocks are value stocks with 0.262 and 0.342 respectively as they possess relatively higher BV/MV ratio and HBL, NABIL and NIBL growth stocks with 0.222, 0.233 and 0.209 respectively

In year 2007/08 SCBNL and EBL stocks are value stocks with 0.270 each as they possess higher BV/MV ratio and NABIL, NIBL and HBL are growth stock with 0.177, 0.172 and 0.172 respectively as they possess lower BV/MV.

In the year 2008/09, SCBNL and EBL are really value stock with 0.225 and 0.196 respectively as they have relatively higher value of BV/MV ratio and NABIL, NIBL and HBL are growth stock with 0.134, 0.106 and 0.125 respectively as they have lower BV/MV ratio.

In conclusion it can be inferred that SCBNL and EBL are really value stocks among samples, as they possess the place in the category of value stocks for three years respectively.

In the category of growth stocks, the stock of SCBNL and HBL are the best of all in the samples selected for review. They confirmed their places in the growth stock category for 5 years out of 9 years of review period considered. Following this is EBL, NIBL and NABIL secures its position in the category of growth stock for 4 years.

4.3.6.2. Earning to Market Value Ratio:

Regarding the earning per share to market value per share ratio, first, using the most recent income statement and dividing the firms earning after taxes by the number of shares outstanding determine the accounting value of the firms earning per share. Second, the market value of the firm's common stock is determined by taking the most recent price at which the firms' common stock was traded. Lastly, the earning per share figure is divided by the market value of the stock to arrive at the E/P ratio. Relatively low values of this ratio characterize growth stocks and relatively high value characterizes value stocks.

Table: 4.10

Earning Per share to Market Value per Share

Banks/Year	NABIL	NIBL	SCBNL	HBL	EBL
2000/01	0.066	0.086	0.069	0.077	0.054
2001/02	0.097	0.091	0.069	0.052	0.041
2002/03	0.060	0.058	0.049	0.036	0.039
2003/04	0.039	0.059	0.063	0.020	0.030
2004/05	0.075	0.091	0.060	0.077	0.045
2005/06	0.106	0.091	0.059	0.067	0.050
2006/07	0.055	0.081	0.071	0.047	0.037
2007/08	0.056	0.064	0.053	0.033	0.049
2008/09	0.042	0.038	0.045	0.033	0.040

Source: Annex -7

Above table shows that, in the year 2001/02 NABIL and NIBL stocks are valued with 0.097 and 0.091 respectively as they have relatively high value of E/P ratio and SCBNL, and EBL and HBL are growth stock with 0.069,0.041,and 0.052 respectively as

In the category of value stock, the stock of SCBNL is best because it confirms the place of value stocks for 5 years out of 9 years of review period considered. After NABIL seemed second after SCBNL as it secures the place of value stock for 4 years out of 9 years.

In the category of growth stock, the stocks of NABIL and SCBNL are the best of all in the samples selected for review. It confirms the place in the growth stock category for 5 years out of 9 years of sample period. Following is NIBL, HBL and EBL secures its position in the category of growth stock for 4 years.

4.4 Major Findings of the Study

On the basis of the above analysis and presentation, the major findings of the study are presented as follows:

Randomness of share prices

The price sequences of MPS of each sample banks are not randomly moving that imply the movement of share price are dependent to the historical prices.

The run test has been done under 108 samples (108 MPS of each sample banks) where 54:54 positive and negative signs were observed except NABIL, NIBL, SCBNL and EBL. The market prices of share price of sample banks imply positive dependence, i.e. the movement of share price of sample banks occurs on the base of historical data.

Risk and Return Analysis

There is always linear relationship between risk and return, as the return goes up in increasing, the risk also increases. Return on common stock of EBL is the highest (67.0%), whereas the lowest return (22.0%) in case of HBL. The investors seeking for value maximization prefers the EBL stocks. From the side of risk concept, the stock of EBL consist highest level of total risk (75.0%) whereas the stock of HBL consist lowest level of risk (40.41%) and remaining banks have the portion of total risk is accordance of rank of return. From the risk and return analysis sides it is being noticed that stocks having less risk have less return and vice versa. The CV is used to standardize the risk per unit of return. As result of CV the involvement of total risk in per unit return is less in the stock of NIBL and EBL as comparatively, whereas more in the stock of NABIL, SCBNL and HBL.

Beta coefficient measures the market sensitivity or systematic risk of an investment. EBL is more aggressive to market changes as revealed by highest beta coefficient of 1.67 and this is followed by NABIL, NIBL, HBL and SCBNL respectively. All the sampled banks show positive correlation between the market rate of return and the return of individual stock, among them the strong relationship exists between HBL, NABIL, NIBL and SCBNL, whereas the weak relationship exists between EBL stocks with market return. EBL has the

maximum portion of systematic risk and in opposition SCBNL has lowest systematic risk. The stocks of all sampled banks are under priced since their expected rate of return is higher than the respective required rate of return.

