# A COMPARATIVE ANALYSIS ON STOCK PRICE BEHAVIOUR OF NEPALESE COMMERCIAL BANKS

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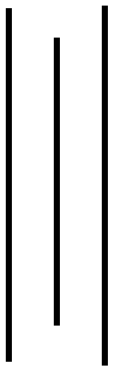

***In partial fulfillment of the requirement for the Degree of Master of Business Studies (M.B.S)***

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# TRIBHUVAN UNIVERSITY

## Faculty of Management

## St. Xavier's College

# DECLARATION

I hereby declare that the work reported in this thesis entitled "**A COMPARATIVE ANALYSIS ON STOCK PRICE BEHAVIOUR OF NEPALESE COMMERCIAL BANKS**" submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the Master's Degree in Business Study (M.B.S.) under the supervision of **Mr. Shankar Thapa** of St. Xavier's College.

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**Sweta Bhattarai**

**Researcher**

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# ABBREVIATIONS

| | | |
|---|---|---|
| BV | : | Book Value |
| Co. | : | Company |
| D/Y | : | Dividend Yield |
| DPR | : | Dividend Payout Ratio |
| DPS | : | Dividend per Share |
| E/Y | : | Earning Yield |
| EBL | : | Everest Bank Limited |
| EMH | : | Efficient Market Hypothesis |
| EPS | : | Earning Per Share |
| F/Y | : | Fiscal Year |
| GDP | : | Gross Domestic Product |
| GDS | : | Gross Domestic Savings |
| HBL | : | Himalayan Bank Limited |
| MPS | : | Market Value per Share |
| MV | : | Market Value |
| MV/BV Ratio | : | Market Value to Book Value Ratio |
| NABIL | : | Nabil Bank Limited |
| NEPSE | : | Nepal Stock Exchange Limited |
| NIB | : | Nepal Investment Bank |
| NIDC | : | Nepal Industrial Development Corporation |
| NRB | : | Nepal Rastra Bank |
| NSM | : | Nepal Stock Market |
| P/E Multiple | : | Price Earning Multiple |
| ROA | : | Return on Assets |
| ROE | : | Return on Equity |
| SCBNL | : | Standard Chartered Bank Nepal Limited |
| SEBON | : | Securities Board of Nepal |
| SEC | : | Securities Exchange Centre |
| T.U. | : | Tribhuvan University |

# CHAPTER – I

# INTRODUCTION

## 1.1 General Background

Banking sector plays a vital role for the country's economic development. Bank is a resource mobilizing institution which accepts deposits from various sources and invest such accumulated resources in the fields of agriculture, trade, commerce industry, tourism etc. The commercial bank has its own role and contribution and it is a means of economic development. It maintains economic confidence of various segments of the society and extends credit to people.

Financial institutions constitute an important component of modern economic scenario. Their economic contribution lies in their role as intermediaries between ultimate savers, house-holds, enterprises and government and the borrowing economic units in need of external finance. Financial intermediaries facilitate the transfer of funds from various sectors. Nowadays, modern banking institutions have been accepted as one of the most essential machinery to acceleratrate the pace of economic growth. And the most important problem of developing countries is the slow rate of economic development. By economic development, we generally mean the development of leading sectors of the economic like agriculture, industry, trade and commerce etc. The development of these sectors requires a regular supply of finance. Finance serves as energy for the economic development and commercial banks serve as reservoirs for supplying and controlling the stream of that fuel. Hence importance and contribution of commercial banks as one of the important components of economic development of a country is immense. Hence, it is clear that the banks are extremely useful and indispensable for a modern community. In this context, even the developed countries have had their economic development with their strong base of banking system. It is thus evident that banks play a vital role in the economic development of under developed economics like Nepal.

Common stock financing is a long-term source of financing of an organization. It is the first sources of fund in any type of organization like corporation, partnership etc. The

equity capital is support for borrowing to expand the business and activities. Common stock holders will get the return from common stock.

Business enterprise requires tremendous amount of capital funds for smooth operation and regulation. Short term, intermediate term and long term capital funds are essential to grow and expand the organizational activities. Out of that, long term, funds are highly significant for future growth and prosperity of these areas. Most of the organizations generate these types of funds from financial market. Similarly, government also borrows large amount of funds to provide goods and services demanded from them by the people. The financial market permits both business and government to raise the needs funds by selling securities. Simultaneously, investors with excess funds are able to invest and earn in return enhancing their welfare (Johns, 1992:261).

The Capital market is a mechanism through which the transaction of financial assets with life spans of greater than one year takes place. Financial assets may take different forms ranging from the long term government bonds to the ordinary shares of various companies. Stock market is a very important constituent of capital market where the shares of various firms are traded (Sharpe, et.al., 1999). Trading of the shares may take place in two different forms of stock market. When the issuing firm sells its shares to the investors, the transaction is said to have taken place in the primary market but when already issued shares of a firms are traded among investors the transaction is said to have taken place in the secondary market.

Stock markets are very important economic institutions that play a crucial role in the economy by channeling investment where it is needed and can be put to best use (Liberman and Fergusson, 1998). So, the stock markets work as the channel through which the public savings are channelized to industrial and business enterprises. Mobilization of such resources for investment is certainly a necessary condition for economic take off, but the quality of their allocation to various investment projects is just as important a factor for growth. This is precisely what an efficient stock market does to the economy (Berthelemy and Varoudakis, 1996). Stock markets help agents manage

liquidity and productivity risk by eliminating premature capital liquidation which increases firm productivity. Stock markets also accelerate growth indirectly by reducing liquidity risk which encourages firm investment (Levine, 1991). Hence, the principal roles that stock market can perform can be stated as follows: *First*, stock market work as a vehicle for raising capital for firms. *Second*, capital markets in general, and stock markets in particular, can enable investors to diversify their wealth across a variety of assets, usually more easily than in most other financial markets. Thus capital markets reduce the risk that investors must bear, there by reducing the risk premium demanded and the cost of capital. *Third*, stock market can perform a screening & monitoring role. *Forth*, stock markets and other financial intermediaries may function as complements, rather than substitutes, and a stock market that functions well may have positive externalities for the rest of the financial system.

The existence of highly developed, widely accessible, and smoothly functioning financial markets is of crucial significance in transmitting savings into the hands of those desiring to make investment expenditure. Those who can visualize and exploit potentially profitable investment opportunities are frequently not the same people who generate current savings. If the financial transmitting mechanism, such as stock markets, is inefficient, the flow of funds to business investment will be impeded, and the level of economic activities will fall below its potential (Ritter and Silber, 1993). In liquid and more efficient stock markets investors assume low level of risk and therefore invest in the stock portfolio. At the same time, companies enjoy permanent access to capital raised through equity issues. By facilitating long-term, more profitable investment, liquid markets improve the allocation of capital and enhance prospects for long-term economic growth. Further, by making investment less risky and more profitable, stock market liquidity can also lead to more investment (Levine, 1996). In this way long-term capital needs for productive investment are fulfilled and mobilization of such capital is essential for economic development. Stock markets assist in increasing capital formation through channelization of savings toward more productive sectors.

Instruments used in capital market are debt, stock, preferred stocks, bonds and convertible issues. Capital markets are also classified as primary market and secondary

market. 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 the securities whereas primary market refers to the market for new issues. In the secondary market, to make transactions primary role to perform by the broker, in exchange they receive commissions. Stock market had been a global phenomenon in the present world regardless of the size of the economy of any particular nation. The primary role of the capital market is to allocate the economy's capital stock among various firms and industries involving in trading, investment and production dimension. Due to globalization of economic market present world economy has been more competitive and complicated. Every sort of changes occurring in one sector of the world affects the others. Economic efficiency is simply impossible without a good system of allocating capital within the economy.

Without the secondary market primary would not function well. The existence of well functioning secondary market where investors come together to trade the exiting securities assures the purchasers of primary securities if the need arises. Thus, the primary and secondary markets are complementary, not competitive, to each other in the sense that one without other is incomplete. In summary, secondary markets are indispensable to the proper functioning of the economy.

The efficient financial markets are essential to ensure adequate capital formation and economic growth in an economy (Van Horne, 1998:491). It implies that market equilibrium and rational financial market are also essential for adequate development of financial markets, which is necessary for growth, and prosperity of economy. But the actual practice equilibrium is not found in the real world.

Mainly, financial market refers to money and capital market. Money market may be defined as short-term financial assets markets, which facilitates liquidity and marketability of securities. It is the market for short-term debt instrument having maturity to less than one year. Capital market plays a vital role in the national economy. It plays an important role in reinvigorating and boosting economic activities in a country. For

mobilization of invisible resources, capital market is an important intermediary through the network of borrower and lender of funds within the economy.

Market price is the functions of various factors. These factors affect the market prices of a security. Thus, market prices fluctuate and it is not for a short period but for over a century. Many theories and models have been developed about the fluctuation and behavior of the behavior of securities prices.

**1.2 Statement of the Problem**

Bank represents a significant and influential sector of business world wide. Most individuals and organization make use of banks either as depositors or borrowers. Bank plays a major role in maintaining confidence in the monitory system through their close relationship with regulatory, authorities and government and the regulation imposed on them by those governments. Hence, there is considerable and widespread interest in the well being of banks and in particulars their solvency and liquidity and the relative degree of risk that attaches to the different types of their business (IAS: 1993).

Profit is one of the indicators of sound financial performance. It is usually the result of sound business management, cost control, credit risk management and general efficiency of operation. Profit is essential for an enterprise for its survival and growth to maintain capital adequacy through profit retention. A bank must maintain adequate liquidity to meet a wide range of contingencies. If bank fails to maintain adequate liquidity it faces obvious difficulties. On the other hand if it maintains excess liquidity, it may be retained earnings to the point where it can be build up the capital needed to hold it's relative position in the banking structure. Excess liquidity is the loss of income. A bank must maintain adequate cash and bank balance to meet day to day operations as well as for remote contingencies.

The user of the financial statement of the banks are interested in it's liquidity and solvency and the risks related to the assets and liabilities recognized on it's balance sheet and to it's off balance sheet items. Liquidity refers to the availability of sufficient funds to

meet deposit withdrawals and others financial commitment as they fall due. Solvency refers to the excess of assets over liabilities and hence to the adequacy of the banks' capital. A bank is exposed to liquidity risk and to risks arising from currency fluctuation, interest rate movement, changes in market prices from counterparty failure. This risks may be reflected in the financial statement, but users obtain a better understanding if management provides a commentary on the financial statements which describes the way it manages and controls the risks associated with the operation of the banks (IAS:1993).

Today's context, most of the investors are attractive towards the banking sectors. Their must be comparative study among the different banks. If it's remaining indifferent towards the other banks relevant information, in long-run it will give negative impact. Most of the customers, they are attractive towards such banks; who provides well and efficient service. Similarly, investor invest their money those banks, who provide high dividend, high profit as well as high amount, customer needs pre-information about the ability of payment whereas they needed. If banks need to survive in competitive market for a long-run, it should be consider; liquidity position, profitability position, market position as well as other positions. Therefore, this study basically depends upon the financial position of Commercial Banks which are operating in Nepal. Which are beneficiary for customers as well as investors?

There are various studies on the Banking Sector's Financial Performance in Nepal, but no broad study have been done about Commercial Banks which are listed in security board of Nepal. This study basically concern to analyze the financial position of five Commercial Banks which are operated in Nepal.

The researcher problem of the study will try to explore in the following question form:

- How is the performance of the commercial banks?
- How is the trend of stock price behavior?
- How the banks have been managing its liquidity position in relation to liquidity?
- Do the performance and the stock price behavior of sample banks correlate?
- Whether the stock market is efficient or not?
- What are the factors that affect the stock price?

- What would be the price for a stock in secondary market?
- What is the share price behavior of Nepal?
- What is the impact of price trend, volume of stock traded?
- Do, the investors analyze the price trend, volume of stock traded while making investment?

### 1.3 Objectives of the Study

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

1. To analyze the market position of each sample bank and compare them in terms of market price per share, earning per share, dividend per share, dividend yield, dividend payout ratio, market price to book value ratio, liquidity ratio, profitability ratios etc.
2. To examine the relationship between market price per share and other determinant variables such as earning price per share and dividend per share.
3. To understand how the price behaves in stock market and how investors can safeguard their investment on stock market.
4. To study the growth of stock market.
5. To test the random walk or weak efficient market hypothesis.
6. To test the dependence or independence of successive price changes with the price of historical change.
7. To point out the problems faced by banking sector in the stock market.

### 1.4 Significance of the Study

Trend of stock market is one of the key indicators of economic development of the country. It is a requisite for the sound development of a economy because it not only provides stable long-term capital for companies and an efficient savings vehicle for the public, but also function as an efficient tool for resource allocation. (SEBON Journal Vol. II, Oct. 2005), It takes macroeconomic factor and provide resources investment which is needed for economic development. So there is the need of additional capital investment to the securities market to earn higher rate of economic growth such as TI, GDP, GDS

etc. Securities market is the sources for investors to asses how market fluctuation affects their investment and return. Current study will provide many more information of past, present, future trend of free and open market and hidden weakness of securities market.

From this studies researcher will provide necessary information of securities market and developed suitable strategies and implementation. This study will be valuable to persons and other parties such as market makers, security brokers, researchers, share holders, investors, government, University students, NGO, INGO'S and other policy making bodies and can take future advantage from any side. It is helpful to the people who are curious to know the price trend of the stock, volume of the stock traded, list of new companies in the secondary market (EPSE) and whether the financial indicators represent the market price and to channel public saving to industrial and business enterprises.

### 1.5 Limitation of the Study

The research is consists of the following limitations:

- The research is limited only stock market trends of Nepalese security market.
- The stock trend is analyzed with the help of Nepal Stock Exchange Ltd (NEPSE) index and report is based on data of security board of Nepal (SEBON) and NEPSE office sites, so that the data may be either actual or estimated.
- Certain time period and financial constraints are the major limitations of the study.
- The study/research depends upon secondary data as well as primary data and no effort has been made to variety the data.
- The study does not make any projections about the future, only covers past and present.
- This study covers only selected companies from Grade-A, listed in NEPSE.
- The study covers the period of 2003/04 to 2007/08, Four years data only.

### 1.6 Organization of the Study

This study has been organized into five chapters, each devoted to some aspects of the study of stock price behavior of Nepalese commercial banks. Chapter one to five consists

of introduction, review of literature, research methodology, presentation and analysis of data, and summary, conclusion and recommendations.

Introduction is the first chapter where subject matter is introduced, the problem is defined, objectives and the organization of the study have been presented.

The second chapter includes a discussion on the conceptual framework and review of the major empirical works as well as review of Nepalese studies. The related conceptual consideration and review of related literature conducted in this chapter provide a framework with help of which this study has been accomplished.

The third chapter describe the research methodology explains all the methods of collection and analysis of data. It comprises research design, population and sample, nature and sources of data, data analysis technique, selection of enterprises and method of analysis.

Chapter four is the main body part of the study that includes data presentation, interpretation and analysis. The chapter analyses the primary data collected from individual investors to adjudge their awareness on different aspects of stock market. The secondary data are analyzed the market price of stock with respect to dividend and earning in the Nepal Stock Market.

In the last chapter the statement of all the four preceding chapters has been summarized and the study is concluded with major findings. The suggestion with package of recommendations to improve efficiency of the investors and stock market has been presented.

# CHAPTER –II

# REVIEW OF LITERATURE

Review of literature is the important parts of any thesis. Literature review includes old thesis, dissertation, newspaper, magazine and suggestion of experts. This chapter in particular attempts to review the theory of stock price behavior. It includes fundamental analysis, technical analysis, efficient market theories, financial institutions and financial markets, capital markets, economic liberalization and capital market development and review of major studies.

To make the study easy, this chapter is further divided into two sections: conceptual review and review of related studies. Conceptual review identifies the components and ingredients that formed the foundation of the study whereas review of related studies draws excerpts from the number of research works carried out illustrating various faces of the subject matter.

## 2.1 Conceptual Review

Before getting into the main subject matter of the price behavior of the common stocks, it is necessary to be acquainted with the general concepts of the common stocks and other matters related to stocks. It also includes the general profiles of the banks that have been sampled for the study.

### 2.1.1 Common Stocks

Usually common stocks are simply known as stocks and they represent equity or an ownership position in a corporation. Holders of common stocks have residual equity in a corporation. This means they have the last claim on the earnings and assets of a company, and they may receive dividends only at the discretion of the company's board of directors and after all other claims on profits have been satisfied. For example, if the company is dissolved, stockholders share in what is left only after all other claims have been settled. Because dividends and equity do not have fixed values, holders of common stock can reap greater benefits when a company is prosperous or lose more when a company is doing poorly than holders of preferred stocks or any other securities.

### 2.1.2 Financial Institution and Markets

Almost all the firms have ongoing needs of funds. They obtain funds from external sources in many ways. Basically firms acquire required funds in three ways. First, through financial institutions that accept saving and transfer them to those that need funds. Another is through financial markets, an organized forum in which the suppliers and demanders of various types of funds can make transactions. And the third way is through the private placement.

Financial institutions serve as intermediaries by channeling the saving of individuals, businesses and governments into loans or investments. Many financial institutions accept customers' savings as deposits and lend the same savings to other customers; while some financial institutions invest customer's savings in assets such as real estate or stocks or bonds. Financial institutions need to within established regulations and guidelines set by the state and government. Commercial banks, insurance companies, pension fund, mutual funds, etc. are the major financial institutions.

Financial markets are forums in which individual suppliers of funds and demanders of funds make transactions directly, whereas the loans and investments of institutions are made without the direct knowledge of the suppliers of funds. Security markets are mechanism for channeling saving from savers to the ultimate investors who are interested to invest. They bring buyers and sellers of securities together and facilitate the flow of fund in the economy.

A market for the exchange of capital and credit, including the money markets and capital markets is called security market.

Security markets are classified into:

i. Primary market and secondary market
ii. Money market and capital market

### i. Primary Market and Secondary Market

The primary market is that part of the capital markets that deals with the issuance of new securities. This is the market for acquiring new long term capital. It is the market where the securities are sold for the first time. So, it is also called the new issue market. Companies, governments or public sector institutions can obtain fund through the sale of a new stocks or bonds issue. This is typically done through a syndicate of securities dealers. The process of selling new issues to investors is called underwriting. In the case of a new stocks issue, this sale is an initial public offering (IPO). Dealers earn from a commission that is included in the price of the security offering. All securities are initially issued in the primary market. This is the only market in which the corporate or government issuer is directly involved in the transaction and receives direct benefit from the issue. The company directly receives the proceeds from the sale of securities. The issue of securities in the primary market leads to direct transfer of money from the savers to the issuer of the securities i.e. one who is in need of money.

The secondary market, also known as the aftermarket, is the financial market where previously issued securities and financial instruments such as stocks, bonds and options are bought and sold. It is the market where investors purchase securities or assets from other investors rather than from issuing companies themselves. It plays a vital role in the capital market. The existence of an organized secondary market provides a level of confidence to holder of securities. It is because of secondary market investors purchase securities in the primary market in expectation that they can easily convert these securities to cash whenever they wish to do so. The securities that already exist are bought and sold in the secondary market. In simple terms secondary market is a market where pre owned securities (those that are not new issue) are traded. Its main function is to provide liquidity to the owners of the securities.

Some examples of secondary markets are New York Stock Exchange, NASDAQ, American Stock Exchange, Bombay Stock Exchange, Nepal Stock Exchange (NEPSE) etc.

**ii. Money Market and Capital Market**

Money market is a market where short term debt instruments or marketable securities are traded. The main function of the money market is to provide short term loans to the business, government and household.

Long term securities like bonds and stocks are traded in the capital market. The capital market is a market that enables suppliers and demanders of long-term funds to make transactions. It includes securities issued by business and government. The backbone of the capital market is formed by the various securities exchange that provides a forum for bond and stock transactions.

The key capital market securities are bonds and both common and preferred stocks. Bonds are long-term debt instruments used by business and government to raise large sum of money, generally from a diverse group of lenders. Common stocks are units of ownership or equity in a corporation. "Securities market is one of the constituents of capital market. It has a wide embracing for the buying and selling securities and all these agencies and institutions which access the sale and resale of corporate securities" (Rough, 1996:50).

A stock market is a public market for the trading of company's stocks and derivatives at an agreed price; these are securities listed on a stock exchange as well as those only traded privately. Thus capital market plays a vital role in the national economy. It plays a vital role in boosting economic activities in the country. It is an organized institution where various securities are issued and traded for the purpose of collection and mobilization of private and institutional savings. Capital market also allows altering liquidity position, risk of their prospective portfolios in response to availability of information and marketability of securities.

Usually the motive for buying stocks is to resale it subsequently at a higher price. In many cases dividends are also expected. Dividends and price changes are the principal ingredients in what investors regard as return in yields (Fisher, 1990:634). It is all

because of secondary market, stock market facilities the successful floatation of new issue. It provides the best opportunity to investors for mobilization of invisible resources. It is an important intermediary which bridges the deficit units and surplus units. The objective of capital mobilization is the transformation of savings on invisible resources into actual investment. So, it plays a crucial role in the mobilization of a constant flow of saving and channeling these financial resources for expanding productive capacities of the country.

Liquid equity market is another aspect that is facilitated by secondary market. Liquid equity markets provide investment opportunities to investors and to make a certain asset more attractive to buyer and seller. Stock market may affect the economic activity through the creation of liquidity. Liquid equity markets make the investment less risky and more attractive. It allows the savers to acquire asset (equity) and sell it quickly and cheaply. By facilitating long term and more profitable investment, liquid equity market improves allocation of capital and enhances prospects for long-term economic growth. Further by making investment less risky and more profitable, stock market liquidity can also lead to more investment (Ross & Sara, 1993:554).

By improving liquidity, stock market provides continuous market that makes more frequent but small price changes. Market price of stock is determined by the interaction of demand and supply. On the contrary on such stock at a given time, the price and volume of its past transaction are meaningful indication of problem in relationship to future supply and demand pressure. It is likely to encounter in the market and that such relationship is the most important element in determining the probable direction of price movement (Bhusan, 1990:10).

According to Weston and Copland, Stock markets are said to provide at least four economic functions:

i. Securities are relatively more stable because of the operation of the security markets. Security market improves liquidity by providing continuous markets that

make more frequent but smaller price changes. In the absence of active market, price changes are less frequent and more violent.

ii. Security markets aid the digestion of new security issues and facilitated their successful floatation.

iii. Security exchange facilitates the investment process by providing a market place to conduct efficient and relatively in expensive transaction. Investors thus assured that they would have a place to sell securities than they would otherwise require.

iv. They are capable of handling continuous transaction testing the values of securities. The purchase of selling securities records judgment and the values and prospects of the companies have higher values which facilitates the new financing and growth.

As already mentioned, primary markets are absolutely vital to capitalist economy. Without secondary market, primary market would not function well. Savers would be reluctant to invest in the new securities if they had to hold up to maturities or large cost of funding of the sellers. The existence of well functioning market refers to liquidity, profitability and diversification of securities to minimize risk. It provides adequate trade off between risk and return for investor, financial institutions to purchase and sale of securities. Traditionally security exchange is referred as both primary and secondary market where securities are initially sold first of all to institutions and then free to resell through exchange. So new issue market is thus separate from stock exchange dealing system. That is why this study is only concerned with stock market secondary function i.e. the stock exchange, the individual and institution are functioning by reselling the securities through exchange process.

In Nepal, Nepal Stock Exchange (NEPSE), a non-profit organization provides the market place in which the firms can raise funds through the sale of new securities and purchasers of securities can easily resell them when necessary. The basic objective of NEPSE is to impart free marketability and liquidity to the government and corporate securities by facilitation transactions in its trading floor through members, market intermediaries such as brokers, market makers, etc. Government of Nepal, Nepal Rastra Bank, Nepal Industrial Development Corporation and members are the shareholders of NEPSE.

### 2.1.3 Theories of Stock Price Behavior

Today, most of the developing countries are boosting their economic development through the contribution of the investment sector. The forces of demand and supply interact to determine a stock price. If demand is high and supply is low then price of stock goes up and vice-versa. Business cycle theories felt that tracing the evolution of several economic variables over time would clarify and predict the progress of the economy through boom periods.

There are two theories of stock price behavior i.e. classical approach and efficient market theory approach. Classical or conventional approach includes fundamental analysis theory and technical analysis theory. Under efficient market theory, there are three forms of efficient market hypothesis. Classical approach assumes market as inefficient whereas the efficient market theory assumes that market is efficient. "Prior to the development of the efficient market theory, investors were generally divided in to two groups, fundamental and technician" (Reilly, 1986:347).

#### 2.1.3.1 Convention or Classical Approach

The conventional or classical approach includes fundamental analysis and technical analysis theories. One of the major divisions in the ranks of financial analysis is between those using fundamental analysis (known as fundamental analysts or fundamentalist) and those using technical analysis (known as technical analyst or technicians).

##### 2.1.3.1.1 Fundamental Analysis

In the fundamental approach, the security analyst or prospective investor is primarily interested in analyzing factors such as economic influences, industry factors and related company information such as product demand, earnings, dividends and management in order to calculate an intrinsic value for the firm's securities. Fundamental analysis begins with the assertion that the true value of any financial asset equals the present value of all cash flows. The owner of the asset expects to forecast the timing and size of these cash flows and then converts the cash flows to their equivalent present value using an appropriate discount rate. The fundamentalist makes a judgment of stocks value with risk return framework based upon earning power and the economic environment.

The fundamentalists are of the opinion that the value of shares depends upon the anticipated future stream of returns and corresponding capitalization rates. The capitalization rate is an appropriated risk related cost of equity. Therefore, value of share, under this model, is equal to the present value of future incomes from an equity discounted at risk adjusted capitalization factor. It requires full disclosure of financial and economic information. If the dissemination of information is not regular, reliable and complete, the market value of shares cannot be properly ascertained. The actual price of the security is considered to be a function of set of anticipation. Price changes as anticipation change which in turn changes as result of new information. The market price of share is based on its intrinsic values." The value of the common stock is simply the present value of all the future income which the owner of the share will receive" (Francis: 1986: 398).

The objective of fundamental analysis is to appraise the intrinsic value of the security. The intrinsic value is the true economic work of the financial assets. It is sometimes said fundamental analysis is designed to answer to questions 'what?' The shareholders would like to maximize the return by buying the shares of the undervalued company and selling shares of the over-valued company. Buying pressure would increase the price of the under-valued company and selling pressure would decrease the price of over-valued company until the equilibrium price is restored.

"If the intrinsic value is below the market price, the security should be sold before its price drops. Under priced stock is purchased until their price down until it equals the value and overpriced stocks are sold, which drives the price down until it equals the value" (Francis: 1986:399).

Fundamental analysis uses different models like Top-Down versus Bottom-Up forecasting, probabilistic forecasting, econometric models, financial statement analysis etc. to estimate the value of security in an appropriate manner for making investment decision. Although many investors use technical analysis, fundamental analysis is far more prevalent.

#### 2.1.3.1.2 Technical Analysis

The technical analysis theory of share price behavior is based on past stock market information in an attempt to predict future price movements. This theory includes the study of the past price and value data of stocks to forecast future price movement. Past prices are examined to identify recurring trends or patterns in price movements. Then more recent stock prices are analyzed to identify emerging trends or patterns that are similar to past ones. This analysis is done in the belief that these trends or patterns repeat themselves.

"A highly specialized form of market is practiced by technical analyst. The try to predict future stock price as we might predict that the pattern of wallpaper behind the mirror is the same as the pattern above the mirror" (Malkiel, B.G.,1981: 19).

Technical analysis is based on widely accepted premise that security prices are determined by the supply and demand of securities. Tools of technical analysis are designed to measure the supply and demand. Technical analyst records historical financial data on charts and studies these charts in an effort and find meaningful patterns to predict future prices. In this method, technical analyst thinks little about future earnings and dividend. The analyst usually attempts to predict short-term price movements and thus makes recommendations concerning the timing of purchases and sales of either specific stocks or groups of stocks or stock in general. It is sometimes assumed that technical analysis is designed to answer the questions 'when'.

Some basic assumptions of technical analysis theory are as follows:

i. Market value is determined by interaction of demand and supply
ii. Demand and supply are governed by numerous factors, both rational and irrational.
iii. Security prices tend to move in trends that persist for an appreciable length of time despite minor fluctuations in the market.
iv. Changes in trends are caused by shifts in demand and supply.

v. Shift in supply and demand, no matter why they occur, can be detected sooner or later in charts of market transactions.
vi. The pattern tends to repeat itself.

Technical analysis believes that past patterns of market action will recur in the future and can therefore be used for predictive purchase. For which it indulges in the study of past market behavior with reference to various financial and economic variables to forecast the future. Financial and economic variables do change, but these variables are to be adjusted in the light of presence situation.

Stock price always move in trend because of an imbalance between supply and demand, when the supply of stock is greater than the demand, the trend will be down as there are more seller than buyers. When demand exceeds supply, the trend will be up and the "buyer bid" up the price and if demand and supply are merely equal, the market will move sideways in what is called a "trading range".

Charles Dow is the greatest protagonist of this theory. Since, this theory anticipates future share prices on the basis of charts and graphs of the past movements in prices, this approach is popularly known as ‘Chartist Approach’. Some charts are used to predict the movement of single security where as others are used to predict the movement of marker index.

**2.1.3.2 Efficient Market Theory**

An efficient market is one where shares are always correctly priced and where it is not possible to outperform the market consistently except by luck. In an efficient capital market, current market prices fully reflect available information. The role of markets in a competitive economy is to allocate scarce resources between competing ends in a way that leads to the scarce resources being used most productively. This means that the highest bidder for the resources gets to use them. When this occurs, markets are said to be allocatively efficient. The role of capital or securities market is to allocate inventible resources in a way that is allocatively efficient.

"An Efficient Market (EM) is defined as one in which the price of security fully reflects all known information quickly and accurately" (Johns, 1992:425).

"An efficient market is one where a security's current price gives the vest estimate of its time watch. In an efficient market, there are higher free launches non-expensive dinner. It is not possible to systematically gain or loss profits from trading on the available public information" (Weston and Copland, 1995:731).

Generally, markets are said to be efficient when:

i. Price adjust rapidly to new information;
ii. There is a continuous market in which each successive trade is made at a price close to the previous price (the faster that the price changes, the more efficient the market);
iii. The market absorbs large amount of securities without destabilizing the prices.

Market efficiency is the most profound idea to affect the investment decision process in security markets, mainly in equity markets. Market efficiency may be defined in different context of areas, for instance, organizational efficiency, investment efficiency, allocation efficiency, informational efficiency, operation efficiency, etc. efficiency means efficiently priced markets in which price of securities does not depart from justified economic values for securities which are determined by investors future expectation about risk earnings and so on. If market price of share are deviated from justified economic values, as rational investors of efficient security market, he tries to adjust the estimated economic values according to new information arises in an efficient market price. Thus, securities are efficiently priced on a continuous basis. EM, which has a significant implication for investors in stock market, would directly affect the investment process and investment decision.

"An efficient market is defined as a market where there area large numbers of rational investor's profit maximizes actively competing with each trying to predict future market values of individual securities and where important current information is almost freely available to all participants. In an efficient market, competition among the many

intelligent participants leads to situation where at any point in time actual prices of individual securities already occurred and on events which, as of now, the market expects to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic value" (Fama, 1970:384). "Efficient market is that, there is large number of knowledgeable and profit maximizing independent buyers and sellers, new information is generated randomly and investors adjust the information rapidly" (Sharpe, 1998:15).

The degree of market efficiency has important implication for the economy and for investment decision makers. In an economic sense, it is important that security prices provide accurate signals that can be used to allocate capital resources correctly. Incorrectly priced securities would result in incorrect allocation of capital.

The information dissemination in market plays a significant role to estimate the market price of securities. Rapid and accurate adjustment of information system has signified more efficient market and only possible to earn normal profits and normal gain. The subject of market efficiency has been much concerned area of the study in recent time. The efficient markets are not only related to informational efficiency but also allocation, operational efficiency etc. allocation efficiency signifies that rate of return adjusted the risk that are equated the margin for all investors. At time minimum transfer cost of investment funds refers operational efficiency.

The requirements for a security market to be efficient are as follows:

i. A large number of knowledgeable profit maximizing investors exist who actively participate in the market by analyzing valuing and trading stocks. These investors are price taking that is one participant alone cannot affect the price of the securities.
ii. Price must be efficient so that new inventions and better products will cause a firm's securities price to rise and cause investors to want to supply capital to the firm (i.e. buy its stock).

iii. Information is costless and widely available to market participants at approximately the same time.
iv. Information is generated in a random fashion such that announcements are basically independents of one another.
v. Transportations cost such as sales commissions on securities are ignored.
vi. Investors react quickly and accurately to the new information causing stock price to adjust accordingly (Johns, 1998:427).
vii. Investors must be rational and able to recognized efficient assets so that they will want to invest money where it is needed most i.e. in the assets with relatively high returns (Bhalla, 1983:216).

The above conditions are met in practice, the investors adjust security price rapidly and accurately as information carrying into the market price changes are independent to each other and also in more random fashion. The price change of today is independent as compared to yesterday because investors react to the new information independently in the market today. If capital markets are efficient, then the current share price of a company is 'far'. There is no question of the share price being under or over-valued. The phenomenon of under or over-valuation of shares is possible only in an efficient capital markets.

At the conclusion, it can be said "In an efficient market there are neither free lunches nor expensive dinners. It is not possible to systematically gain or lose abnormal profits from trading on the basis of available information" (Weston and Copland, 1996:93).

Efficient market theories believe that someone do better than average because of luck. In fact, they suggest that the investors who buy and sell their stocks frequently do less well than the stock market averages by an amount equal to the commissions they pay.

“An efficient capital market is one in which it is impossible to earn an abnormal return by trading on the basis of publicly available information" (Stewart L. Brown, 1978: 26-28).

The main assumptions of market efficiency are:

i. All investors have costless access to currently available information about the future.
ii. All investors are good analyst.
iii. All investors pay close attention to market process and adjust their holdings appropriately.

There are three forms of efficient market hypothesis based in type of information used in making market decision:

i. Weak-form market efficiency
ii. Semi-strong form market efficiency
iii. Strong -form market efficiency

**Weak -Form Market Efficiency**

The stock prices are assumed to reflect all past information about the price movements in the weak form of efficiency. "This hypothesis holds that no investor can earn excess returns by developing trading rules based in historical prices or return information" (Weston and Copland, 1996:94). The significant conclusion derived from the weak form hypothesis is that past rates of return and any other security market information should have no relationship with future stock prices or future rates of return. It is not possible for an investor to predict future security price by analyzing historical prices and achieve a performance (return) better than the stock market index. It is so because the capital market has no memory, and the stock market index has already incorporated past information about the security prices in the current market price.

To know that the capital market is efficient in its weak form, we can find out the correlation between the 'security prices over time'. "In an efficient capital market there should not exist a significant correlation between the security prices over time" (Fama, 1965:55-59).

Most empirical test has shown that there exists serial independence between the security prices over time. An alternative method of testing the weakly efficient market hypothesis

is to formulate the trading strategies using the security prices and compare their performance with the stock market performance. The capital market will be inefficient if the investor's trading strategy could beat the market. Researchers have studied a large number of trading rules, and have concluded that it is not possible for investors to outperform the market.

**Semi-Strong form of Efficiency**

In the semi-strong form of efficiency, the security prices reflect all publicly available information. This implies that no investors could earn excess return using publicly available resources such as corporate annual reports, stock market price information or all publicly available data such as earnings, dividends, stock split announcements, new products development, financing difficulties, accounting changes, or financial dailies/magazines (e.g. The Economic Times). In fact such publicly available information is already impounded in the current security prices. "If the semi-strong hypothesis is true, then only a few than what could be earned by using a native buy and hold strategy"(Francis, 1986:608). This form of efficiency is most controversial because it implies that a security analyst who tries to identify mispriced using publicly available information is wasting time because that information is already reflected in the current price. The semi-strong efficient market hypothesis implies that the share price reflects an event or information very quickly, and therefore, it is not possible for an investor to beat the market using such information.

**Strong form of Efficiency**

In the strong form of efficiency, the security prices reflect all published and unpublished public and private information. The strong form encompasses both the weak form and the semi strong form. This version implies that no opportunities should exist for any investors to derive above average rates of return. "The most stringent form of market efficiency is the strong form which asserts that prices fully reflect all information public and non public" (John, 1943:429). An obvious way to check the validity of the strong efficient market hypothesis is to examine the profitability of traders in securities made by insiders to see if the insider's access to information allows them to earn statistically significant trading profits.

**Random Walk Efficient Market Theory**

The random walk theory assumes that all future stream of income from the equity investment are independent of preceding income. In other words, future prices cannot be predicted on the basis of past price behavior. It means is we attempt to predict future prices in absolute terms using only historical price change information, we will not be successful i.e. successive price changes at any time will on the average reflect the intrinsic value of the security. The random walk theory says that nothing more than that successive price changes are independent. This independence implies that prices at any time will on the average reflect the intrinsic value of the security. If a stock price deviates from its intrinsic value because of different insights into future prospects of the firm, professional investors and smart non professionals will seize upon the short term or random deviations from the intrinsic value and their active buying and selling of the stock in question will force the price back to its equilibrium position. In other words, the share prices fluctuate randomly; however, this does not mean that the market is irrational in the determination of prices. It operates through market mechanism. In a free and competitive market, the relative forces of demand and supply determine the share price. The so-called efficient market automatically adjusts the prices of shares since the market is very sensitive. Any discrepancies in the market are automatically correlated and the actual prices fluctuate randomly about its intrinsic value. This is a free and most competitive market and the prices of shares in the market are assumed to reflect all relevant information. Though the subject of market efficiency has been much concerned area of the study for the academicians and researchers in recent times, the advocates of the efficient market theory are matched by and equally eloquent opposing camp, which argues that the stock market is neither competitive nor efficient.

“The critics contend that one or more of the following factors cast their shadow over the efficiency and competitiveness of the stock market” (Chandra, 1994:86).

1. Information inadequacy: Information is neither freely available nor rapidly transmitted to all the participants in the stock market. In addition there is a calculated attempt by many companies to circulate "misinformation".

2. Limited information processing capabilities: Human information processing capabilities are sharply limited. As Noble Laureate Herbert Simon observed: "Every human organism lives in an environment which generates millions of new bits of information every second, but the bottleneck of perceptual apparatus certainly does not admit more than a thousand bits per second and possible much less."
3. Irrational behaviors: In theory, it is generally assumed that investor rationally will ensure a close correspondence between market prices and intrinsic value. In practice, this may not be true. As J.M. Keynes argued. In the point of fact all sort of consideration enter into the market valuations, which are in no way relevant to the prospective yield. L.C. Gupta made a similar observation: our findings suggest that the markets evaluation process work haphazardly almost like a blind man firing a fun. The market seems to function largely on a 'hit-or-miss' basis rather than on the basis of informed beliefs about the long-term prospects of individual enterprises (Gupta, 1981:20).
4. Monopolistic influence: In theory, the market is regarded as highly competitive. In practice, powerful institution and big operators wield great influence over the market. The monopolistic power enjoyed by them diminishes the competitiveness of the market.

#### 2.1.3.3 Economic Liberalization and Capital Market Development

As a precondition to economic liberalization, the Industrial Enterprise Act was enacted in 1982 and Foreign Investment and Technology Transfer Act came into effect since 1983. Since 1985 Nepal has been following liberal economic policy. In its first stage of implementation, banking and financial sector was liberalized. A policy to invite foreigners to invest jointly with the domestic investors on the banking and financial sector was introduced. Finance Companies Act 1986 was also enacted with a view to provide non-banking securities to the people in order to promote their economic benefit in general through institutionalized investment. Accordingly, many banks and finance companies were incorporated in the private sector and listed in the securities exchange center. Nepal Rastra Bank liberalized the regulation of interest rate and endeavored to

reform and strengthens the financial sector by implementing various prudential financial norms like income recognition, loan classification, maintenance of adequate loan loss provisions, reserves and capital adequacy rational and liquidity position of the banks and finance companies. The Industrial Policy of 1988 introduced various reforms in order to encourage the establishment of corporate enterprises and guaranteed the non-nationalization of private sector industrial organization.

In August1988, Nepal was hard hit by major earthquake resulting in considerable loss of lives and properties. Nepal-India trade and transit treaty came to an end on March 1989 and the country underwent more than a year long trade impasse with India which caused temporary set banks to the capital market too. Most of the trade points with India were closed down and because of the short supply of fuel and other essential industrial inputs; the operation of most of the industries was disrupted. After the restoration of multiparty democracy in 1992 and resumption of the trade and transit statement with India in its status quo ante, new democratic constitution was enacted, which enshrined in its directive principle the previous conducive to the private sector growth. The multiparty election took place in April 1991and the elected government while taking the steering of the economy realized the need to reform the financial sector and develop capital market along with the economic liberalization in the country for private sector growth. The multiparty election took place in April 1991 and the elected government while taking the steering of the economy realized the need to reform the financial sector and develop capital market along with the economic liberalization in the country for private sector growth towards this move, more joint venture companies were opened in the country and Citizen Investment Trust was established as a pioneering market maker institution in the capital market.

**2.1.3.4 Monetary Policy Implication on Capital Market Development**

It was realized after the restoration of multiparty democracy in the country that economic development of the nation was not possible without the increased participation of the private sector. With the adoption of liberal economic policy, the newly elected government followed the policy of privatization of industrial and commercial undertaking retaining the public unity enterprises under its control. The government recognized the

need of dynamic capital market in order to meet the increased demand of capital for the private sector. Toward this end, suitable monetary policy moves were undertaken by Nepal Rastra Bank.

Commercial banks and financial institutions enjoyed complete freedom to determine their own interest rates on lending and borrowing with effect from FY 1989/90. Before that NRB used to determine the maximum interest rates on credit and minimum interest rates on deposits for commercial banks and financial institutions. As a move towards financial sector reforms, NRB took various policy decisions such as increasing bank's capital structure, classification of loans, loan loss provisioning, and recognition of income and establishment of ceiling for individual credit. The capacity of commercial banks to channel their resources to the private sector had improved due to the lowering of statutory ratio from 24 percent to 22 percent; NRB continued to hold auction sales of government treasury bills on a regular basis. Along with the improvement in the financial sector, additional joint venture banks, finance companies and insurance companies had also come into existence. NRB in an effort to maintain the price stability to an acceptable level has issued bonds worth Rs. 4 billion. This squeeze in excessive liquidity has been helpful in easting the domestic inflation NRB continued to issue bonds occasionally to absorb excessive liquidity.

NRB abolished the mandatory requirement of commercial banks to invest 22 percent of total deposit liability on government bonds, treasury bills or NRB Bonds with effect from 16 July 1993. At the same time, it also lowered its refinance rates from 13 percent to 11 percent. All these moves were directed towards the release of adequate fund to the private sector. Development of capital market in Nepal has then become imperative because of ongoing structural reforms in the economy, increased participation of private sector and the growing demand for capital.

### 2.2 Review of Major Studies

In the following sections it is tried to review various international as well as Nepalese journals and books regarding the capital and stock market.

### 2.2.1 Review of Foreign Studies

Various number of research studies have been performed internationally on the stock market. Research on security price did begin with the development of a theory of price formation which was then subjected to empirical tests. The impetus for the development of theory came from the accumulation of evidence in the middle 1950s and early 1960s that the behavior of common stock and other speculative prices could be well approximated by a random walk. The findings of some of the research studies are as follows:

Slutsky (1927) proved that the randomly generated price changes look like stock price changes and they appear to exhibit cycles and other patterns. Alfred Cowles in 1933 found little evidence that stock market analysis could predict future price. Alfred Cowles and Herbert E. Jones in 1937 reported that stock 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 more than two decades.