Relationship of share price with financial variables

The correlation coefficient helps to determine whether there exist any relationship among different variables, statistical test to test the significance of correlation coefficient and the coefficient of determination to explain the variation in dependent variable due to the variation in independent variable. MPS of all the sampled banks have positive correlation with BVPS, EPS and DPS except SCBNL which has negative correlation with investment. MPS of HBL has highly positively correlation with BVPS and EPS, statistically significant at 5 % level of significance and weakly positively correlation with DPS. MC of all sampled banks has positive correlation with DC and Investment. There exists moderate statistical relationship between MPS and BVPS in case of all sampled banks. It indicates that these sampled banks MPS do move slightly as the variation occurs in BVPS. The Regression analysis is done with an objective to find the statistical relationship between market price per shares and book value per share of sampled banks. It indicates whether variation in book value per share affect the market price per share of sampled banks. The regression model of MPS on EPS and DPS is fitted for each sampled banks that explains there is certainty of variation in MPS of sampled banks take place due to variation in EPS and DPS as according to explanation of F statistics except NABIL, SCBNL and EBL.

The multiple regression analysis has been done with developing two multiple regression equation. The first multiple regression equation analyze the effect of EPS and DPS on the MPS and second one analyze the effect of DC and Investment on MPS. As results of coefficient of determination, MPS of EBL,

HBL, and NIBL have the highest dependency upon EPS and DPS of 74.60%, 48.60% and 42.0 % respectively. The prediction value of 'a' in the case of HBL has found reasonable as accordance of 't' statistic that is verified by the smaller value of SEE i.e. 1695.54.

The regression model of MC on DC and Investment is fitted for each sampled banks that explains the market capitalization is not dependent upon deposit collection and Investment done by banks.

PBVR is defined as the ratio of market price per share to book value per share and it implies the high MPS at given BVPS. SCBNL secures high PBVR of 5.475 in FY 2000/01 that indicates the large gap of BVPS and MPS occurred due to degree of paying attitude of public and vice versa in case of NABIL. This ratio reflects the nature and interest of investors who paid the price how far how from BVPS.

The price-earning ratio is the ratio of market share price of a stock to its annual earning per share and known as PE ratio. The P-E ratio of HBL is higher than the other sample banks where as NABIL has low P-E ratio. The P- E ratio of HBL is 50.00 means the stockholders were ready to pay for grab one rupee earning after paying 50.00 rupees.

Under Book Value to market value ratio NABIL and NIBL are categorized as value stocks whereas SCBNL, HBL and EBL as growth stocks.

Under earning to market value ratio, SCBNL and NABIL are categorized as value stocks and EBL, HBL and NIBL as growth stocks.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Financial market is the market in which financial assets are created or transferred. A financial asset represents a claim to the payment of a sum of money sometime in the future and / or periodic payment in the form of interest or dividend. Financial market constitutes money market and capital market. In Nepal, the listing of shares in stock exchange centre (SEC) and their trading in the stock market is a recent phenomenon. A low trading volume, absence of professional brokers, early stage of growth, limited movement of share prices, and limited information available to investors characterize the Nepalese stock market. After initiation of the liberal economic policies the financial and banking sector have been strengthening and extending their services significantly so as to contribute extremely in their development of the country, mean while the NEPSE and commercial banks have to play enormous role in respect for the effective development of stock market.

This research aimed at analyzing the relationship of MPS with different financial indicators and level of risk associated with the common stock investment of commercial banks in Nepal. The general public investors do invest their saving funds in the common stocks of the public companies through primary and secondary market, for profit in the future. Common stock is the most risky security and lifeblood of Nepalese stock market so this study is also focused on making aware on the level of risk associated with the common stock investment.

The major objective of this study is to analyze the share price behavior of commercial banks in Nepal and other specific objectives are:

- To analyze the movement of stock volume, stock price, market capitalization and NEPSE index of commercial banks.
- To evaluate risk and return proportion on investments on stock of commercial banks.
- To study group wise overall behavior of NEPSE index.

This study is totally based on the secondary data and information obtained from various financial reports, annual reports, regular publications, news, journal, official websites etc. For the analysis five top commercial banks have been taken as sample. The study has attempted to identify the interrelationship of MPS with major financial indicators like BVPS, EPS and DPS and the analysis is based on nine-year observation. Most of the statistical computations are done with the help of SPSS program. In this study the results are tested at 5% and 10% level of significance.