In the middle 1950 that the behavior of common stock and other speculator of prices could be well approximated by a random walk. Much of the theory on the random walk can traced on French mathematician Louis Bachelier whose PhD dissertation was titled “the theory of speculation” researcher tested the model in commodity speculation in France was a “fair game.” researcher concluded that the current price of a commodity walk was unbiased estimate of its future price. After the first discovery of the random walk model by Louis Bachelier, empirical testing of the model in the stock prices almost remained stagnate until 1960’s. There were large number of studies most of which were briefly review below.

Kendall (1953) made significant contribution to advance in the study of the random walk model. He tested the model on the weekly price changes of the 19 indices of British Industries shares and in the spot price series of cotton (New York) and wheat (Chicago). He analyzed the data by serial correlation coefficient and concluded that the subsequent

stock price movement forms random walk. He showed that the successive price changes are statistically independent to its past price changes.

Samuelson (1965) though lacked theoretical discussions in his paper, but his findings support the independent hypothesis of random walk theory in stock prices. In conclusion, he states that if a market has zero transaction costs and if all available information are free to all interested parties and if all market participants either potential and existing have the same time horizons and expectations about prices, the market will be efficient and prices will fluctuate randomly.

Kendall (1953), Roberts (1959) and Osbern (1959) also tested the model that gave support to the theory. Then after in 1960's and onwards numerous studies were carried out in this area validated the hypotheses while some other studies refuted this theory as a true description of the market. This research applies various analyzing tools and mechanical rules, details of that have been present in the following paragraphs.

Kendall made significant contribution to advance in the study of the random walk model. Researcher tested the model on the weekly price changes of the 19 indices of British industrial shares and in the spot price series of cotton (New York) and wheat (Chicago). Researcher analyzes the data by serial correlation coefficient and concluded that the subsequent stock price movement follows random walk. Researches showed that the successive price changes are statistically independent to its past price changes.

Roberts conducted simulation tests by comparing the cumulative of random numbers and the Dow- Jones Industrial Average Index (DJIAI) for about one year. Researcher observed that the first difference of two series produce the same pattern. Researcher gives a number of methodological suggestions for testing what he calls the change model. Researcher suggested run analysis for testing independence of price changes. Similarly, Osbern (1959) analyzed stock price from New York stock exchange (NYSE) using daily log price changes, which called Borwain Motion. Research found the consistency between the Borwain Motion and share prices movements rise to support on random walk hypothesis.

Counter had analyzed weekly and 14-week interval data on 14 stocks from New York Stock Exchange (NYSE). Research found that one-week interval stock price moves as a random walk and some dependencies in the data at 14 weeks interval. The average serial correlation coefficient for one week as -0.047 and for 14 was 0.131. Researcher focused the importance of "differencing interval" while testing for randomness in stock price behavior.

Fama (1965) analyzed the movement of stock market price changes of all the stocks that make up Dow Jones Industrial Index for the period end of 1952-1962 and investigated the daily proportional price changes of those 30 industrial stocks and auto correlation were estimated for a variety of lags ranges from 1 to 10 days. In his study, he found that the auto correlation coefficients for daily changes are small, the average being 1.03 i.e. near to zero. Out of thirty, eleven auto correlation coefficient were significant different from zero and lagged price changes show some degree of dependence. He further analyzed the data by run tests by total number of run number of runs by signs and distribution of runs by length. He found slight tendency for this to occur but again the results were sufficient to accept the random walk hypothesis.

The study conducted by the U.S Department of commerce on stock prices and the business cycle 1948-84 has found that the general correspondence between stock prices and the business cycle, where weighted moving average of a stock price index is mapped against the peaks and troughs of business cycle since 1948 (Kimpton, 1985: 105-107) .

The investment decision in the stock market, Coteries Paribas is a function of the prevailing market price and return to capital. By return to capital is meant the algebraic sum of increment in the value of yield (Doodha, 1962: 125).

The indicators of stock market development reflect the development of an economy. It is important to predict the course of the national economy because economic activity affects corporate profits, investor attitudes and expectations and ultimately security prices. The key for the analyst is that overall economic activity manifest itself in the behavior of

stock prices or the stock market. This linkage between economic activity and the stock market is critical (Fisher & Jordan, 1990:57-59).

There are two important aspect of capital market, the raising of funds in the form of shares and debentures and trading in the securities already issued by the companies. While the first aspect is obviously most important from the point of view of economic growth, the second aspect is also of considerable importance. In fact if facilities for transfer of existing securities are abundant, the raising of new capital is considered assisted for the buyer of new issue of security is confident that whenever he wants to get cash he can find buyer without much difficulty. Thus, the liquidity of the stock market affects the raising of new capital from the market (Kunt And Levin, 1996: 224).

Note that my arguments do not imply that markets are necessarily inefficient, there are no arbitrage opportunities here, nor is there the provisional free lunch, traders with superior information will move prices towards full information levels , but continuously attaining fault information level is not credible – new information arrives, old information is obsolete, market price can be martingales with respect to information but if traders have diverse information sets, then these expectations need not be the same across traders. Thus, as in micro structure models, the adjustment of prices of full information values can differ widely across markets that are needed efficient, and it is this difference in adjustment that gives rise to the effects discussion here (Hara, 2003: 1351).

Analysis of Malaysian Share Price Behaviour: An Information Theory Approach Dr. Kok Kim Lian, Faculty of Economics and Administration, University Malaya, Kuala Lumpur. The study uses daily data on the proportions of stocks advancing, declining or remaining constant in the Malaysian stock market for the years 1984 through 1991. The test is used to examine the extent to which it is possible to predict these three proportions given the time series data of such proportions in the past. The results show that the immediate past proportions do not have much influence on the prediction of the future proportions. The reduction in the average information inaccuracy compared to using only the long-run averages is also minimal. These results suggest that the Malaysian stock

market is weak-form efficient and its efficiency has also improved from the mid 1980s to the early 1990s. An analysis of the share price behaviour using information theory suggests that the Malaysian stock market is a weak-form efficient market. Its efficiency has also improved from the mid 1980s to the early 1990s. The dependence of share price changes at time t on those of time (t-1) is of the same degree as in the United States market and much lesser than in the United Kingdom and the Netherlands markets although it should be noted that the studies on these other three markets employed data in the sixties.

From experience we know that investors may temporarily pull financial prices away from their long term trend level. Over-reactions may occur so that excessive optimism (euphoria) may drive prices unduly high or excessive pessimism may drive prices unduly low. New theoretical and empirical arguments have been put forward against the notion that financial markets are efficient. According to the efficient market hypothesis (EMH), only changes in fundamental factors, such as profits or dividends, ought to affect share prices. (But this largely theoretic academic viewpoint also predicts that little or no trading should take place contrary to fact since prices are already at or near equilibrium, having priced in all public knowledge.) But the efficient-market hypothesis is sorely tested by such events as the stock market crash in 1987, when the Dow Jones index plummeted 22.6 percent the largest-ever one-day fall in the United States. This event demonstrated that share prices can fall dramatically even though, to this day, it is impossible to fix a definite cause: a thorough search failed to detect any specific or unexpected development that might account for the crash. It also seems to be the case more generally that many price movements are not occasioned by new information; a study of the fifty largest one-day share price movements in the United States in the post-war period confirms this. [3] Moreover, while the EMH predicts that all price movement (in the absence of change in fundamental information) is random (i.e., non-trending), many studies have shown a marked tendency for the stock market to trend over time periods of weeks or longer. Various explanations for large price movements have been promulgated. For instance, some research has shown that changes in estimated risk, and the use of certain strategies, such as stop-loss limits and Value at Risk limits, theoretically could cause financial

markets to overreact. Other research has shown that psychological factors may result in exaggerated stock price movements. Psychological research has demonstrated that people are predisposed to 'seeing' patterns, and often will perceive a pattern in what is, in fact, just noise. (Something like seeing familiar shapes in clouds or ink blots.) In the present context this means that a succession of good news items about a company may lead investors to overreact positively (unjustifiably driving the price up). A period of good returns also boosts the investor's self-confidence, reducing his (psychological) risk threshold [4] (Tarun Jaswani 2009).

Hence, on the basis of the reviews done above of the previous studies, it can be concluded, that the stock market prices show a random movement and the security price appears to be serially independent.

### 2.2.2 Review of Nepalese Studies

The stock market of Nepal has been less subjected to investment research than their counterparts elsewhere. In Nepalese context, there is little study available about stock market behavior in small capital markets. Some of the available relevant studies are reviewed below. Even though these studies were carried out few years back, it can provide intellectual ground in our domestic stock market and its dimension in the present context also.

Here, we are taking brief synopsis of ‘Stock market Behavior in a Small Capital Market’ by Pradhan R.S in 1993, Shareholder's Democracy and Annual General Meeting Feedback by Professor Dr. Shrestha and The Dividend Policy and Value of Firm in Small Stock Market conducted by Dr. Kamal Das Manandhar in 1998.

The study about ‘Stock Market Behavior in a Small Capital Market’ in Nepalese context conducted by Dr. Radheshyam Pradhan in 1993 helps to provide at least some insight into stock market behavior in Nepalese context by concerning listed and traded shares in secondary market. “The purpose of this study is to address the stock market equity, market value to book value, price earnings and dividends with liquidity, leverage profitability assets turnover and interest coverage. To find out the above objective, this

study is based on cross sectional analysis of 55 observations and the study period of 1986 to 1990. According to him, this paper is based pooled cross section analysis of 55 observations. Data could not be obtained on contacting the individual enterprise as they traded them confidential.

Due to initial and unestablished stage of stock market, there is no system yet to compile and publish stock market data on regular basis. There is no database, which make it difficult to carry on any research in Nepalese stock market. Considering the study period of 1986 to 1990, usable data could be obtained for 17 enterprises." (Pradhan, 1993: 216) These enterprises are in different sectors such as manufacturing, banking, trading, hotels, etc. In this study, he constructed three different levels of portfolios of sample securities (small, intermediate and large). According to market equity, market value to book value, price earnings and dividend per share to market price per share, dividend per share to earning per share and analyze liquidity, leverage, earnings and coverage of each portfolio in terms of larger and smaller and also average ratios are computed.

He concludes "the result indicate that larger stock have longer price earning ratio of market value to book value equity, lower liquidity, lower profitability and smaller dividends. Price earning ratio and dividend are more variable for smaller stocks; whereas market value to book value of equity is more variable for larger stock. Larger stock also has higher leverage, lower assets turnover and lower interest coverage but there are more variables for smaller stocks that for larger stocks. Stock with larger market value to book value of equity has larger price earning ratio and lower dividends. These stocks also have lower liquidity, higher leverage, lower profitability, lower turnover and lower interest coverage. However there are more variable for assets with smaller price earning ratio. Stock paying higher dividends has higher liquidity, low leverage, high earnings, and high turnover and high interest coverage whereas liquidity and leverage ratio are more variable for the stock paying lower dividends (Pradhan, 1993: 216).

The study of Shareholder's Democracy and Annual General Meeting Feedback conducted by Professor Dr. Shrestha critically analyzed the situation of common stock investors and

the situation is more of less similar till now. He further emphasizes the need of separate act regarding the protection of shareholder's right in the current context of increasing number of shareholders. Some public limited companies have floated the shares to the general public without having shareholder's representation in the board. There are many such companies which conduct the annual general meeting just to fulfill their desire and do not consider the voice of the majority of the shareholders. Similarly, management involvement and government intervention in the board election have brought a greater set back in the voting right of the shareholders (Shrestha, 1995:45). The encouraging and growing disclosed contents of prospectus. This helps to satisfy a minimum standard of faith on investment in shares through relying on pros and cons of prospectus. It is therefore important to dispose everything in prospectus which could reasonably influence the mind of the prudent investors. Dr. Shrestha in this context further emphasizes need of the expression of disclosure philosophy and investigation of frauds in prospectus reconciliation to check growing problems in the development of the capital market in Nepal.

Most of the studies on share price behavior are conducted by different scholars in the context of Nepal at the secondary market through different point of view. They organized the study using different approaches and tools so as to analyze the behavior of stock price more realistically at the specific point of time. This nature of stock prevails more or less similar both abroad and in Nepalese market. The study of market regarding the secondary market in Nepal is very few because the capital market started to develop lately and hence does not have very long history to look for. It still is in the process of development. The result of the study differs depending upon the factors like sample size and methodology used during the study. The earlier studies were based on randomly selected sample stocks while this study is based on fully paid up and actively traded equity shares related to each commercial bank taken into consideration. Moreover, the earlier studies were conducted when the organized stock market was at the initial stage without considering necessary information while this present study is based on the information almost fourteen years after establishment of NEPSE which undoubtedly portrays the real scenario of the stock market on present context. Previous researches have been conducted

to identify share price behavior by using limited tools i.e. run tests, serial correlation, risk and return analysis, etc. in particular company's share. This study uses some if the methods used previously and in addition, broadens its area of study by analyzing share price behavior on the basis of important indicators like EPS, DPS, P/E ratio, dividend yield, earning yield, MV/BV ratio, current ratio, ROE etc. which plays significant role in determining share price and its behavior. Furthermore, this study has used commercial banks that are enlisted as the one with high trading value and high frequency of trading in the security market which helps additionally to identify the price behavior of commercial banks as a whole. To make study even more accurate the monthly data has been taken within the span of recent five years i.e. from 2001/02 to 2005/06. Most of the previous studies in Nepalese context are done in the pursuit of academic fulfillment with little help to the professional community and probable investors in the capital market. Hence, this study tries to fill that shortcoming by trying to give certain professional opinion in order to do some contribution in practical side of capital security market and side by side carrying its academic purpose by revalidating the tools and techniques available in the field of analysis of share price behavior. Thus, this study enables to view current condition of share price behavior by updating and revalidation in terms of the changes taken place in stock market of Nepal.

Bhattarai (1990) has carried out a study on ‘Share Market in Nepal’. In which, he emphasized the historical background and the analysis of various financial variables affecting the smooth operation of share market. The study was mainly based on secondary data obtained from various sources. He has applied both financial and statistical tools in the study. He found that out of 12 sample companies, only 2 companies were useful to cross over the average price earning ration, as a result, market price of shares were highly skewed. Moreover, there was mismatch between calculated and quoted price. However, he concluded that the movement of more and more institutions as well as individual investors in capital through broker’s network raised the transaction volume. Rumors spread by brokers, and create genuine speculation. Fair play of bulls and bears makes equilibrium resulting price stabilization. Speculation on the trading of shares

is encouraged. Thus, the market starts to walk randomly reflecting the value of shares. Investors are facilitated by providing alternative to make diversified portfolio.

Aryal (1995) has conducted a study on ‘Behavior of Stock Market Prices’ with the objective to discuss the movement of stock market prices and to develop the empirical probability distribution of successive price change of an individual common stock and a stock market whole. This study was based on secondary information obtained from Nepal Stock Exchange. This study covered almost eight months' period and the sample was 21 listed stocks. He applied serial correlation and runs test as statistical tools to analyze the data. Through the analyzing he has concluded that the assumption of independence as predicted by random walk model of security price behavior has been refused at least for Nepalese context as the first approximation even in the rough way for early days of stock market operation. This refection of hypothesis made clear that the knowledge of past and present becomes useful in predicting the future movements of stock market prices. The investors on the floor of exchange can make higher expected profits in future based on these historical price series. In other words, the dependence nature of price series produced by general market fluctuation statically implies, today's change is positively depending upon yesterday's price changes.

Bhatta (1997) conducted research on the topic “Dynamics of stock Market in Nepal” with the objectives to diagnose and compare sartorial financial status of the stocks in Nepalese stock market. The main conclusion of his research was that the stock market and economic activities move in similar direction and EPS and ROE have a decisive effect on the market share prices of stocks. The investors are interested to invest the resources in the shares of corporate sector through the stock market in the Nepalese economy. It is necessary to develop the entrepreneurship and encourage entrepreneurs to start the productive venture as soon as possible. The main back bone of an economy is to develop the manufacturing sector, which in turn, assists to foster banking, finance and insurance sectors. But unfortunately, the manufacturing sector doesn’t have good performance in Nepalese economy. The secondary aspect of stock market is also not functioning well in Nepal. There is almost no liquidity in the stock market for shares except that of banking

and some finance and insurance sectors. Although it has become late to take steps to overcome such problems of the Nepalese stock market in order to make it active and supportive, the stock market has good prospect for the resources mobilization to finance the productive enterprises in Nepalese economy.

Gurung (1999) thesis "Share Price Behaviour of Listed Companies in Nepal" carried out the task of analyzing trends of Nepalese stock markets and influence variables. The main objectives of the study were to identify the relationship between stock price and independent variables. The basic objectives of his research are given as follows:

- To analyze the trend in paid up value and market capitalization.
- To identify market behaviour in Nepalese securities market.
- To analyze the relationship between traded and listed company.
- To analyze the effect of earning and book value to the stock price in NEPSE and behaviour of NPESE index.
- To evaluate the trends of trading turnovers.

  After analyzing the above objectives the major finding of his research are as follows:

- The no. of listed companies has been increased during the study period. In addition, the no. of secondary market intermediaries has also been increased.
- Both of no of traded and listed companies have increased during the study period. Shares of all the listed commercial banks have been operated in the market and the no. of trading companies whose share have traded in each year.
- NEPSE index in general, is in decreasing trend, which implies that the performance of economy is deteriorating year by year.
- Listed company were not found relatively responsible agency in the stock market efficiency in Nepalese security market. In Nepalese securities market all the three agencies i.e. broker, government and market maker are found responsible in the present market inefficiency.
- The trading turnover in term of amounts, number of transaction occurred, market capitalization etc have in banking group as compared together groups, the performance of banking group is highly attractive and liquid.

Timilsina (2001) conducted a study on "Capital Market Development and Stock Price Behavior in Nepal". The main objectives of the study was to find out the fair market price of equities and observe the variation of actual prices form the computed fair prices to test whether the present behavior of prices will remains stable. The study covered a period of 8 months (1999/2000). Thirty-four listed companies were takes as a sample for the study. By using different statistical, mathematical, and financial tools, including the formation of hypotheses had done in the study. Researcher concluded that the market price of share depends on earning per share (EPS) as well as dividend per share (DPS) direct and immediate response in the market.

Bhattarai (2002) has also performed study on "Efficiency of Nepalese Stock Market" the objectives of this study were to find out the level of efficiency of NEPSE and to find out some facts about the Nepalese investors and their behaviour. Using serial correlation and runs test for the daily market return he found significant first order correlation .Which means the market return of today in NEPSE is affected by the return of yesterday. The stock price movement is not independent rather than it has some relation with the past price sequences. Similarly, runs test for the daily market return has also revealed the similar result that the stock price formation process in NEPSE is not independent from the historical price series. The subjective analyses of Nepalese investors are based on the rumors and speculations. They do not compare the yield of their investment with other opportunity, rather they look at the market movement and if they found stocks to be increasing, they buy the security and if it is decreasing they sell the security. Nepalese investors are not familiar with investment banking. They do not have any idea about the mutual funds so they are making direct investment towards the companies. Thus, he concluded that the average Nepalese investors are behaving irrationally and the market inefficiency is also the consequence of irrational behaviour of Nepalese investors.

Manandhar (2002) carried out a study on impact of bonus share issue on stock price behavior. The study included the observation of 21-bonus share issue of 11 companies covering the period from 1993/94 to 1997/98. The analysis show that the immediate affect of bonus announcement on the share price had found fluctuating, ranging from

approximately -502 to +41.04% with standard deviation of approximate 70%. The study concluded that bonus ratio is limited to 100 percent, if more than that, then it may cause share price decline. The important implication of this result corporate firm was that firm's share price could maximize if it announces the bonus ratio to the maximum of 1:1.

Kharel (2002) has used filter rule to test whether sophisticated mechanical trading rule can beat the average market return. The finding indicated annual rates of return obtained from all filter trading strategy were greater than buy and hold strategy. In overall the result of these studies concluded that present stock price changes are biased outcome of past price change which, demonstrated that the random walk model was not appropriate to define the security price movement of equity shares in Nepal. Thus the conclusion draw was drawn that Nepalese market was not even weakly efficient in pricing share.

Dahal,(2002) conducted research on "Stock Market Behaviour of Listed Joint Stock Companies in Nepal". The study aims to find out the behaviour of stock market n Nepal on the basis of secondary as well as primary dates. The basic objectives of the studies are as follows:

- To study and analyze the no. of companies and maintenance of listed companies in NEPSE.
- To analyze stock price trend and volume of shares traded in the secondary market.
- To analyze the investors view regarding the decision on stock investment.
- To analyze the affecting factors impact on stock price with the help of NEPSE index.
- To suggest the abstract result to the interested parties related to stock market.

Above objects including, he also describes the major findings are as follows:

- Most of the investors were asked for their performance of investing sectors. Major position of them said that they were attached with banking sector for investment.
- Investment process and its other factors like NEPSE index, price trends and investment facilitator are not doing their work in systematic way.
- The investors were not satisfied with their investment as they were asked whether they were satisfied or not to their investment.

- The efficiency of stock markets, different parties, brokers market makers, security exchange Ltd were not sound efficient by analyzing interviewer's expression as they were not getting required support from these parties.
- While analyzing the rate of listing of new companies showed that increasing trend from the year 1997 to 2001.
- Volume of stock traded in the stock exchange during the study period was found increasing trend but in last year it was decreasing trend.
- On the analyzing paired t-test for signaling factors with reference to major seven events it was found that signaling effects had played a major role in fluctuation of the stock prices.
- It was found that investors in the stock market take the investment decision on the basis of market price of the shares.

Dhakal,(2003) Study on Leading "Dividend and Stock Price Behaviour" which was carried out by date for 16 enterprises from 1998 to 2002. This study had used simultaneously equation model as developed by Friend and Puckett (1964).

From this study, the main objectives are as follows:

- To analyze the impact of dividend policy on share prices.
- To test the difference between dividend per share and share price.
- To identify whether it is possible to increase the market value of the stock, changing dividend policy.
- To analyze and determine the company's DPS distribution rate.

  From the above objective, the major finding conclusions are as given below:
- Dividend per share affects the share prices variedly in different sector.
- The difference between dividend per share and stock price is positive in the sample companies.
- Changing the dividend policy or DPS might help to increase the market price of shares.
- The difference between stock prices and lagged earning ratio is negative.
- DPS of different corporation's were fluctuating up and down.

Shrestha,(2004) Studied on the topic "Share Prices Behavior in Nepal" was conducted with the major objective of securities market of Nepal., which are as follows:

- To analyze development and the efficiency of stock market of Nepal.
- To analyze whether the sequence of price change are constant with change of the series of random number, expected number the independent Beunoulli process.
- To analyze the sensitivity of securities (specially banking, financing and insurance sectors) and compare with market return.
- To determine the efficiency of the stock market through the theoretical model of efficiency market hypothesis in the securities market.

The researcher examined daily closing prices of 30 stocks during the period from 13 Jan, 1994 to mid July, 1998 by means of serial correlation and runs tests fund that the successive price changes are dependent. The main findings of this study are:

- The price changes in the present and future stock market may not be independent of the price change in the past and present respectively.
- The changes of price of the present and past may be helpful to forecast future price change. Hence, there exists the sufficient amount of opportunities for the sophisticated investors.
- There 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.
- When logs of days increase, the mean value of series correlation of coefficient is lower, that indicates the past price changes may have low power to predict the future price change.
- The development of institute rates of stock markets are also not in satisfactory factors and Nepalese stock market is not efficient in pricing shares.

Subedi,(2005) studied "Stock Price Behavior in Nepal". The main objectives of the study were to identify the relationship between stock price and other variables. The basic objectives of this research are as follows:

- To analyze the effect of book value to stock price in securities market..

- To evaluate the effect of earning to stock price in securities market and to show the relationship effect of market variables in securities market.
- To analyze the effect of dividend to stock price in Nepalese stock market.
- To analyze the listing of new companies and volume of share traded.
- To access the effect and efficient qualitative factors in the opinion of the employees of A grade listed companies.

For the above objective she also concludes the following findings:

- In NEPSE, EPS, DPS & BPS individually do not have consistent relationship with the market price of shares, among the listed companies, the pricing behavior, various from on company to another.
- But EPS, DPS and BPS jointly have significant effect in market prices of shares. So they may be other major factor affecting the share price significantly.
- All of the Nepalese share investors have not found adequate knowledge to analyze the share price behaviour.
- There is difference of proper laws and policies regarding the capital market, share holders are feeling unsecured to invest in security market due to poor regulatory mechanism to protect shareholders interest**.**

Poudyal,(2005) studied on "A Study on Share Price Movements of Joint Venture Commercial Banks in Nepal" is preferred through analyzing statistical and financial tools i.e. standard derivation, correlation, beta, t-test etc. The basic objectives of the study are as follows:

- To examine analyze NEPSE market and to judge whether the market shares of different banking indicators (book value per shares and major financial ratio) explain the share price monuments.
- To analyze the scenario why the shares of selected banks emerge as blue chips to the potential investors and to make a conclusion on the basis of the financial ratio analysis.
- To analysis how risky the investment in commercial banks.
- To provide fruitful suggestions for the improvement of stock market in Nepal.

- To analyze the movement of stock market price in relation to Nepalese joint venture commercial banks are either dependent or independent to historical price of stocks.

From the above objectives, he had also analyzed the following findings:

- The market shares of these banks do not capture the market share and the growth rates of different banking indicators used.
- Having good track record of the financial position, the market potential investors buy the shares of joint venture commercial banks. Therefore the share of joint venture commercial bank emerge a blue chips in the Nepalese stock markets.
- The ordinary least square equation of book value per share on market value per share reveals that the independent variables doesn't fully explain the dependent variables 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.
- The beta-coefficient which measures the risks of individual securities between in relative terms, suggested that none of shares of eight sampled banks are risky. The shares of publicity quoted joint venture commercial banks are less risky as compared to other average stocks traded in the stock exchange.

Pradhan and Upadhaya (2006) conducted a study on the "Efficient market hypothesis and the Behavior of the share prices in Nepal". This study attempts to apply the most widely accepted analytical approach in the study of stock markets, namely efficient market hypothesis(EMH), to investigate the behaviour of share prices of Nepal. The objective of the study was to make comprehensive investigation of weak and other form of efficient market hypothesis. Different statistical tools were used in the study like, serial correlation, the run test, weighted mean, median, chi-square test, and spear's rank correlation. Twenty three equity shares listed and actively traded in the Nepal Stock Exchange Ltd. during mid-July 1997 to mid-July 2000 constitute the sample for this study. While selecting the sample, adequate care has been taken to exclude the shares that had no transactions in any of the weeks falling within the study period. They concluded that Nepalese stock market may not be termed as "weekly efficient" in pricing shares where market efficiency is defined as all historical information is reflected in security

price. Another conclusion that can be drawn from the views of financial executives is that, the current market price of shares in Nepal are useful to make buy or sell decision, to predict future average return, and to predict future prices. The main factors affecting share prices perceived by the respondents were dividends, retained earnings, bond share, and right issue. The share prices have been found more volatile than expected dividends. Similarly, publicly available information is useful in identifying over or undervalued securities.. The reasons for non-random price changes in Nepal are that stock market is in early stage of development, excessively speculative behaviour of the investors, and poor performance of market intermediaries. Similarly, company information, lack of profitability of the company, market operation system and government policy regarding investment, etc. have appeared to be the major causes of deficiency in the Nepalese stock market. It is revealed that information on favourable future prospect would increase market price of share. In Nepal, shareholders in high tax brackets did not prefer retained earnings instead of dividends.

Keshar J. Baral and Surya Kumar Shrestha (2006) studied on " Daily Stock Price Behaviour of Commercial Banks in Nepal." Was conducted using the data set on daily stock prices during the fiscal year 2005/06 (July 16, 2005 through July 16, 2006), this paper attempts to analyze the stock price behavior of commercial banks in Nepalese markets. The results of serial correlation and run tests conclude that the proposition of Random Walk Hypothesis (RWH) in Nepalese stock markets does not hold true. This conclusion corroborates with the conclusions of the past studies carried out in Nepalese context. Observations of daily stock prices of sampled banks indicate that there is a large variation in their stock prices in the fiscal year 2005/06. They are not doing well in Nepalese stock market. Most of the serial coefficients are significantly deviated from zero and statistically insignificant. It signifies that the successive price changes are dependent. Therefore, the Nepalese stock market is inefficient in pricing the shares. Runs test results also show that the percentage of deviation between the observed and actual number of runs in the series of price changes is significant. It is obvious that the successive price changes are not random. Thus, RWH does not hold true in the context of Nepalese stock market.

Surya Bahadur G.C. (2008 December) conducted a study, 'Volatility Analysis of Nepalese Stock Market'. The study revealed strong evidence of time-varying volatility, a tendency of the periods of high and low volatility to cluster and a high persistence and predictability of volatility in the Nepalese stock market. Modeling and forecasting volatility of capital markets has been important area of inquiry and research in financial economics with the recognition of time-varying volatility, volatility clustering, and asymmetric response of volatility to market movements. Given the anticipated growth of the Nepalese stock market and increasing interest of investors towards investment in Nepalese stock market, it is important to understand the pattern of stock market volatility. In the paper, the volatility of the Nepalese stock market is modeled using daily return series consisting of 1297 observations from July 2003 to Feb 2009 and different classes of estimators and volatility models. The results indicate that the most appropriate model for volatility modeling in Nepalese market, where no significant asymmetry in the conditional volatility of returns was captured.

### 2.3 Research Gaps

All the research studies mentioned above about stock movements system are basically related to the behaviour movement system of listed companies' transaction activities, findings and all the dissertation have pointed out that there is no suitable stock price fluctuation systems and have recommended for the effective implementing of stock price fluctuation system. Therefore, more extensive testing measures, more close time period and adjustment of necessary variables are needed in order to be more conclusive about the efficiency of Nepalese securities market. During the review of previous research, no researchers have taken the concern data and required variables of securities market of initial periods' activities and used limited information based on sources of secondary data. No researches have been conducted on price trend related to stock market efficiency by using share brokers and individual investors as sources of information. There were need to conduct a survey with the share brokers and individual investors who are the major stakeholders of the stock market, in order to find out more subjective facts on share price movement behaviour which could not tested through the use of secondary sources of data.

The earlier studies is based on the randomly selected sample stocks and shown that price of the stocks are mostly influenced by different market related factors but some cases, it is found that the facts deal there were not significant while present study are based upon fully paid up, actively traded equity shares related to commercial field and various factors that are the major variables of the fluctuation on the stock market.

This study conduct on various aspects in developed securities market may not entirely be relevant in the securities market of underdeveloped country like Nepal. During the study period used technical method and statistical method such as: risk return analysis, correlation coefficient, and run test for analyzing the NEPSE trends. Further more, only few of studies have used verify of testing method as used by this research to describe the trends. More than that, only few studies are concern about the financial indicator such as: EPS, DPS&NWPS which are the most influencing factors for the MPS. The earlier study were conducted when the organized stock market was at the initial stage with out adjusting necessary information, while the present study is focused upon the data of after initial stage of NEPSE and before related to securities exchange market, which adjusted necessary information in the price of the stocks.

Therefore the earlier studies on trends of stock markets needed to be update and validated because of the many changes taking place in the stock market in Nepal. These study efforts to attempt in this direction.

# CHAPTER - III

# RESEARCH METHODOLOGY

This chapter deals with some methods that are used in the period of research and also brief introduction to financial parameters used in this study. Research design, sources and nature of data, sampling method, and statistical and financial tools for data analysis are basically explained in this chapter.

### 3.2 Research Design

The research design includes specification of the method of the proposed study and detailed plan for carrying out the study with various empirical data for the analysis of the problem. A descriptive research design has been used to make the analysis more conclusive. The diagnostic analysis mainly highlights to find out the actual position of the companies using different statistical and financial tools. This study covers the census data from fiscal year 2002/03 to 2006/07. Due to the unavailability of past data only five years period is covered in this study.

### 3.2 Population and Sample

There are various sectors in the stock market such as commercial banks, insurance, finance, hotels, trading, manufacturing and processing and others. This study includes only the commercial banks. The data used for the purpose of the study are based on the banks that are listed in the stock market. Among the listed banks, 5 banks are taken as sample to represent the performance of the capital market.

The sample banks are as follows:

1. Everest Bank Limited
2. Himalayan Bank Limited
3. Nepal Investment Bank Limited
4. NABIL Bank Limited
5. Standard Chartered Bank Limited

### 3.3 Nature and Sources of Data Collection

The necessary information and data are collected from different sources. This study is primarily based on the secondary data. The data are taken from the annual report, trading report and official record of stock exchange and the annual reports of the specific banks as well as internet website (www.nepalstock.com). Other data pertaining to NRB, ministry of finance, national and international journals, sample banks are reviewed through concerned website. Primary data have also been used where secondary sources are inadequate. The method of collecting data is primary and secondary. They are:

Primary Data:

- Personal observation
- Questionnaire analysis
- Interview with brokers and investors
- Informal talk

Secondary Data:

- Annual report of the banks
- Previous study and reports
- Published as well as unpublished documents and websites
- Summary sheet of NEPSE

### 3.4 Data Analysis Technique

Mere presentation of data is not enough to analyze stock price behavior unless it is further processed. Many mathematical and statistical tools have been developed to process relevant data to reach a conclusion. In this study, both statistical and financial tools have been used to analyze and interpret the relevant data so that meaningful conclusions can be drawn.

#### 3.4.1 The Run Test Analysis

Statistical tests based on the theory of runs ignore absolute values in a time series and observe only their signs. That is, they are essentially concerned with the direction of

changes in a given time series. Thus, for the present purposes, a run can be defined as a sequence of price changes of the same sign preceded and followed by price changes of different sign. In a given share price series, there are three types of price changes in a series i.e. positive, negative and no change, thus implying three types of runs. Therefore, a plus run of length L may be defined as a sequence of positive price changes preceded and succeeded by either negative or positive price changes preceded and succeeded by either negative or zero price change (Fama, 1965:74). Likewise, a run of length L of minus and no-change sign can be defined as a sequence of L consecutive price changes of the same sign followed and preceded by negative and no change sign of price changes. Runs test is a non-parametric test that ignores the magnitude of price changes and observes only direction of changes in a given time series. The difference between expected and actual number of runs will be analyzed by the total number of runs. The randomness hypothesis is tested at given level of significance in favor of or against depending on observed values.

#### 3.4.1.1 Layouts

Consider a sample $x_1,x_2,x_3,\ldots\ldots\ldots\ldots..x_N$ of size N.

#### 3.4.1.2 Assumptions

a. The given sample if is of dichotomous feature.
b. The measurement scale is either nominal or ordinal.

#### 3.4.1.3 Problems

To test,

$H_0$: The observations are in random order.

$H_1$: They are not in random order.

#### 3.4.1.4 Mechanism

1. Compute the median of $x_i$ and call it $M_e$.
2. Attach an algebraic sign + or - to each of the observations according to the following rules:

a. If $x_i > M_e$, then assign '+' sign to $x_i$.
b. If xi<Me, then assign '-' sign to $x_i$.
c. If xi=Me, then a tie is said to have occurred. In this case, assign 'o' to $x_i$ and delete the observation.

3. Count the number of runs and denote it by r. Then clearly, $2 \leq r < n$.

Then clearly,

N=Sample size = # (+) + # (-) + # (0)

Thus the effective sample size n = # (+) + # (-)

So that the effective sample becomes

$X_1, x_2, x_3, x_4, x_5 \ldots\ldots\ldots\ldots\ldots x_N$

+ + = + +……..+

1 2 3…….r

**Test Statistic**

For large sample case, the sample distribution or r is approximately normal with mean $\mu_r$ and variance $\exists r^2$.

Symbolically,

r ⎱ N ($\mu_r$, $\exists r^2$)

Where,

$\mu_r$ = Mean = $\frac{2n_1n_2}{n_1+n_2} + 1$

$\exists r^2$ = variance = $\frac{2n_1n_2(2n_1n_2 - n_1 - n_2)}{(n_1+n_2)^2(n_1+n_2-1)}$

Next to test $H_0$, we define a test statistic given by,

$$Z = \frac{r - \left(\frac{2n_1n_2}{n_1+n_2} + 1\right)}{\left[\frac{2n_1n_2(2n_1n_2 - n_1 - n_2)}{(n_1+n_2)^2(n_1+n_2-1)}\right]^{\frac{1}{2}}} \text{ ⎱ } N(0, 1) \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad (3.4.1)$$

For large sample, Z will be approximately normal with mean 0 variance 1. Therefore, for testing significance of the difference between actual and expected number of runs, the test statistic employed would be standardized normal variable Z. the null hypothesis ( i.e. randomness hypothesis) will be rejected or accepted at 5 percent and 1 percent level of significance in favor of (or against) the alternative hypothesis (non-randomness hypothesis) depending on observed values of Z.

### 3.4.1.5 Critical Value

For a pre-assigned level of significance $\backslash$ and under $H_0$, we obtain from the normal table A, the probability $p_0$ associated with values as extreme as Z.

### 3.4.1.6 Decision Rule

Reject $H_0$ $V_s$ $H_1$ at x 100% level of significance, if $p_0 \leq \backslash$ accept otherwise.

Remarks:

1. For two tail test double the probability $p_0$
2. The confidence limits of r for level of significant is given by,

   C.L. for mean = $\mu_r \pm Z_{\backslash 2x} \exists r$

### 3.4.2 Statistical Tools

Statistical tools such as arithmetic mean, coefficient of correlation and probable error are the main tools applied in this study. Other statistical tools are also applied where necessary.

### 3.4.2.1 Mean

Mean or arithmetic average of a series is the figure obtained by dividing the total values of the various items by their number. In general if $X_1X_2$,……...$X_n$ are the given 'N' observation then their mean, usually denoted by $\overline{X}$ is given by:

$$| \overline{X} \; X \frac{X}{N}$$

### 3.4.2.2 Correlation Coefficient

Correlation analysis establishes the closeness of relationship between the two and more variables. It measures the degree of relationship or association between variables. Karl Person's Coefficient of correlation is used to measure the degree of association among the variables. The formula used to calculate the coefficient of correlation is as:

$$r(X,Y) = \frac{(X\ Z\overline{X})(Y\ Z\overline{Y})}{\sqrt{(X\ Z\overline{X})^2}\sqrt{(Y\ Z\overline{Y})^2}}$$

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

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

### 3.4.2.3 Regression Analysis

**Simple Regression Analysis**

Simple regression analysis consisting one dependent variable Y as Performing MPS and independent variables X as EPS and MPS. This regression is done to find out the degree and the direction between MPS and EPS and DPS respectively.

The regression equation for simple regression is:

$$Y = a + b\ X$$

Where,

Y= dependent variable

X= independent variable

a = y-intercept [the value of dependent variable performing MPS when independent variable EPS and DPS

b = slope [the rate of change in dependent variable Y(MPS) due to per unit change in independent variable X (EPS and DPS). It measures the rate of relationship.

**Multiple Regression Analysis**

Multiple regression analysis consist of one dependent and two or more than two independent variables. In this analysis there are only two independent variables (EPS and DPS) and one dependent variable i.e MPS.

The regression equation of Y (MPS) on $X_1$ (EPS) and $X_2$ (DPS) is:

$$Y= a + b_1X_1 + b_2X_2$$

Where,

Y= MPS

$X_1$= EPS

$X_2$= DPS

$b_1$= Beta coefficient of EPS

$b_2$= Beta coefficient of DPS

### 3.4.3 Financial Parameter

The financial parameter helps to measure the financial status of the organization. The parameter is found from financial statement and financial disclosure. Some of the financial variables, stated below, have been employed to analyze market capitalization, market price of share, earnings price per share and dividend per share.

#### 3.4.3.1 Earning Price per Share

The profitability of a firm from the point of view of the ordinary shareholders is the EPS. It measures the profit available to the equity holders on a per share basis, i.e. the amount that they can get on every share held. It is calculated by dividing the profits available to the shareholders by the number of outstanding shares. The profits ordinary shareholders

are represented by net profits after taxes and preference dividends. EPS is closely watched by the investing public and is considered an important indicator of corporate success. Thus,

$$\text{EPS} = \frac{\text{Net Profit Available to Equity Holders}}{\text{No. of Stocks Outstanding}}$$

### 3.4.3.2 Dividend per Share

Dividend is the portion of profit that is ready to be available for shareholders. A part of the net profits belonging to equity shareholders is retained in the business and the balance is paid them as dividends. The dividend paid to the shareholders on a per share basis is the DPS. In other words, DPS is the net distributed profit belonging to the shareholders dividend by the number of ordinary shares outstanding. That is,

$$\text{Dividend Yield} = \frac{\text{Dividend Available to Ordinary Shareholders}}{\text{No. of Stocks Outstanding}}$$

### 3.4.3.3 Price Earning Multiple

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

$$\text{P/E Ratio} = \frac{\text{Market Price of a Share}}{\text{Earning Price of a Share}}$$

### 3.4.3.4 Dividend Yield

Dividend yield shows the relationship between dividend per share and market price per share. The dividend yield is calculated by dividing the cash dividend per share by the market value per share.

$$\text{Dividend Yield} = \frac{\text{Dividend per Share}}{\text{Market Value per Share}}$$

### 3.4.3.5 Earning Yield

The earning yield may be defined as the ratio of earning per share to the market value per ordinary share. Earning yield is also called earning price ratio.

$$\text{Earning Yield} = \frac{\text{Earning per Share}}{\text{Market Value per Share}}$$

### 3.4.3.6 Market Value to Book Value Ratio

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

$$\text{MV/BV Ratio} = \frac{\text{Market Value per Share}}{\text{Book Value per Share}}$$

### 3.4.3.7 Liquidity Ratio

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

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

### 3.4.3.8 Return on Total Assets

Here, the profitability ratio is measured in terms of the relationship between the net profits and assets. The ROA may also be called profit-to-assets ratio. It measures the overall effectiveness of management in generating profits with its available assets. The higher the firms return on total assets, the better. The return on total assets is calculated as follows.

$$\text{Return on Total Assets} = \frac{\text{Net Profit after Tax}}{\text{Total Assets}}$$

### 3.4.3.9 Return on Common Equity

The return on common equity measures the return earned on the common stockholders' investment in the firm. Generally, the higher these returns, the better off are the owners. Return on common equity is calculated as follows;

$$\text{Return on Common Equity} = \frac{\text{Net Profit after Tax}}{\text{Shareholders' Equity}}$$

### 3.5 Limitations of the Methodology

Availability of data is a major concern. NEPSE is the sole authority to release data needed for analysis in this study but all the required data were not provided. So the major portion of analysis especially stock price information has been based on daily newspapers, websites and subsequently bound to be influenced by their quality of presentation, the unavailability of data has also forced to limit the time frame of study into fiscal year 2003/04 to fiscal year 2007/08. The study has used ratios, correlation and regression analysis, run test, and hence the study is subjected to their inherent biases.

# CHAPTER - IV

# DATA PRESENTATION AND ANALYSIS

The presentation and analysis of data is the core of this study, which consists four sections i.e. the run test analysis, the development and growth of stock market, comparative analysis of financial performance of the companies and analysis of market price of stock with respect to dividend and earning in the Nepal Stock Market.

## 4.1 Run Test Analysis

A run is defined as a sequence of price changes in the same sign. For the stock price behavior, there are three types of change pattern namely; positive, negative and zero which are known as three types or runs. This test which is nonparametric in nature is used to examine independence assumption of the model.

### Empirical Results

If it is assumed that the simple proportions of positive, negative and zero price changes are good estimates of the population, then the hypothesis of independence can be testes by using the equation 3.4.1. The calculated value of standard normal variant Z for each sample bank is presented in Appendix IV.

It is important to test absolute dependence in the price changes than whether the dependence is positive or negative. To test the randomness or independence of the given share prices, the values of the standard normal variant Z as calculated in Appendix IV is tested at the 5% and 1% level of significant.