5.2 Conclusion

To examine the randomness of share price, the study has attempted run test where 108 market price from year 2000/01- 2008/09 if each sample bank have been observed and tested. In the model, two separate hypotheses were assumed; share prices changes are independent/ random variable. In the opposition of this, market share price of stock are dependent/ not random variable. The results were the MPS of each sample banks are slightly randomly moving that imply the movement of share prices are dependent to the historical prices. Further more the level of risk associated with the common stock investment has been analyzed with the help of expected rate of return, standard deviation, coefficient of variation, beta coefficient, correlation, systematic risk, unsystematic risk and required rate of return. The analysis explores that in the side of return EBL secures highest return (67.0%) and HBL secures lowest return (22.0%). In the side of risk EBL stock consist highest level of risk (75.0%) whereas the stock of

HBL consist lowest level of risk (40.41%). It confirms that the relationship the lower level of risk, the lower will be rate of return and vice versa.

Besides to examine the relationship between the share prices with various financial variables, the correlation coefficient analysis including the simple as well as multiple regressions analysis has also been carried out. The result derived from it focuses the fixation and determination of market values (MPS & MC) have been influenced by the variation in company's financial indicators, but it also conclude the degree of interrelationship of MPS with different financial indicators varies from one company to other company as per sample period. As well as overall PBVR, P-E ratio and growth versus value analysis have been used to explain up or down ward tendency of share prices. SCBNL secures high PBVR of 5.475 in FY 2005/06 and HBL secures high P E of 50.0 in FY 2003/04. Growth verses Value analysis exposes the results that NABIL and SCBNL stocks have been categorized as value stock and EBL, HBL and NIBL as growth stocks.

There is not a single financial indicator that has dominant role to determine MPS. The same financial indicator that has significant role in the fixation of MPS for one company is not significant for another company. The degree of interrelationship of MPS with different financial indicators varies form one company to another. As accordance of run tests the price sequences or orders of share price within the sampled period were not randomly moving, which implies the movement of share price is dependent variable. There is no uniformity in the relationship of MPS with various financial indicators of sampled companies. The public investors are not much aware of investment risk. They are investing their funds in different securities on the basis of expectation and assumption rather than analysis. It is clear from the finding of risk and returns analysis that most of the companies common stock consists of greater extent of unsystematic risk.

PBVR, P-E ratio and growth versus value analysis have been used to analysis upward and down ward movement of share price of sampled banks. Hence we can conclude that Nepalese stock market is not efficient enough to determine MPS in accordance with the respective financial performance and to make aware the investors about investment risk.

5.3. Recommendations

Based on this study, major recommendations are as follows:

i) Since the non-random share price changes are observed, it is recommended that the investor should be aware of the fact that above average return is possible to some extent from the past 'trend' and 'pattern'.

ii) It is recommended that the listed companies must publish their, working results on half yearly or quarterly basis.

iii) It is recommended that any price sensitive information should always be included in the agenda of the board meeting of the companies required to be circulated to SEBO/N and NEPSE well in advance.

iv) It is recommended that stock brokers and other connected with the securities business should develop necessary expertise.

v) It is recommended that investors should be educated on the benefit of investment in corporate securities. Besides, adequate knowledge on investment analysis, risk return analysis, portfolio analysis should be developed among investor to make competitive and efficient stock market.

vi) It is recommended that the regulatory body, SEBO/N entirely give regularity of rules and regulation to the stock market. It needs to take quick action in breaking rules and regulations.

vii) The Nepalese stock market (NEPSE, SEBO/N) should take some effective initiatives to control random fluctuation of MPS and establish the system of regulator monitoring and evaluating the stock market.

viii) Public companies should be compelled to disclose the factual information about themselves and their financial performance in regular time.

ix) Government should implement the policy of protectionism in order to create sound environment for industry and economic development should be accelerated for maintaining positive impact on the stock market development.

x) There should be separate body for regular monitoring and analyzing the strength and weakness of public companies, which will disclose right and value information and suggestion to public investors to take proper investment decision at the right time to avoid or minimize the level of risk.

xi) The public investors should not invest their saving in shares haphazardly. They should get suggestion from expert prior to taking an investment decisions for which there is need to create awareness among the investors by concerned bodies (NEPSE, SEBO/N).

xii) The proper trend of financial indicators influenced the MPS fixation of public companies there fore the company should be sought to maximize the value in the motive to enhance the financial status.

xiii) Reliability of financial information has significant role in investment decision. In order to ensure the reliability of information regarding performance of listed companies,

international standard securities analysis and rating agency is needed in Nepalese security market.

xiv) Accurate and timely information disclosure is the key ingredient of investor's protection strict norm and rule should be adopted for timely submission of financial reports.

xv) Nepal stock exchange (NEPSE) should publish its daily trading activities in details as monthly publication. It will benefit researchers, security analyst, and market participants to greater extent.

xvi) This study could not explore the movement of share price of whole sector of listed companies and no any separate software regarding to stock market is applied. Thus it is recommended to future researchers to under take comprehensive study by appropriate method, related to the whole sector wise share price movement.

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