**Table 4.1**

**Name of the Companies having Significant Value of Standard Normal Variate Z at 5% and 1% Level of Significance**

| S.No. | Name of the Company | Level of the Significance | |
|---|---|---|---|
| | | 5% | 1% |
| 1. | Himalayan Bank Limited | R | R |
| 2. | Nepal Investment Bank Limited | R | R |
| 3. | Nabil Bank Limited | R | R |
| 4. | Standard Chartered Bank Nepal Limited | R | R |
| 5. | Everest Bank Limited | R | R |

**Note**: R indicates that the hypothesis of randomness or independence is rejected. Viewed from table 4.1 which gives information regarding the composition of standardized variable, it can be seen that the standard normal variate Z is significant 5% and 1% level of significance in respect to all sample banks.

The overall results suggest that the hypothesis of randomness of share prices do not support the monthly closing stock of NEPSE. Hence, it can be concluded that these companies do not follow random walk model or weakly efficient market hypothesis. It suggests that the Nepalese stock market may not be defined as "weakly efficient" in pricing the shares as the implication of non-random behavior in share prices. In view of above findings, the technical analysis (chartist) theory can be useful to an extent as an investment strategy for buying selling shares in such market situation. The result obtained also suggests that the fundamental or intrinsic value analysis is important to test the efficiency of NEPSE.

### 4.2 State and Growth of Stock Market

The history of stock market began with the floatation of shares by Biratnagar Jute Mill and Nepal Bank Limited in 1937, other development relating capital markets were the introduction of the company act, in 1951. The first issue of government bonds was in 1964 and the establishment of the Securities Marketing Center in 1976, under the

company Act. It assisted public limited companies to raise capital through Issue of shares and debentures and also provide a market place for trading the securities. Although the purpose of the establishment was to assist the public limited companies, but it was only concerned with dealing the government bonds and the treasury bills in the beginning phase of establishment. After the Securities Exchange Act in 1983, the Security Marketing Centre was changed to Security Exchange Centre and it opened the floor for security trading of shares to provide liquidity and marketability of new issued securities. His Majesty's Government under a program initiated to reform capital market and in the prices Securities Exchange Centre was converted into Nepal Stock Exchange in 1993. After opening the floor for secondary trading of shares in 1984, 16 companies were listed with paid-up capital and market capital of Rs. 307.32 million and 318.67 million respectively in fiscal year 1985/86. Security Exchange Centre was new concept at that time, to work the new environment, the existing laws and regulations from the government side and also the awareness of the people to security exchange activities were essential. However, Nepalese economy is weak than industrial developed county, gross domestic saving (GDS) and gross domestic product (GDP) is very low. People have tendency to invest in unproductive sector, rather than productive activities, regarding it the pace of development of stock market activities was very slow in corresponding years. The following table shows the fiscal year wise development of stock market.

The adhoc policy and negligible participation from government side and also low public response were main cause to slow development of stock market. It also failed to channelize the response to the productive sectors. On the other hand, due to lack of large projects people have not been able to get opportunity to invest their savings, so the surplus and savings were diverted to invest in unproductive sectors and real estate due to lack of mobilization of savings. As a result, people were discouraged to utilize savings in productive sectors and there was no return for savers. The existence of all these conditions was caused due to slow growth of economic activities before establishment of Nepal Stock Exchange Limited.

After the restoration of democracy, government followed liberalization policy and also opened the domestic market for foreign investors. It was positive sign to the development of stock market. Nepal Stock Exchange opened its trading floor from 13th January 1994 for its newly appointed brokers and market makers. The extended

Structural adjustment programs in fiscal year 1993/94 had significantly positive impact on stock market development. Higher liquidity and market price of stock were observed in stock market, which increasingly drew the attention of pubic in the ownership structure of the corporate sector.

The table presented below shows the key development stage of stock market in recent time.

**Table 4.2**

**The Development of Stock Market in Nepal**

(in million)

| Descriptions | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 |
|---|---|---|---|---|---|
| Paid up value of listed shares (Rs) | 13404.9 | 16771.9 | 19958 | 21799 | 29465 |
| Market Capitalization (Rs.) | 41424 | 61366 | 96764 | 186301 | 366248 |
| No. of Company Listed | 114 | 125 | 135 | 135 | 142 |
| No. of Company Traded | 92 | 102 | 110 | 116 | 136 |
| No. of Share Traded | 6468.18 | 18433.55 | 12221.93 | 18147.25 | 285997.7 |
| Turnover (Rs.) | 2144.3 | 4507.7 | 3451.4 | 8360.01 | 22820.8 |
| % of turnover to market Capitalizati | 5.18 | 7.35 | 3.57 | 4.49 | 6.23 |
| %of turnover to paid up value | 15.99 | 26.87 | 17.29 | 38.35 | 77.45 |
| Market Days | 243 | 236 | 228 | 232 | 235 |

*Sources: NEPSE*

The above table clearly shows the main indicators of stock market are in fluctuating trend in recent year. The paid- up value of listed shares was Rs.13404.9 million in the year 2003/04, which is in the increasing trend and was Rs. 29465 million in 2007/08. In the year 2003/04, the turnover is Rs.2144.3 million which increases the following year to Rs.4507.7 million. With continuous fluctuation in the following years, it reaches to Rs.22820.8 million in the year 2007/08. However, the market capitalization shows steady

growth from Rs.41424 million in 2003/04 to Rs. 366248 million in 2007/08. The number of listed company is in increasing trend. It was 114 in 2003/04 and it became 142 in 2007/08. The number of share traded in the floor was increased sharply from 6468.18 in the year 2003/04 to 18433.55 in the year 2004/05 but decreased to 12221.935 in the year 2005/06. It fluctuated in the following years and it was 285997.7 in 2007/08.

The market was in the fluctuating manner over the period of study. The sharp inclination in 2004/05 and declination in 2006/07 was due to international and national reasons. The world economy was going through the recession phase that made severe affect on world stock market and Nepalese stock market was no exception. The increasing level of internal conflict and political instability was badly hampering the stock market and economy as a whole.

### 4.3 Analysis of Financial Performance of the Companies

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

Various indicators are used to analyze the company performance. The used indicators are earning price per share, market price per share, dividend price per share, book value per share, price earning multiple, and dividend payout ratio, market price to book value ratio, dividend yield, earning yield, liquidity ratio, return on assets and return on equity.

#### 4.3.2 Earning Price Per Share

The profitability of a firm from the point of view of the ordinary shareholders is the EPS. It measures the profit available to the equity holders on a per share basis, i.e. the amount that they can get on every share held. It is calculated by dividing the profits available to the shareholders by the number of outstanding shares. The profits ordinary shareholders are represented by net profits after taxes and preference dividends. EPS is closely

watched by the investing by the investing public and is considered an important indicator of corporate success. Thus,

$$\text{EPS} = \frac{\text{Net Profit Available to Equity Holders}}{\text{No.of Stocks Outstanding}}$$

**Table 4.3**

**EPS of the Sample Banks**

(in Rs.)

| Years / Banks | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | Average |
|---|---|---|---|---|---|---|
| 1. Himalayan Bank Ltd. | 49.05 | 47.91 | 59.24 | 60.66 | 62.74 | 55.92 |
| 2. Nepal Investment Bank | 51.70 | 39.50 | 59.35 | 62.57 | 57.87 | 54.19 |
| 3. NABIL Bank Ltd. | 93 | 105 | 129 | 140 | 108 | 115 |
| 4. Standard Chartered Bank | 143.55 | 143.14 | 175.84 | 167.37 | 131.92 | 152.36 |
| 5.Everest Bank Ltd. | 45.58 | 54.22 | 62.78 | 78.4 | 91.82 | 66.56 |

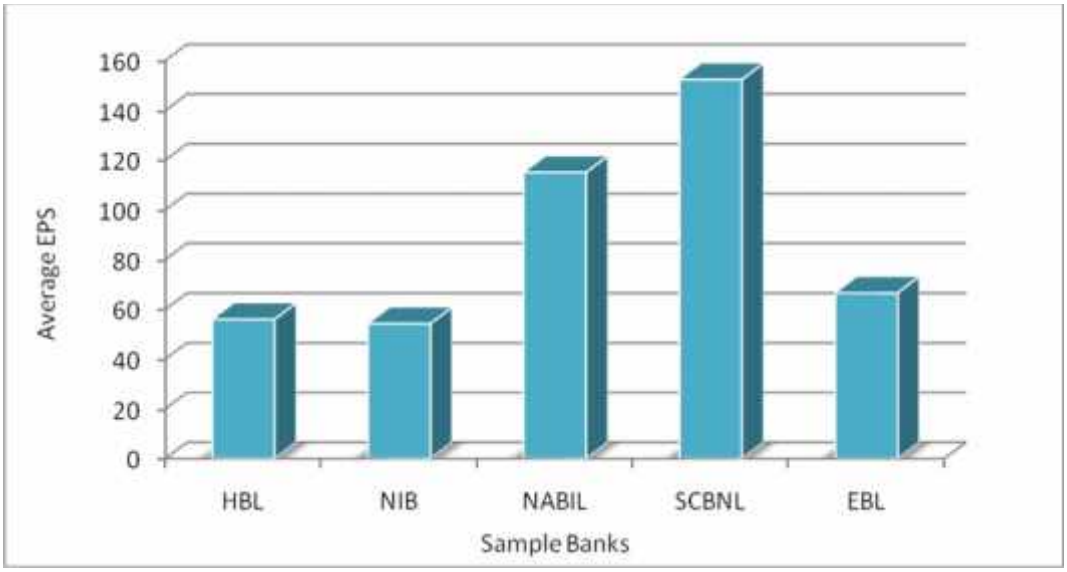
*Source: Appendix- I*

The average EPS of all sample banks are more than Rs. 50. The market leader in this segment is SCBL with the average EPS of Rs. 152.36. The lowest average EPS is Rs. 54.19 of NIB. The SCBNL and NABIL are the banks having EPS more than Rs. 100 in the period of 5 years. Other than SCBL, only NABIL has EPS more than Rs. 100 in the years 2004/05, 2005/06, 2006/07 and 2007/08. The lowest EPS recorded was Rs. 39.5 of NIB in the year 2004/05. The reason of this low EPS was due to the fact that the earning declined sharply in the year and there was a declaration of bonus shares.

The table can also be presented in graph to understand the data more clearly. The following figure presents the average EPS of sample banks during the period of 5 years.

**Figure 4.1**

**EPS of Sample Banks**




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

### 4.3.2 Dividend per Share

Dividend is the portion of profit that is ready to be available for shareholders. A part of the net profits belonging to equity shareholders is retained in the business and the balance is paid them as dividends. The dividend paid to the shareholders on a per share basis is the DPS. In other words, DPS is the net distributed profit belonging to the shareholders dividend by the number of ordinary shares outstanding. That is,

$$\text{Dividend Yield} = \frac{\text{Dividend Available to Ordinary Shareholders}}{\text{No.of Stocks Outstanding}}$$

**Table 4.4**

**DPS of the Sample Banks**

(in Rs.)

| Banks \ Years | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | Average |
|---|---|---|---|---|---|---|
| 1. Himalayan Bank Ltd. | 20 | 31.58 | 35 | 40 | 45 | 34.32 |
| 2. Nepal Investment Bank | 15 | 12.5 | 55.46 | 30 | 40.83 | 30.76 |

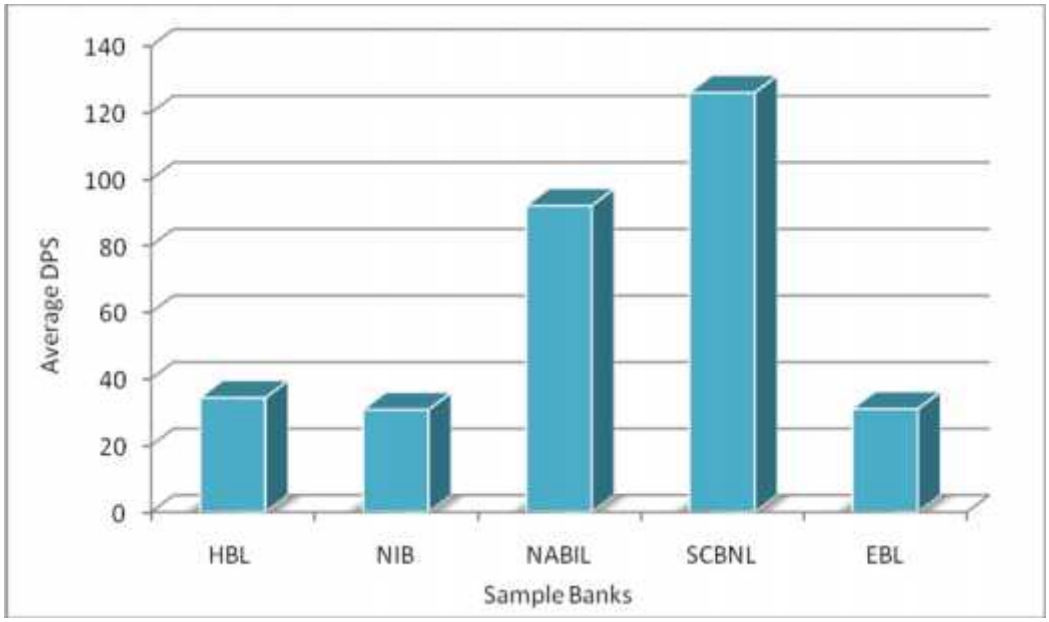
| | | | | | | |
|---|---|---|---|---|---|---|
| 3. NABIL Bank Ltd. | 65 | 70 | 85 | 140 | 100 | 92 |
| 4. Standard Chartered Bank | 110 | 120 | 140 | 130 | 130 | 126 |
| 5. Everest Bank Ltd. | 20 | 20 | 25 | 40 | 50 | 31 |

*Source: Appendix- I*

Standard Chartered Bank seems prominent in declaring large amount of dividend. The average dividend of SCBNL is Rs 126 per share, which is nearly double of second highest average dividend which is of Nabil Bank Ltd. The SCBNL has been continuously offering Rs 100 and more as dividend per share in the period of study. All selected banks i.e. EBL, NABIL, SCBNL, NIB and HBL are regular on offering dividend to shareholders during the study period. Investment bank has the lowest DPS in average Rs.30.76 only which is almost equal to that of EBL i.e. Rs.31. The following figure presents the average DPS of sample banks during the period of 5 years.

**Figure 4.2**

**DPS of Sample Banks**




The figure clearly states that the SCBNL is the top on dividend per share. The NABIL is also good in paying dividends whereas NIB, EBL and HBL are nearly equal on average dividend offering during the study period. It is believed that the declaration of dividend has positive impact on the price of share. In Nepalese context, only the banking sector is regular on paying dividend. This may be one of the reasons of such high prices of banking- sector in stock market.

### 4.3.3 Market Price per Share

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

**Table 4.5**

**MPS of the Selected Banks**

(in Rs)

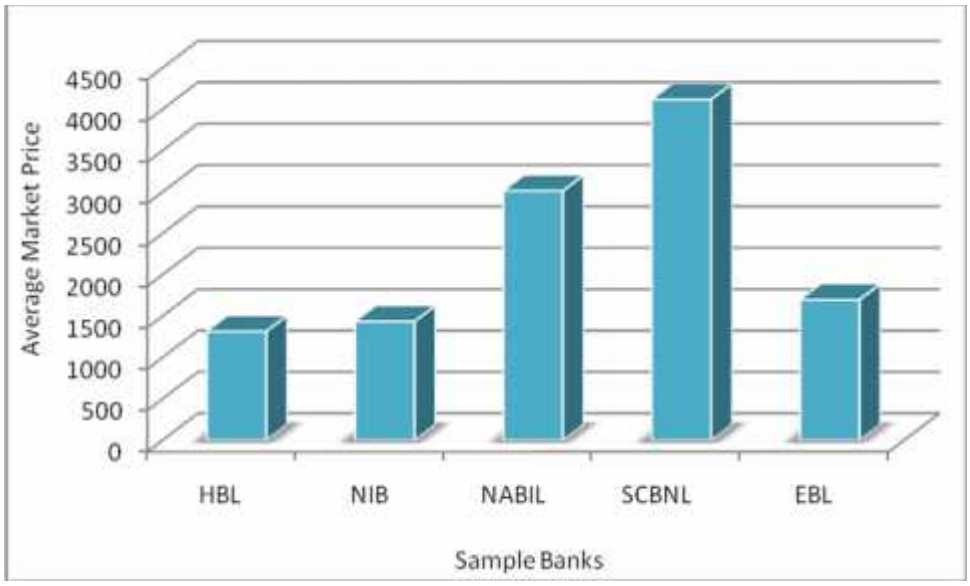
| Years / Banks | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | Average |
|---|---|---|---|---|---|---|
| 1. Himalayan Bank Ltd. | 840 | 920 | 1100 | 1740 | 1980 | 1316 |
| 2. Nepal Investment Bank | 940 | 800 | 1260 | 1729 | 2450 | 1435.8 |
| 3. NABIL Bank Ltd. | 1000 | 1505 | 2240 | 5050 | 5275 | 3014 |
| 4. Standard Chartered Bank | 1745 | 2345 | 3775 | 5900 | 6830 | 4119 |
| 5. Everest Bank Ltd. | 680 | 870 | 1379 | 2430 | 3132 | 1698 |

*Source: Appendix- I*

Market price per share shows the value of each share at a glance. From the above table, the average MPS of SCBNL has the higher value in comparison of other banks. It has the values of Rs. 4119. That means SCBNL is showing good performance over this period. The lowest of all banks is the HBL, which has average MPS of Rs.1316. The market prices of all the banks are in the increasing trend except for decrease in market price of NIB in 2004/05.

**Figure 4.3**

**Market Price of Sample Banks**




The above figure clearly shows that market price of SCBNL have the highest value whereas HBL has the lowest market price.

### 4.3.4 Price Earning Ratio

Price earning multiple is the relationship between earning per share and market price of the stock. Earning per share shows the companies performance in the sense that how well the company has managed its material as well as human resources to satisfy the interest of stockholders. So, P\E ratio multiple reflects the price currently being paid by the market for each rupee of currently reported EPS. In other words, the P\E ratio measures investor's expectations and the market appraisal of the performance of the firm. As a general rule, the higher the P\E ratio, the better it is for the owners. Security analyst to assess a firm's performance as expected by the investors popularly uses this ratio.

$$\text{P\E Ratio} = \frac{\text{Market Price of a Share (MPS)}}{\text{Earning Price per Share (EPS)}}$$

**Table 4.6**

**Price Earning Ratio of Sample Banks**

(in Rs)

| Years / Banks | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | Average |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. Himalayan Bank Ltd. | 17.12 | 19.20 | 18.57 | 28.69 | 31.56 | 23.03 |
| 2. Nepal Investment Bank | 18.18 | 20.25 | 21.23 | 27.63 | 42.33 | 25.92 |
| 3. NABIL Bank Ltd. | 10.80 | 14.27 | 17.34 | 36.84 | 48.84 | 25.61 |
| 4. Standard Chartered Bank | 12.16 | 16.38 | 21.47 | 35.25 | 51.77 | 26.8 |
| 5. Everest Bank Ltd. | 14.9 | 16.0 | 22.0 | 31.0 | 34.11 | 23.6 |

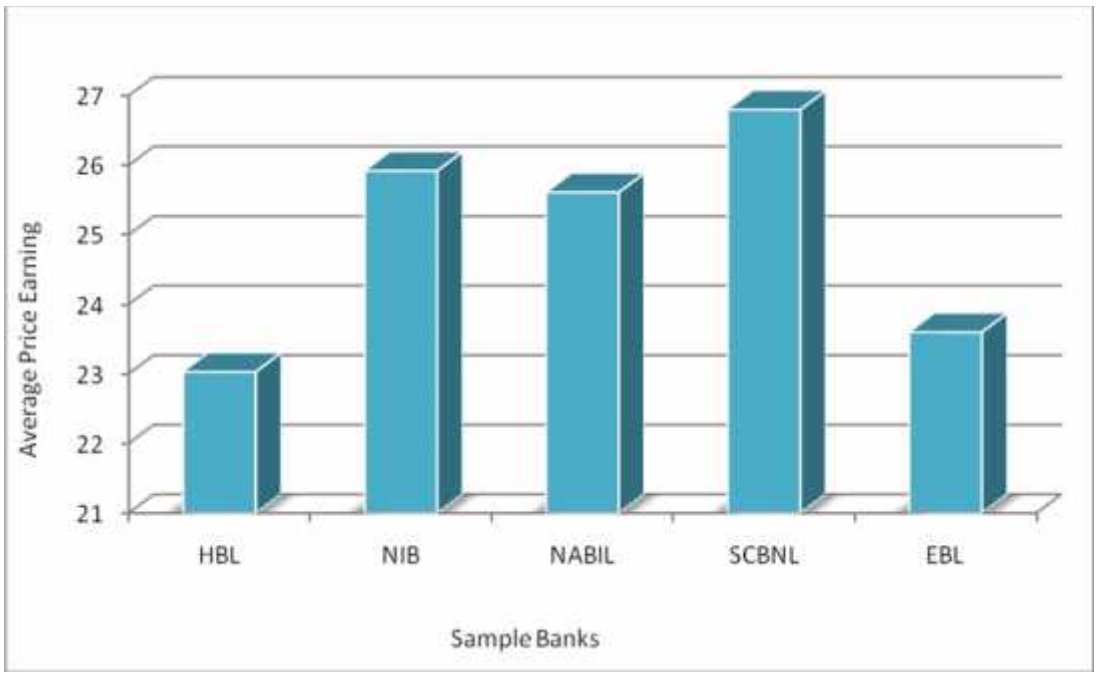
*Source: Appendix I*

The P\E ratio is an important indicator of the performance of stock in stock market. In this criterion, the SCBNL has the highest average P\E ratio among all samples. It has 26.8 average P\E ratios during the period of study. SCBNL is the most consistent in P\E ratio. It has increasing trend throughout the period of the study and is less volatile. HBL has fluctuating P\E ratio. Its P\E ratio decreases in the year 2005/06. The less volatility in P\E ratio during the study period is the sign of good consistency performance. The consistency in P\E ratio is important than having higher P\E ratio with high degree of volatility. The consistency in P\E ratio will have positive impact on the price of share in market. A rational investor will look for the consistency than high but fluctuating P\E ratio.

The figure below presented the average P\E ratio of selected samples between the period 2003/04 and 2007/08.

**Figure 4.4**

**Price Earning Ratio of Sample Banks**




### 4.3.5 Dividend Payout Ratio

It is also known as payout ratio. It measures the relationship between the earnings belonging to the ordinary shareholders and the dividend paid to them. In other words, the D\P ratio shows what percentage share of the net profit after tax and preference dividends is paid out as dividend to the equity holders. It can be calculated by dividing the total dividend paid to the owners by the total profits/earnings available to them. Alternatively, it can be found out by dividing the DPS by the EPS. Investors prefer for a firm that have higher D/P ratio. Thus,

$$\text{D/P Ratio} = \frac{\text{Dividend Per Share (DPS)}}{\text{Earning Per Share (EPS)}}$$

**Table 4.7**
**Dividend Payout Ratio of sample banks**

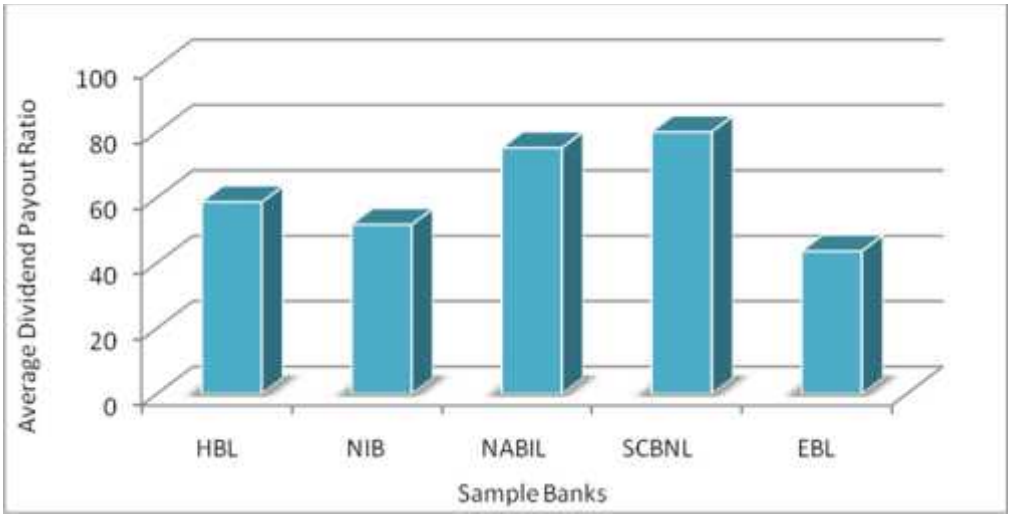
(in Rs.)

| Years / Banks | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | Average |
|---|---|---|---|---|---|---|
| 1. Himalayan Bank Ltd. | 40.78 | 65.91 | 59.08 | 65.94 | 61.37 | 58.61 |
| 2. Nepal Investment Bank | 29.01 | 31.65 | 93.45 | 47.95 | 56.75 | 51.76 |
| 3. NABIL Bank Ltd. | 70.19 | 66.38 | 65.78 | 102.13 | 71.3 | 75.15 |
| 4. Standard Chartered Bank | 76.63 | 83.83 | 79.62 | 77.67 | 82.69 | 80.08 |
| 5. Everest Bank Ltd. | 43.89 | 36.89 | 39.82 | 51.02 | 46.57 | 43.63 |

*Source: Appendix - I*

On average, the SCBNL has the highest rate of payout among all selected samples. The table shows the average payout ratio of SCBNL is 80.08% while the second highest payout ratio is 75.15% of NABIL. The highest payout ratio among all samples during the period of study was 102.13 of NABIL in the year 2006/07. Such a high payout ratio is done to declaration of very high dividend per share in comparison to previous year. The NABIL is consistent in payout dividend. In 2003/04, it had 70.19% payout ratio that has been increases during the period of study. The consistency in payout is considered very positively among all stakeholders. The SCBNL bank is also consistent in dividend payout ratio while the NIB is not so consistent as NABIL and SCBNL. Generally, the high and consistent payout ratio has positive impact on the behavior of market price of stock. A good payout ratio helps the stock price to move upward. The figure shows the average payout ratio of selected sample between the period 2003/04 and 2007/08.

**Figure 4.5**
**Dividend Payout Ratio of Sample Banks**




### 4.3.6 Dividend Yield

Dividend yield shows the relationship between dividend per share and market price per share. The dividend yield is calculated by dividing the cash dividend per share by the market value per share. That is,

$$\text{Dividend Yield} = \frac{\text{Dividend Per Share}}{\text{Market Value Per}}$$

**Table 4.8**

**Dividend Yield of Sample Banks**

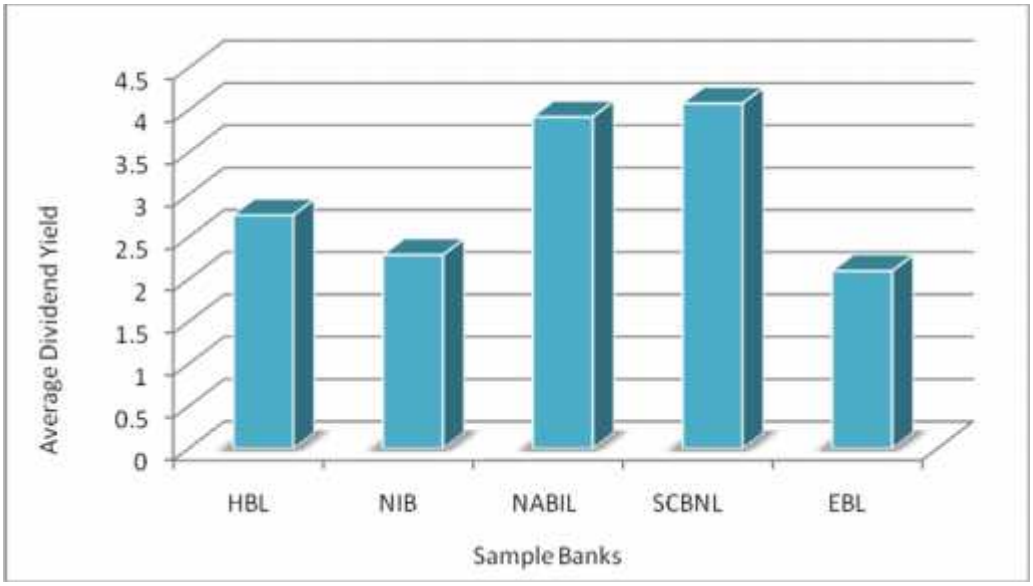
| Years / Banks | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | Average |
|---|---|---|---|---|---|---|
| 1.Himalayan Bank Ltd. | 2.38 | 3.43 | 3.18 | 2.31 | 2.6 | 2.76 |
| 2.Nepal Investment Bank | 1.61 | 1.56 | 4.40 | 1.74 | 2.14 | 2.29 |
| 3.NABIL Bank Ltd. | 6.50 | 4.65 | 3.79 | 2.77 | 1.89 | 3.92 |
| 4.Standard Chartered Bank | 6.30 | 5.12 | 3.71 | 2.20 | 3.06 | 4.08 |
| 5.Everest Bank Ltd. | 2.94 | 2.31 | 1.81 | 1.65 | 1.82 | 2.10 |

*Source: Appendix - I*

The dividend yield is another major factor that affects the behavior of stock price in market. A high and consistent yield generally increases the market price of stock. In this parameter, the SCBNL is the best among the selected banks. Its share is earning a good return in each of the year with steady rate. The yielding rate of NABIL is regular but is in a decreasing trend. Such a decreasing trend in yielding rate of stock always has the

negative impact on the movement of stock price. The yielding rate of EBL is very low comparative to other banks. Its share is yielding only 2.1% on average and is the lowest among all banks. The average dividend yield can also be presented in graph as well. The following figure shows the average dividend yield rate between the period 2003/04 and 2007/08.

**Figure 4.6**
**Dividend Yield of Sample Banks**




### 4.3.7 Earning Yield

The earning yield may be defined as the ratio of earning per share to the market value per ordinary share. Earning yield is also called earning price ratio.

$$\text{Earning Yield} = \frac{\text{Earning Per Share}}{\text{Market Value Per Share}}$$

**Table 4.9**
**Earning Yield of Sample Banks**

| Years / Banks | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | Average |
|---|---|---|---|---|---|---|
| 1. Himalayan Bank Ltd. | 5.84 | 5.21 | 5.39 | 3.49 | 4.25 | 4.83 |
| 2. Nepal Investment Bank | 5.50 | 4.94 | 4.71 | 3.62 | 3.77 | 4.5 |
| 3. NABIL Bank Ltd. | 9.26 | 7.01 | 5.77 | 2.71 | 2.05 | 5.36 |
| 4.Standard Chartered Bank | 8.23 | 6.10 | 4.66 | 2.84 | 3.69 | 5.10 |
| 5.Everest Bank Ltd. | 6.70 | 6.23 | 4.55 | 3.23 | 3.92 | 4.92 |

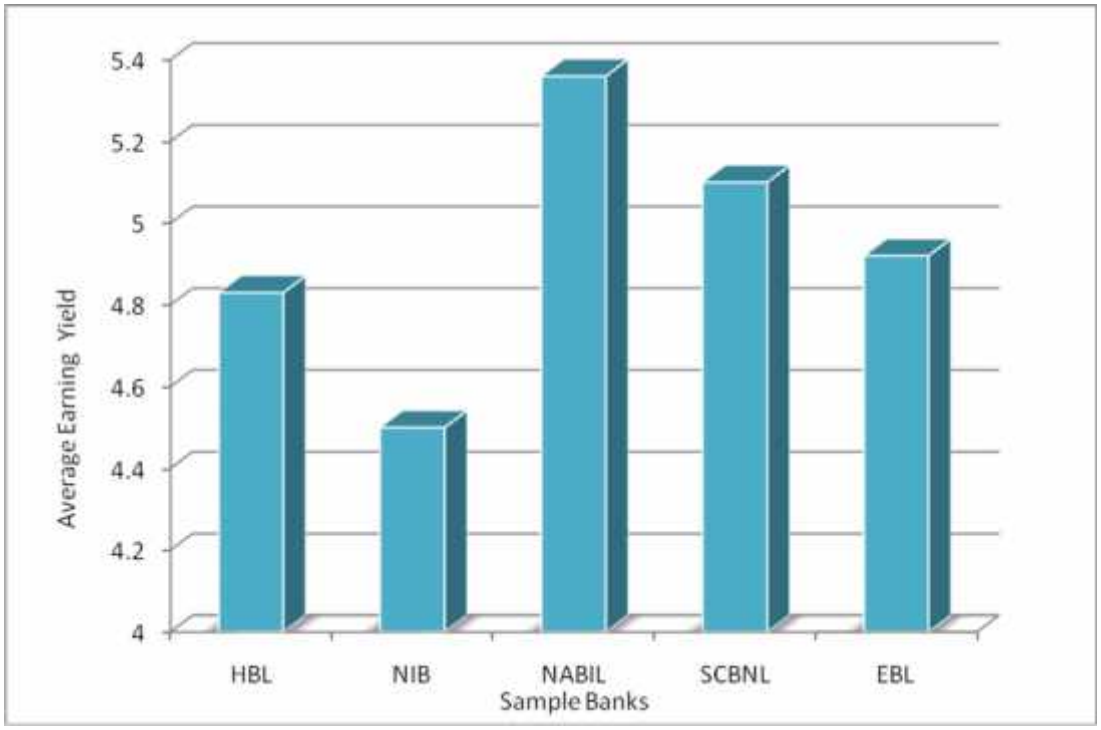
*Source: Appendix - I*

The earning yield is another phenomenon that has impact on the behavior of stock price. Generally, a high and consistent yield is considered good among all stakeholders. On this criterion, the stocks of all sample banks are closely competitive expect NIB. The highest average earning yield is 5.36% of NABIL and the lowest yield is 4.5% of NIB. In

individual yield, the stock of NABIL had highest yield of 9.26% in the year 2003/04 and also SCBNL had the lowest yield of 3.69% in the year 2007/08. The average earning yield is presented in the following figure.

**Figure 4.7**

**Earning Yield of Sample Banks**




### 4.3.8 Market Price to Book Value Ratio

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

$$\text{MV/BV Ratio} = \frac{\text{Market Value per Share}}{\text{Book Value per Share}}$$

**Table 4.10**

**MV/BV Ratio of Sample Banks**

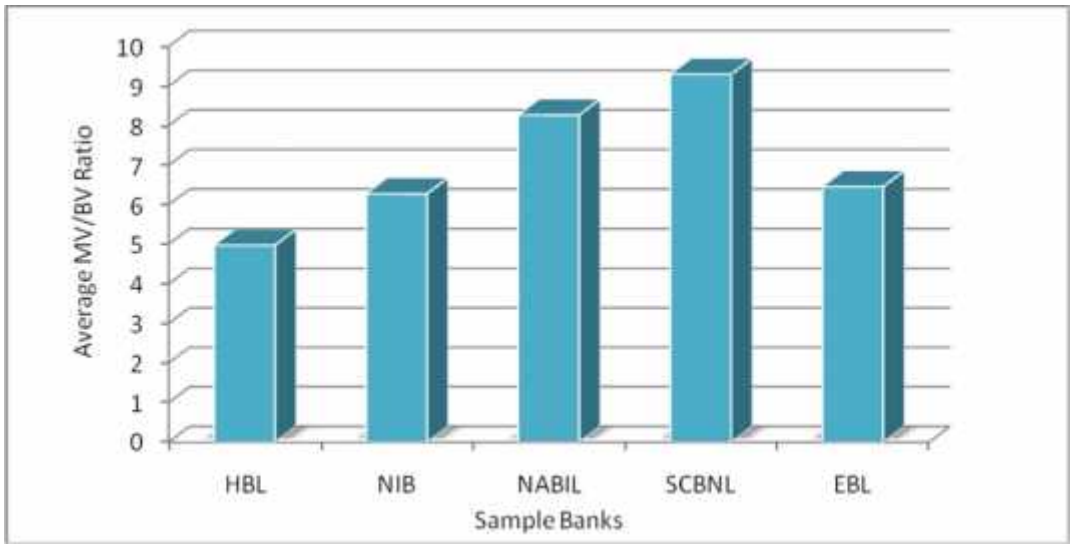
| Years / Banks | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | Average |
|---|---|---|---|---|---|---|
| 1. Himalayan Bank Ltd. | 3.40 | 3.84 | 4.81 | 6.57 | 6.28 | 4.98 |
| 2. Nepal Investment Bank | 3.81 | 3.98 | 5.26 | 7.38 | 10.98 | 6.28 |
| 3. NABIL Bank Ltd. | 3.32 | 4.46 | 5.87 | 12.8 | 14.9 | 8.27 |
| 4.Standard Chartered Bank | 4.37 | 5.55 | 8.06 | 11.52 | 17.01 | 9.3 |
| 5.Everest Bank Ltd. | 3.97 | 3.96 | 6.34 | 8.30 | 9.73 | 6.46 |

*Source: Appendix- I*

The book value of market value ratio is another parameter that affects the behavior of stock price in market. Generally, a high ratio is considered to be good. In this criterion, the SCBNL, on average, seems the best among all selected samples. The SCBNL has the ratio of 9.3 while the lowest ratio is 4.98 of HBL. In the year 2007/08 the stock of SCBNL has 17.01 times ratio which means that the market price of the share is 17.01 times higher than its book value. The stock of SCBNL has nearly highest ratio in each individual sample years. The difference among the sample bank is very low on average. The following figure illustrates the average market value to book value ratio.

**Figure 4.8**

**MV/BV Ratio of Sample Banks**




### 4.3.9 Liquidity Ratio

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

$$\text{Liquidity Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

**Table 4.11**

**Liquidity Ratio of Sample Banks**

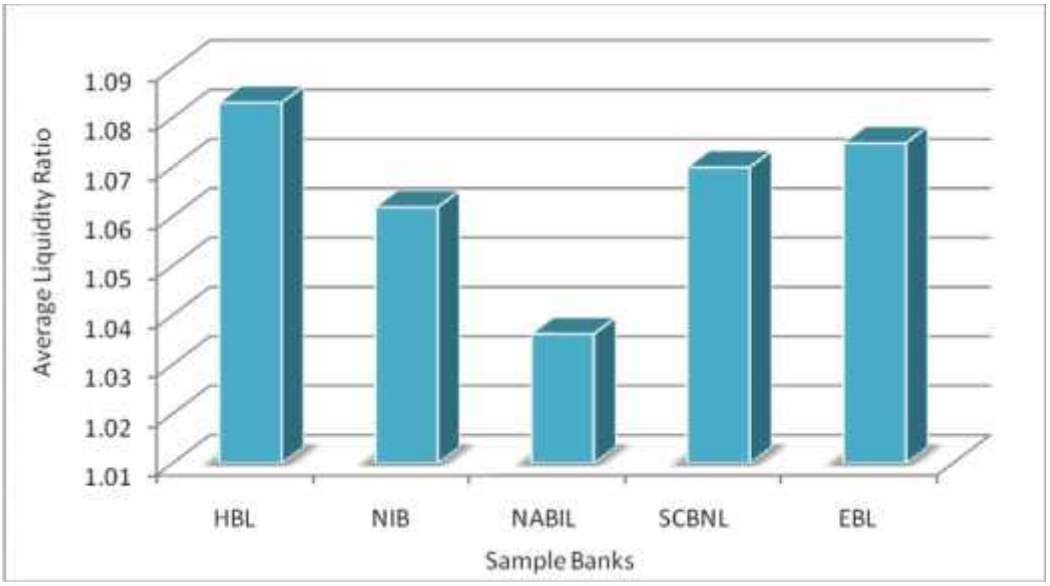
| Years / Banks | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | Average |
|---|---|---|---|---|---|---|
| 1. Himalayan Bank Ltd. | 1.0091 | 1.6328 | 0.6995 | 1.0623 | 1.24 | 1.0831 |
| 2. Nepal Investment Bank | 1.0383 | 1.0569 | 1.0838 | 1.0770 | 1.45 | 1.0619 |
| 3. NABIL Bank Ltd. | 1.0749 | .9666 | .9997 | 1.0702 | 1.52 | 1.0362 |
| 4. Standard Chartered Bank | 1.0614 | 1.0745 | 1.0688 | 1.0752 | 1.069 | 1.0700 |
| 5. Everest Bank Ltd. | 1.0629 | 1.0942 | 1.0756 | 1.0668 | 1.0748 | 1.0749 |

*Source: Appendix- I*

The liquidity position of HBL shows the highest ratio among all the selected banks with the value of 1.0831. The lowest liquidity ratio is 1.0362 of NABIL. In banking sector, a ratio of 1:1 is considered to be good and in this regard all samples banks are more or less equal to 1. The following figure shows the liquidity ratios of all selected banks.

**Fig 4.9**

**Liquidity Ratio of Sample Banks**




### 4.3.10 Return on Total Assets

Here the profitability ratio is measured in terms of the relationship between the net profits and assets. The ROA may also be called profit-to-assets ratio. It measures the overall effectiveness of management in generating profits with its available assets. The higher the firms return on total assets, the better. The return on total assets is calculated as follows:

$$\frac{\text{Net Profit After Tax}}{\text{Total Assets}}$$

Return on Total Assets =

**Table 4.12**

**ROA of Sample Banks**

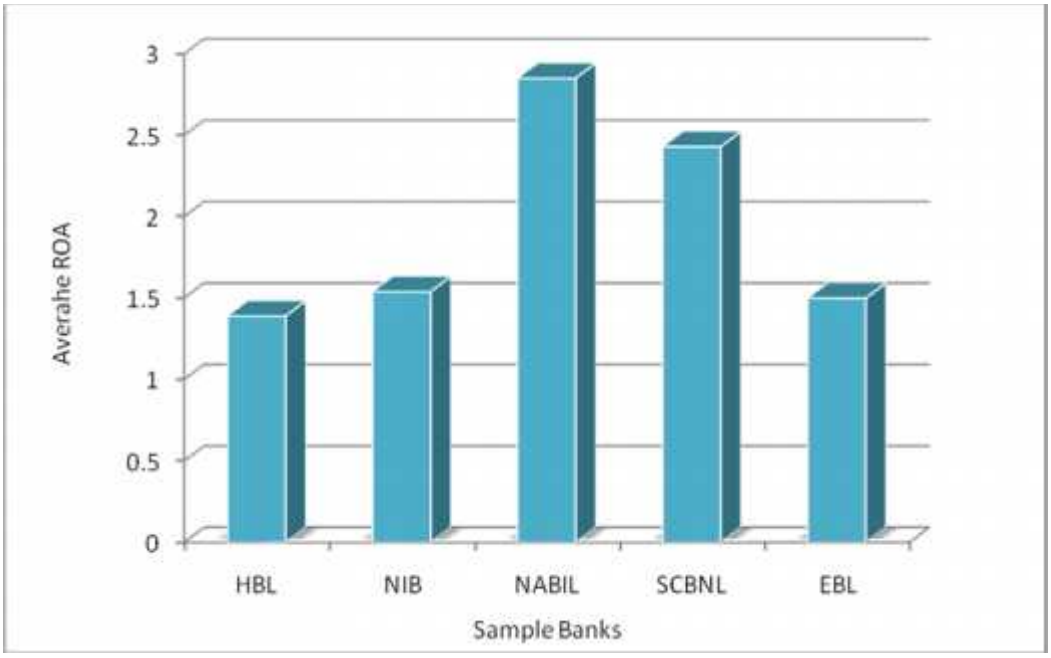
| Years / Banks | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | Average |
|---|---|---|---|---|---|---|
| 1. Himalayan Bank Ltd. | 1.06 | 1.11 | 1.55 | 1.47 | 1.76 | 1.39 |
| 2. Nepal Investment Bank | 1.13 | 1.42 | 1.61 | 1.79 | 1.79 | 1.54 |
| 3. NABIL Bank Ltd. | 2.72 | 3.06 | 3.23 | 2.72 | 2.5 | 2.85 |
| 4.Standard Chartered Bank | 2.27 | 2.46 | 2.56 | 2.42 | 2.46 | 2.43 |
| 5. Everest Bank Ltd. | 1.5 | 1.4 | 1.5 | 1.4 | 1.7 | 1.5 |

*Source: Appendix - I*

The ROE of NABIL is the highest with 2.85% while the lowest ROA is 1.39% of HBL. All of the banks ROA are more than 1% which is acceptable. Only NABIL and SCBNL have more than 2% of ROA for the period of five years. Higher ROA generally pushes the market price upward. The figure below shows the average ROA for all sample banks for the given period of study. i.e. 2002/03 to 2006/07.

**Figure 4.10**

**ROA of Sample Banks**




### 4.3.11 Return on Common Equity

The return on common equity measures the return earned on the common stockholders' investment in the firm. Generally, the higher these returns, the better off are the owners. Return on common equity is calculated as follows:

$$\text{Return on Common Equity} = \frac{\text{Net Profit After Tax}}{\text{Shareholder's Equity}}$$

**Table 4.13**

**ROE of Sample Banks**

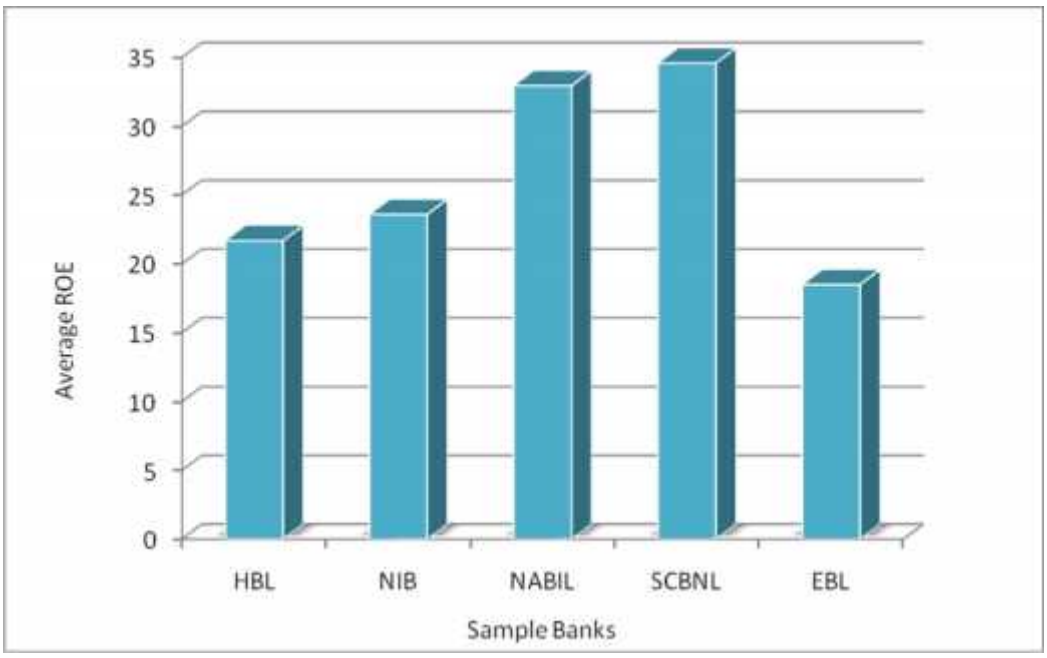
| Years / Banks | 2003/04 | 2004/05 | 2005/06 | 2006/07 | 2007/08 | Average |
|---|---|---|---|---|---|---|
| 1. Himalayan Bank Ltd. | 19.81 | 19.86 | 19.99 | 25.90 | 22.91 | 21.69 |
| 2. Nepal Investment Bank | 20.88 | 19.67 | 24.77 | 26.69 | 25.93 | 23.59 |
| 3. NABIL Bank Ltd. | 30.77 | 31.30 | 33.91 | 32.79 | 36 | 32.95 |
| 4. Standard Chartered Bank | 35.96 | 33.89 | 37.56 | 32.68 | 32.85 | 34.59 |
| 5. Everest Bank Ltd. | 15.34 | 18.84 | 17.12 | 19.82 | 21.35 | 18.49 |

*Source: Appendix- I*

The ROE of SCBNL is the highest among all selected banks. SCBNL's average ROE is 34.59%. The lowest ROE is 18.49 of EBL. Investors seek higher ROE for investment. In this regard, the SCBNL's stock is excellent while the stock of NABIL is also good during the period of the study. The following figure presents the average ROE for 5 years of study.

**Figure 4.11**

**ROE of Sample Banks**




### 4.4 Analysis of Relationship of Price with Earnings and Dividend

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

#### 4.4.1 Coefficient of Correlation between Price and Earning

Correlation analysis establishes the closeness of relationship between two and more variables. It measures the degree of relationship or association between variables. Karl Pearson's Coefficient of correlation is used to measure the degree of association among the variables. The formula used to calculate the coefficient of correlation is a

**A) Himalayan Bank Limited**

**Table 4.14**

**Correlation between EPS and MPS of Himalayan Bank Limited**

| Year | EPS | MPS |
|---|---|---|
| 2003/04 | 49.05 | 840 |
| 2004/05 | 47.91 | 920 |
| 2005/06 | 59.24 | 1100 |
| 2006/07 | 60.66 | 1740 |
| 2007/08 | 62.74 | 1980 |
| Average | 55.92 | 1316 |
| Standard Deviation | 6.91 | 512.52 |
| Coefficient of Correlation | 0.72 | |

*Source: Appendix II*

The table shows the earning per share and market price per share of Himalayan Bank Limited from the year 2003/04 to 2007/08. The average of earning per share is Rs. 55.92 and the average market price per share is 1316. The standard deviation of earning per share and market price per share is 6.91 and 512.52 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.72. This shows that EPS and MPS are positively correlated.

**B) Nepal Investment Bank**

**Table 4.15**

**Correlation between EPS and MPS of Nepal Investment Bank**

| Year | EPS | MPS |
|---|---|---|
| 2003/04 | 51.70 | 940 |
| 2004/05 | 39.50 | 800 |
| 2005/06 | 59.35 | 1260 |
| 2006/07 | 62.57 | 1729 |
| 2007/08 | 57.87 | 2450 |
| Average | 54.19 | 1435.8 |
| Standard Deviation | 9.11 | 669.98 |
| Coefficient of Correlation | 0.65 | |

*Source: Appendix- II*

The table shows the earning per share and market price per share of Nepal Investment Bank from the year 2003/04 to 2007/08. The average of earning per share is 54.19 and the average market price per share is 1435.8. The standard deviation of earning per share

and market price per share is 9.11 and 669.98 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.65. This shows that EPS and MPS are highly positively correlated.

**C) NABIL Bank Limited**

**Table 4.16**

**Correlation between EPS and MPS of NABIL Bank Limited**

| Year | EPS | MPS |
|---|---|---|
| 2003/04 | 93 | 1000 |
| 2004/05 | 105 | 1505 |
| 2005/06 | 129 | 2240 |
| 2006/07 | 140 | 5050 |
| 2007/08 | 108 | 5275 |
| Average | 115 | 3014 |
| Standard Deviation | 19.06 | 2011.82 |
| Coefficient of Correlation | 0.55 | |

*Source: Appendix - II*

The table shows the earning per share and market price per share of NABIL Bank Limited from the year 2003/04 to 2007/078. The average of earning per share is Rs. 115 and the average market price per share is 3014. The standard deviation of earning per share and market price per share is 19.06 and 2011.82 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.55. This shows that EPS and MPS are positively correlated.

**D) Standard Chartered Bank Nepal Limited**

**Table 4.17**

**Correlation between EPS and MPS of Standard Chartered Bank Nepal Limited**

| Year | EPS | MPS |
|---|---|---|
| 2003/04 | 143.55 | 1745 |
| 2004/05 | 143.14 | 2345 |
| 2005/06 | 175.84 | 3775 |

| | | |
|---|---|---|
| 2006/07 | 167.37 | 5900 |
| 2007/08 | 131.92 | 6830 |
| Average | 152.364 | 4119 |
| Standard Deviation | 18.42 | 2203.56 |
| Coefficient of Correlation | 0.056 | |

*Source: Appendix- II*

The table shows the earning per share and market price per share of Standard Chartered Bank Nepal Limited from the year 2003/04 to 2007/08. The average of earning per share is Rs. 152.364 and the average market price per share is 4119. The standard deviation of earning per share and market price per share is 18.42 and 2203.56 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.056. This shows that EPS and MPS are positively correlated.

**E) Everest Bank Limited**

**Table 4.18**

**Correlation between EPS and MPS of Everest Bank Limited**

| Year | EPS | MPS |
|---|---|---|
| 2003/04 | 45.58 | 680 |
| 2004/05 | 54.22 | 870 |
| 2005/06 | 62.78 | 1379 |
| 2006/07 | 78.4 | 2430 |
| 2007/08 | 91.82 | 3132 |
| Average | 66.56 | 1698.2 |
| Standard Deviation | 18.6 | 1050.69 |

| | |
|---|---|
| Coefficient of Correlation | 0.99 |

*Source: Appendix II*

The table shows the earning per share and market price per share of Everest Bank Limited from the year 20032/04 to 2007/08. The average of earning per share is Rs. 54.18 and the average market price per share is 1160.80. The standard deviation of earning per share and market price per share is 18.19 and 788.44 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.94. This shows that EPS and MPS are highly positively correlated.

### 4.4.2 Coefficient of Correlation between Prices with Dividend

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

**A) Himalayan Bank Limited**

**Table 4.19**

**Correlation between DPS and MPS of Himalayan Bank Limited**

| Year | DPS | MPS |
|---|---|---|
| 2003/04 | 20 | 840 |
| 2004/05 | 31.58 | 920 |
| 2005/06 | 35 | 1100 |
| 2006/07 | 40 | 1740 |
| 2007/08 | 45 | 1980 |
| Average | 34.32 | 1316 |
| Standard Deviation | 23.47 | 512.523 |
| Coefficient of Correlation | 0.35 | |

*Source: Appendix- III*

The table shows the dividend per share and market price per share from the year 2003/04 to 2007/08. The average of DPS and MPS is Rs. 34.32 and Rs. 1316. The standard deviation of dividend per share and market price is 23.47 and 512.523. The coefficient of correlation between dividend per share and market price per share is 0.35. This shows that DPS and MPS are positively correlated.

**B) Nepal Investment Bank**

**Table 4.20**

**Correlation between DPS and MPS of Nepal Investment Bank**

| Year | DPS | MPS |
|---|---|---|
| 2003/04 | 15 | 940 |
| 2004/05 | 12.5 | 800 |
| 2005/06 | 55.46 | 1260 |
| 2006/07 | 30 | 1729 |
| 2007/08 | 40.88 | 2450 |
| Average | 30.76 | 1435.8 |
| Standard Deviation | 17.99 | 669.98 |
| Coefficient of Correlation | 0.52 | |

*Source: Appendix- III*

The table shows the dividend per share and market price per share from the year 2003/04 to 2007/08. The average of DPS and MPS is Rs. 30.76 and Rs. 1435.8. The standard deviation of dividend per share and market price is 17.99 and 669.98. The coefficient of correlation between dividend per share and market price per share is 0.52. This shows that DPS and MPS are positively correlated.

**C) NABIL Bank Limited**

**Table 4.21**
**Correlation between DPS and MPS of NABIL Bank Limited**

| Year | DPS | MPS |
|---|---|---|
| 2003/04 | 65 | 1000 |
| 2004/05 | 70 | 1505 |
| 2005/06 | 85 | 2240 |
| 2006/07 | 140 | 5050 |
| 2007/08 | 100 | 5275 |
| Average | 92 | 3014 |
| Standard Deviation | 30.12 | 2011.82 |
| Coefficient of Correlation | 0.86 | |

*Source: Appendix- III*

The table shows the dividend per share and market price per share from the year 2003/04 to 2007/08. The average of DPS and MPS is Rs. 92 and Rs. 3014. The standard deviation of dividend per share and market price is 30.12 and 2011.82 respectively. It shows that the market price is more volatile in comparison with dividend. The dividend per share is less volatile that means it can attract investors. The coefficient of correlation between dividend per share and market price per share is 0.86. This shows that DPS and MPS are perfectly positively correlated. Any increment in DPS will result positively on the market price of share.

**D) Standard Chartered Bank Nepal Limited**

**Table 4.22**
**Correlation between DPS and MPS of Standard Chartered Bank Nepal Limited**

| Year | DPS | MPS |
|---|---|---|
| 2003/04 | 110 | 1745 |
| 2004/05 | 120 | 2345 |

| | | |
|---|---|---|
| 2005/06 | 140 | 3775 |
| 2006/07 | 130 | 5900 |
| 2007/08 | 130 | 6830 |
| Average | 126 | 4119 |
| Standard Deviation | 11.4 | 2203.56 |
| Coefficient of Correlation | 0.61 | |

*Source: Appendix- III*

The table shows the dividend per share and market price per share from the year 2003/04 to 2007/08. The average of DPS and MPS is Rs. 126 and Rs. 4119. The standard deviation of dividend per share and market price is 11.4 and 2203.56. The coefficient of correlation between dividend per share and market price per share is 0.61. This shows that DPS and MPS are positively correlated.

**E) Everest Bank Limited**

**Table 4.23**

**Correlation between DPS and MPS of Everest Bank Limited**

| Year | DPS | MPS |
|---|---|---|
| 2003/04 | 20 | 680 |
| 2004/05 | 20 | 870 |
| 2005/06 | 25 | 1379 |
| 2006/07 | 40 | 2430 |
| 2007/08 | 50 | 3132 |
| Average | 31 | 1698.2 |
| Standard Deviation | 13.41 | 1050.69 |
| Coefficient of Correlation | 0.99 | |

*Source: Appendix- III*

The table shows the dividend per share and market price per share from the year 2003/04 to 2007/08. The average of DPS and MPS is Rs. 31 and Rs. 1698.2. The standard deviation of dividend per share and market price is 13.41 and 1050.69. It shows that the market price is more volatile in comparison with dividend. The dividend per share is less volatile that means it can attract investors. The coefficient of correlation between dividend per share and market price per share is 0.99. This shows that DPS and MPS are highly positively correlated.

### 4.4.3 Regression Analysis of Y (MPS) on X (EPS), Y on X (DPS)

The regression equation for simple regression is:

$Y = a + bX$ …… (i)

$\sum Y = na + b\sum X$ …… (ii)

$\sum YX = a\sum X + b\sum X^2$ …… (iii)

Where,

Regression equation of MPS on EPS,

$\sum X$=444.03, $\sum Y$ =11582.8, $\sum YX$ =1238596.44, $\sum X^2$ =46932

Regression equation of MPS on DPS,

$\sum X$=314.08, $\sum Y$ =11582.8, $\sum YX$ =938250.33, $\sum X^2$ =27425.04

After solving the above equation, the result is as follows.

**Table 4.24**

**Simple Regression Analysis of Overall Selected Banks**

| Dependent Variable(MPS) | Intercept (a) | Slope (b) | Independent Variable |
|---|---|---|---|
| Y | -168.024 | 27.98 | X (EPS) |
| Y | 598.39 | 27.36 | X (DPS) |

*Source: Appendix - VI*

When independent variable EPS and DPS is zero, the value of dependent variable Y becomes -168.024 and 598.39 respectively. Similarly, if per rupee change in independent variable then the rate of change in dependent variable is Rs. 27.98 and Rs. 27.36 respectively. It also shows the positive relationship between MPS and EPS and also MPS and DPS respectively.

### 4.4.4 Multiple Regression Analysis

The multiple regression equation of Y on X1 and X2 is:

$Y = a + b_1X_1 + b_2X_2$ …….. (i)

$\sum Y = na + b_1\sum X_1 + b_2\sum X_2$ …….. (ii)

$\sum X_1Y = a\sum X_1 + b_1\sum X_1^2 + b_2\sum X_1X_2$ …… (iii)

$\sum X_2Y = a\sum X_2 + b_1\sum X_1X_2 + b_2\sum X_2^2$ ……. (iv)

Here,

$\sum Y$ =11528.8, $\sum X_1$=444.03, $\sum X_2$=314.08, $\sum YX_1$=1238596.44,
$\sum X_1^2$= 46932, $\sum YX_2$ =938250.33, $\sum X_2^2$ =27425, $\sum X_1X_2$= 35426.77

After solving the above equations, the result is as follows:

**Table 4.25**

**Regression analysis on Y on $X_1$(EPS) and $X_2$(DPS)**

| Sectors | Regression Coefficient | | | | |
|---|---|---|---|---|---|
| | **a** | **$b_1$** | **$b_2$** | **$R^2$** | **S.E.E** |
| **MPS on EPS and DPS** | -221.8 | 30.2 | -2.21 | .99 | 201.12 |

*Source: Appendix- VI*

Now, we have the regression equation as $Y= -221.8 +30X_1 – 2X_2$

The equation Y indicates dependent variable i.e. MPS and where as $X_1$ and $X_2$ are EPS and DPS. a, $b_1$ and $b_2$ are constant. When EPS and DPS change positively or negatively it will affect the MPS because MPS is dependent Variable.

Here, a shows the value of dependent variable y-intercept. It also shows the value of Y when $X_1=X_2=0$. The above table shows the value of multiple coefficient of determination $r^2$ is 0.99 which shows that independent variables EPS and DPS explain 99% variation to the dependent variable MPS. And remaining 1% variation affected due to other variables. Similarly, $b_1$ and $b_2$ are 30.2 and -2.21 which shows.

that the increase or decrease in rupee 1 EPS and DPS leads to increase or decrease of RS. 30.2 and RS. (2.21) in MPS respectively. There was positive relationship between MPS and EPS where as negative relationship between MPS and DPS. Standard error of the estimate can be used to determine whether statistically significant relationship exists between the dependent and given independent variables. The lesser the value of the standard error of estimate the better is the model fitted.

**4.5 Analysis of Primary Data**

In this section, the collected data from primary sources has been tabulated and analyzed. For the purpose of primary data collection, 100 questionnaires were sent to investor and non-investor but only 90 respondents returned the questionnaire. Similarly, the question number 12 was asked to brokers and 60 were to investors and remaining to public. The analysis of primary data was classified into analysis of opinion survey and test of hypothesis.

### 4.5.1 Analysis of Opinion Survey

Regarding investment in financial securities whether respondents have invested in securities or not i.e. question no. 1 (see appendix -IV) was asked to randomly-selected respondents. The whole respondents, for the purpose of analysis, the collected data are classified in to two groups (i.e. investors and brokers). The analysis is shown in the following table.

**Table 4.26**

**Investor's Invest in Securities**

| S.N | Research variables | Investors | | Brokers | | total | |
|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % |
| A | Yes | 68 | 87 | 12 | 100 | 80 | 89 |
| B | No | 10 | 13 | 0 | 0 | 10 | 11 |
| | **Total** | **78** | **100** | **12** | **100** | **90** | **100** |

*Source: Field Survey*

At the time of classification, out of 90 total respondents, 78 were found from public and 12 from brokers. It is clear from the table no. 4.24. 87% of public had invested in securities while 100% of broker respondents had invested. In overall 89% of total respondents had invested in securities.

**Sources of Idea about Investment at First**

Most of Nepalese people had well known about real investment (i.e. non- securities investment in building, machinery, factories etc.) but financial investment (i.e. securities investment like investment in common stock, preferred stock, bond etc.) is still new phenomena for them. Therefore, it was tried to know their first source of idea about securities investment. For this purpose, question no. 2 (see in appendix IV) was asked to randomly selected respondents. The analysis is as follows.

**Table 4.27**

**Sources of Idea about Investment at First**

| S.N | Research Variable | No. of Respondents | % |
|---|---|---|---|
| A | From friends | 30 | 33 |
| B | From stock broker | 10 | 11 |
| C | From relatives | 14 | 16 |
| D | My selves | 36 | 40 |
| | **Total** | **90** | **100** |

*Source: Field Survey*

In the above table, 40% of respondents had known themselves about securities investment at first, and rest of 33%, 16%, and 11% of respondents had get the idea about securities investment at first from their friends, relatives and stockbrokers respectively.

**Consideration of Risk and Return before Investing**

Consideration of risk and return factors before investing in securities is important to get success from securities investment. In this respect, one question was asked to respondents to measure the awareness of respondents about risk and return. For this purpose the respondents were classified, based on the respondents answer to the question no.3 in following two groups

**Table 4.28**

**Awareness of Investors in Risk**

| S.N | Research Variables | Investors | | Brokers | | total | |
|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % |
| A | Return only | 19 | 24 | 0 | 0 | 19 | 22 |
| B | Risk only | 3 | 4 | 0 | 0 | 3 | 3 |
| C | Risk and return | 53 | 68 | 12 | 100 | 65 | 72 |
| D | I don't know | 3 | 4 | 0 | 0 | 3 | 3 |
| | **Total** | **78** | **100** | **12** | **100** | **90** | **100** |

*Source: Field Survey*

The table no.4.28 classifies in investor group, 72% of investor replied the answer to both risk and return to be considered, 22% replied return only to be considered, replied of I don't know and risk only had 3% respectively.

**Diversification of Risk by Portfolio Investment**

Some portion of the total risk can be diversified by the portfolio investment. In this regard, respondents were again asked to find the awareness of them. For this analysis, the collected data are analyzed in the table no. 4.29.

**Table 4.29**

**Awareness of Investors (in term of Risk Diversified)**

| S.N | Research Variables | Investors | | Brokers | | total | |
|---|---|---|---|---|---|---|---|
| | | **No.** | **%** | **No.** | **%** | **No.** | **%** |
| **A** | Yes | 50 | 71 | 12 | 100 | 62 | 69 |
| **B** | No | 28 | 29 | 0 | 0 | 28 | 29 |
| | **Total** | **78** | **100** | **12** | **100** | **90** | **100** |

*Source: Field Survey*

In the group of investors, 69% of investors were aware of investment and rest of 29% was not aware of investment, that is some risk can be diversified by portfolio investment.

**Valuation of Securities**

The next question is about the valuation of securities (What type of share should buy form securities market?) asked to the respondents. The collected answers to this question were classified again into following two groups.

**Table 4.30**

**Awareness of Investors in Pricing**

| S.N | Research Variables | Investors | | Brokers | | Total | |
|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % |
| A | Under valued | 40 | 51 | 12 | 100 | 52 | 58 |
| B | Over valued | 17 | 22 | 0 | 0 | 17 | 19 |
| C | I don't know | 21 | 27 | 0 | 0 | 21 | 23 |
| **Total** | | **78** | **100** | **12** | **100** | **90** | **100** |

*Source: Field Survey*

**Most Preferred Sector to Invest**

In this present situation 135 companies are listed in NEPSE .Large number of company's shares of different sectors were available for investment. In such of mass alternatives, investors can sacrifices their fund on the best companies' shares. Therefore, the researcher had tried to survey the different eight sectors in which the investors like to invest most.

**Table 4.31**

**People's Preferred Sector to Invest**

| S.N | Research variable | No. of Respondent | % |
|---|---|---|---|
| A | Banking | 42 | 46 |
| B | Insurance | 6 | 7 |
| C | Development | 14 | 15 |
| D | Finance | 8 | 9 |
| E | Hotels | 6 | 7 |
| F | Manufacturing & processing | 6 | 7 |
| G | Trading | 2 | 2 |
| H | Others | 6 | 7 |
| | **Total** | **90** | **100** |

*Source: Field Survey*

It is found that 46% of respondents were most interested to invest in banks. 7%, 15%, 9%, 7%, 7%, 2% and 7% respectively of respondents were found most interested to invest in the share of insurance, development bank, finance, hotels, manufacturing & processing, trading and other respectively.

**Satisfaction from Securities Investment**

Regarding the satisfaction with presently return from share investment, 90 randomly selected respondents were asked whether they were satisfied or not from presently getting return on share investment.

**Table 4.32**

**Satisfaction from Securities Investment**

| S.N | Research variables | No. of Respondents | % |
|---|---|---|---|
| A | Yes | 62 | 69 |
| B | No | 28 | 31 |
| | **Total** | **90** | **100** |

*Source: Field Survey*

69% of the investors replied that they were satisfied from the return of share investment but remaining 31% replied that they were not satisfied from the return of investment on share.

**Satisfaction with Government Efforts**

Regarding satisfaction of respondents with government efforts to develop stock market in Nepal, the selected investors and broker were asked to question. For the purpose of analysis, the collected answers from the investors and brokers were considered.

**Table 4.33**

**Satisfaction with Government Efforts**

| S.N | Research variables | Investors | | Brokers | | Total | |
|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % |
| A | Yes | 52 | 67 | 1 | 8 | 53 | 59 |
| B | No | 26 | 33 | 11 | 92 | 37 | 41 |
| **Total** | | **78** | **100** | **12** | **100** | **90** | **100** |

*Source: Field Survey*

**Main cause of being Reluctant to Invest in Securities**

After the avenue of democracy in Nepal, participation of private sector is highly motivated. As a result, Nepalese people are invested in different sectors. Banking finance is successful to collect large deposits from domestic depositors but most of the listed companies are still unable to collect the needed fund through the issue of securities. Large number of investor's participation is the catalyst for stock market development. Therefore, it was tired to know the main cause for Nepalese people to be reluctant to invest in securities.

**Table 4.34**

**Main Cause of being Reluctant to Invest in Securities**

| S.N | Research variables | No. of Respondents | % |
|---|---|---|---|
| A | Lower return | 2 | 2 |
| B | More risk | 20 | 22 |
| C | Lack of knowledge | 54 | 60 |
| D | No protection of investor right | 14 | 16 |
| **Total** | | **90** | **100** |

*Source: Field Survey*

60% pointed the main cause of the reluctant of the securities investment is the lack of knowledge about securities investment while 22% of respondents pointed the main cause of more risk in secondary market. 16% and 2% of respondents pointed the main cause of being reluctant to invest in securities investment were no protection of investor and lower return respectively.

**Investor's Purpose in Investment**

Investors have different view to investment in market. Most of investors are confuse about which factors was more benefit. The numbers of investors are increasing but real investors are very low. The different view of investors is presented below.

**Table 4.35**

**Investor's Purpose in Investment**

| S.N | Research variables | No. of Respondents | % |
|---|---|---|---|
| **A** | Dividend | 22 | 24 |
| **B** | Management participant | 10 | 11 |

| | | | |
|---|---|---|---|
| **C** | Capital gain | 46 | 52 |
| **D** | Social status | 12 | 13 |
| **Total** | | **90** | **100** |

*Source: Field Survey*

In this research 52% of investors are invested for capital gain. 24%of investors invest for dividend similarly, 13% for social status and 11% for management participant.

**Responsible for NEPSE Performance**

The investors are influenced by various factors of securities investment. Therefore, it has been tried to analyze the performance of NEPSE index by investors. For this purpose, the collected data are present and analyzed in following table.

**Table 4.36**

**Responsible for NEPSE Performance**

| S.N | Research variables | No. of Respondents | % |
|---|---|---|---|
| A | Government | 34 | 37 |
| B | Investors | 24 | 27 |
| C | Brokers | 16 | 18 |
| D | NEPSE | 16 | 18 |
| **Total** | | **90** | **100** |

*Source: Field Survey*

The respondent voice for NEPSE performance was highly responsible of government. Similarly, 27% of investors, 18% of respondent were responsible both broker and NEPSE.

### 4.5.2 Test of Hypothesis

This sections deals with different hypothesis test, which are as follows;

**Hypothesis-1**

In this section, the impact of income level of people on securities investment is tested using chi-square test. For this purpose, the whole respondents are classified according to their annual income level in the following table.

**Table 4.37**

**Annual Income Level**

| **Responds** | **Below Rs. 50000** | **Above Rs. 50000** | **Above Rs. 100000** | **Above Rs. 200000** | **Row Total** |
|---|---|---|---|---|---|
| **Yes** | 11 | 6 | 23 | 16 | **56** |
| **No** | 3 | 4 | 15 | 12 | **34** |
| **Column Total** | **14** | **10** | **38** | **28** | **90** |

*Source: Field Survey*

Formulation of Hypothesis,

Null hypothesis ($H_0$): securities investment is independent on income level of people or there is no significant relationship between income level of people and securities investment.

Alternative hypothesis ($H_1$): securities investment is dependent on income level of people or there is significant relationship between income level of people and securities.

The computed value of $\Re^2$ i.e. 1.9669 is lower than tabulated value of $\Re^2$ at 55 level of significant with d.f. 3i.e. 7.815. Therefore, null hypothesis is accepted. It implies that securities investment is independent on income level of people in Nepalese context. In other words, there is no significant relationship between income level of people and

securities investment. Wealthy persons have also not invested but some poor persons have also invested in securities.

**Hypothesis-2**

In this hypothesis, the whole respondents are classified into the following two groups according to their academic background. The main purpose of this classification is to test the hypothesis, whether persons with the academic background of management and economics are more aware about securities investment or not.

**Table 4.38**

**Academic Background of Management and Economic Aware about Investment or Not**

| Academic Background / Awareness | Management or Economic | Others | Row Total |
|---|---|---|---|
| **Yes** | 46 | 12 | **58** |
| **No** | 22 | 10 | **32** |
| **Column Total** | **88** | **22** | **90** |

*Source: Field Survey*

Formulation of hypothesis,

Null hypothesis ($H_0$): the experiment does not exist any relationship between academic background and awareness about securities investment.

Alternative hypothesis ($H_1$): the experiment does exist any relationship between academic background and awareness about securities investment or the people with academic background of management and economics are more awareness about securities investment than others.

Since, the calculated value of $\Re^2$ i.e. 1.2477 lower than tabulated value of $\Re^2$ at 5% level of significant with d.f. 1 i.e. 3.841, null hypothesis is accepted and alternative hypothesis is rejected. It can be concluded that people with academic background of management and economics are less aware about securities investment than people with academic background of others. In another word, there is meaningless relationship between

academic background of management and economics with less aware about securities investment.

**Hypothesis-3**

In this hypothesis, the whole respondents are classified into the following two groups according to their academic background. The main purpose of this classification is to test the hypothesis, whether relationship between academic background of persons and securities investments or not.

**Table 4.39**

**Academic Background of Persons and Securities Invest or Not**

| Academic Background / Response | Management or Economic | Others | Row Total |
|---|---|---|---|
| **More aware** | 18 | 36 | **54** |
| **Less aware** | 30 | 6 | **36** |
| **Column Total** | **48** | **42** | **90** |

*Source: Field Survey*

Formulation of Hypothesis,

Null hypothesis ($H_0$): there is no significant relationship between academic background and securities investment.

Alternative hypothesis ($H_1$): there is significant relationship between academic background and securities investment

Since, value of $\aleph^2$ i.e. 21.6963 more than tabulated value of $\aleph^2$ at 5% level of significant with d.f. 1 i.e. 3.841, null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is associated between the people with academic background of management and economics and securities investment. It proves that people with academic background of management and economic are less aware about securities investment is significantly above than people with academic background of others subjects.

**Hypothesis-4**

For this hypothesis, only the existing investors of securities are considered. Moreover, some NEPSE staffs and companies staffs were specially asked to collected their opinions regarding government efforts for development stock market in Nepal. Hence, the respondents are classified into the following three groups.

**Table 4.40**

**Perception towards Government Efforts**

| Respondent / Response | NEPSE Staff | Companies Staff | Industries | Row Total |
|---|---|---|---|---|
| **More Aware** | 18 | 14 | 27 | **59** |
| **Less Aware** | 14 | 4 | 13 | **31** |
| **Column Total** | **32** | **18** | **40** | **90** |

*Source: Field Survey*

Formulation of Hypothesis,

Null hypothesis ($H_0$): there is no significant difference in the perception of NEPSE staff, companies' staffs, and investors towards government efforts for stock market development.

Alternative hypothesis ($H_1$): there is significant difference in the perception of NEPSE staff, company's staffs, and investors towards government efforts for stock market development

Since, value of $\aleph^2$ i.e. 2.4874 lower than tabulated value of $\aleph^2$ at 5% level of significant with d.f. 2 i.e. 5.991, null hypothesis is accepted and alternative hypothesis is rejected. It means the perception of NEPSE staffs, companies' staffs, and investors is significant difference towards government efforts for stock market development in Nepal.

## 4.6 Major Findings of the Study

The major findings of the study are summarized as under:

1. The random walk hypothesis or weakly efficient market hypothesis of share price behavior has been tested to get answer whether successive monthly price changes of sample banks' shares were independent or not. This independent assumption of the study has been tested by the runs test. The result of the test does not support the independent assumption of random, walk model which implies that the price changes in the future will be dependent on the historical price. Thus, the information of historical price is helpful to predict future prices of the shares. This study suggests that fundamental analysis becomes useful to make above average return in Nepalese stock market. Based on above conclusion, Nepalese stock market may not be defined as weakly efficient in pricing the share where market efficiency is defined as all past information is reflected in share prices.
2. The market price has high variability during study period. SCBNL has high average price of Rs.4119 and HBL has the lowest market price of Rs.1316. This high market price of shows that SCBNL has the better performance than others.
3. The overall profit of the company from the view of ordinary shareholders is the EPS. The Standard Chartered Bank Nepal Limited has the highest EPS of RS.152.36 whereas Nepal Investment Bank Limited has the low EPS of Rs.54.19. The better the earning, the better is the performance.
4. There is a fluctuation in dividend per share. SCBNL shows high average dividend of Rs.126 whereas NIB shows the lowest of all i.e. Rs.30.76. The investor who is eager to invest for the long term chooses the company with high dividend.
5. All the banks have the healthy and positive P\E multiples. Earning and price relation shows the mixed behavior. SCBNL has the highest P\E multiple among the entire sample banks i.e. 26.8 which shows a good performance due to their managerial efficiency and professional management whereas NIB, NABIL,EBL and HBL has low but consistent P\E ratio with average P\E ratio of 25.92, 25.61, 23.6 and 23.03 respectively.
6. Among the sample banks SCBNL has the higher average dividend payout ratio of 80.08 in average. EBL has the least dividend payout ratio of 43.63.
7. The earning yield, which measures that yield of outstanding stock, of NABIL is the highest with all selected sample banks, which was 5.36%. Similarly, the lowest

average earning yield was registered by NIB with 4.5%. However, each bank has good earning yield which is one of the reasons why banking sector is dominating the stock market. On the other hand, the dividend yield, which measures the return of each outstanding stock, is irregular and is in decreasing trend during study period. Although all the sample banks have satisfactory earning yield but the dividend yield is very low because the company retained maximum or all amount of earning for further investment. The dividend yield of SCBNL has the highest average with 4.08% while the dividend yield of EBL is the lowest with 2.1%. The study found a mixed behavior between price and dividend, price and earning during the period of study.

8. The market value to book value that shows the efficiency of stock price in market than the book. In this regard, all the selected samples have ratio greater than 4. This shows that the market prices of banks are exceeding their book values. The stock of SCBNL is priced 9.3 times more than its book value. The lowest ratio is of HBL with 4.98 times which can be considered satisfactory.
9. The ROA shows the overall effectiveness of management in generating profits with its available assets. The managements of NABIL and SCBNL have utilized their available assets more efficiently and effectively to generate profits than other banks. The highest ROA generally pushes the market price upward. The SCBNL has the highest ROA with 2.43. The ROA of HBL is the lowest with 1.22. As there are some banks with higher ROA having lower market price and vice versa, it can be concluded that there is mixed relationship between ROA and market price per share.
10. The return on common equity measures the return earned on the common stockholders' investment in the firm. Generally, it is believed that high ROE will raise the market price per share. The ROE of SCBNL is the highest among all sample banks so does its market price of stock. The ROE of EBL is the lowest but its market price per share is higher than that of HBL and NIB. This again shows the mixed behavior pattern between ROE and market price per share.
11. The liquidity ratio measures the ability of a firm to meet short-term obligations. The relationship between liquidity position and market price shows a mixed

behavior. The liquidity ratio of HBL is the highest and its market price is the lowest. While liquidity ratio of NABIL is the lowest but its market price is higher than EBL, HBL and NIB. Similarly, the liquidity position of EBL and HBL is nearly same bit the stock price of EBL is pretty much higher than that of HBL.

12. The coefficient of correlation between EPS and MPS shows mixed pattern. The degree of correlation between the EPS and MPS of EBL is the highest with 0.99 which is slightly higher than that of NIB. It indicates that if the EPS increases by 100%, the MPS will also increase by 99% and vice-versa. All the sample banks have positive correlation between EPS and MPS.
13. The coefficient of correlation between DPS and MPS shows mixed pattern. The degree of correlation between the DPS and MPS of EBL is the highest with 0.99. All sample banks are positively correlated in terms of DPS and MPS which can be considered as satisfactory. HBL has the lowest coefficient of correlation with 0.35. It indicates that if the DPS increases by 100%, the MPS will also increase by 35% and vice-versa.

# CHAPTER - V

# SUMMARY, CONCLUSION AND RECOMMENDATIONS

## 5.1 Summary

Security market is one of the constituents of capital market. It has wide embracing for the buyer and seller of all securities and all related agencies. It has a significant role to the development of capital market as well as overall economy. Basically, it affects the economy through creation of liquidity, marketability, etc. liquid equity markets makes less expensive to trade equities, reduce disincentive to investing the lag duration projects because investors can easily sell. It also facilitates higher to choose and invest in higher return projects and best productivity growth. More liquidity makes easier to sell. Like liquidity, market efficiency is another most profound idea to affect the investment decision process in security market. This means that efficiently proved markets in which this price of security do not depart for any length of time from justified economic values. The security values are also determined by investor's expectation about earning risk and so on. In efficient market values is going to be changed by reacting with new information. Thus, securities are efficiently priced on a continuous basis.

The stock market of Nepal is in developing stage. It needs help from all concerned bodies to function properly. The government should formulate effective rules and regulations and implement it properly to develop the stock market. The listed companies should always be ready to help the market by obeying the rules and regulations, timely disclosing and submitting annual financial statement, avoiding rumors and not manipulating the price of stock.

To test the behavior of share prices in Nepalese stock, efficient market theory is an important and latest thought. Efficient market theory helps in channelization of shavings and funds into the profitable investment for the maximum benefit to the society. The efficient market hypothesis implies that all known information is immediately discounted by all the investors and reflected in the price of share. It cannot be tested directly. However, by postulating some security price behaviors, one can analyze market

efficiency. The literature on share price behavior developed during the last decades in the big economy countries such as USA, UK, Australia, etc. for testing the appropriateness of the random walk hypothesis (later known as weak form efficient market hypothesis) that can be used to describe common stock price behavior.

This study is mainly focused to assess share price behavior i.e. the random walk or weak efficient market hypothesis and to test whether the successive price changes are independent or dependent with the price of historical changes with special reference to the banking sector. In addition, it also studies how the earning price per share, dividend price per share, price earning multiple and dividend payout ratio affect the market price of the stock. This study also attempts to focus the relationships among liquidity ratios, profitability ratios, market price to book value ratio and many other key ratios. The study period for this study is from 2003/04 to 2007/08 with the time period span of five years for five sample commercial banks. To test the independent assumption or to test the hypothesis of randomness, the runs test has been used. The series was found to be non-random and assumption of independence was not supported by this evidence. Therefore, the random walk model was not accepted. Hence, the result demonstrated that the successive price changes are dependent with historical price changes and that the random walk model can not justifiably used to describe share price behavior of Nepal.

While analyzing development stock market during the study period, the numbers of listed companies are in increasing trend over the study period but during the first two years there was not high increase. The number was 114 in F\Y 2003/04, 125 in F\Y 2004/05 and 135 in both F\Y 2005/06 and F\Y 2006/07 respectively, 142 in F/Y 2007/08. The market capitalization increased from Rs. 34704 million in F\Y 2003/04 to Rs366247.5 million. There was fluctuation in percentage of turnover to market capitalization which eventually increased from 5.18 in F\Y 2003/04 to 7.35 in F\Y 2004/05 then there was dramatically decrease in F\Y 2005/6 to 3.57 and again there was slightly increase from 3.57 to 4.49 in F\Y 2006/07 and 6.23 in F\Y 2007/8. The percentage of turnover to paid-up value also was in increasing trend for initial three years but it down and then up in latter year. The paid-up values of listed companies are in increasing trend. The paid-up

value was Rs 13404.9 million F\Y 2003/04 and Rs 29465 million in F\Y 2007/08. This is largely due to declaration of bonus shares and right share issue of commercial banks, which are major players in stock market with more than 75% of the total transactions.

Using different financial tools, the company's performance has been analyzed to relate their market price with EPS, DPS, Book Value, and liquidity, return on assets and return in equity. This analysis shows a mixed behavior in these relationships. Since companies having low EPS have high price and companies having high EPS have low price. The same fluctuating trend follows in the case of DPS also. The summary table presented below gives the exact idea about the company's performance in major aspects.

**5.2 Conclusion**

The following conclusions are drawn by the researcher on the basis of analysis of different sample banks.

- The development of stock market is not in the satisfactory level. Only the banking sector is having the high performance.
- During the collection of primary data, discussion with both brokers and investors, it has been seen that they blamed each other's regarding their roles and performance.
- Most of the populations were interested to invest in shares. Regarding their preference of investment sectors, major portion were found preferring to invest in banking and finance companies.
- Correlation coefficient measures the degree of relationship between two variables whereas the regression analysis is used to measure the likely value of one variable from the known value of other variable.
- The cause and effect relationship is clearly indicated through regression analysis than by correlation.
- The regression analysis shows the positive relationship between MPS with EPS and DPS respectively.
- Having good track record of the financial position, market penetration and continuous declaration of dividends encourage the potential investors to buy the share of commercial banks emerge as the blue chips in the Nepalese Stock Market.

- Nepal Stock Exchange operates in a weak form of efficient market hypothesis, indicating that the market price move randomly.

### 5.3 Recommendations

Based on analysis of data, the following recommendations are made:

- Due to the non-randomness of the share price movement, either individual or institutional investor should be aware of the fact that above average return is possible to some extent from the past information.
- Since the random walk hypothesis is not accepted by NEPSE market, the rational investors should study the past trend and pattern of price series of the stock for prediction of future price change to make safe investment.
- As the run test findings have shown that the successive price changes are dependent with the price of historical change, it is recommended that investors should consult with the fundamentalists and technical analysts before the investment.
- The government should not only make policies for capital market development but also implement these policies timely and appropriately.
- The performances of commercial banks, finance companies and manufacturing & processing companies are better than the other sectors so it is recommended to the investors to invest their investment in these sectors.
- The investment decision of the individuals is based to a large extent on signals they get from capital market. The market mechanism should be able provide information cheaply and widely. Its reliability is a must.
- The stock exchange should be investor focused and market oriented along with strong operation with effective management.
- There should be good coordination and cooperation between concerned regulatory bodies.
- Buying and selling procedure of shares should be systematic, fast and less time consuming.
- The listed companies should disclose its financial statements timely and completely.
- The regulatory body should avoid negative rumors that may affect the price of stock. The behavior of stock price should be free and fair without any manipulation.

- The listed companies lack clear dividend policy and have fluctuating payout ratio.
- The company should have close monitoring system to check the behaviors of stock price and should make an effort to uplift the market price than its competitors.
- The stockbrokers and others concerned with the securities business should develop necessary expertise and the market intermediaries should have adequate infrastructure facilities to offer appropriate services to investors.
- Further research and in-depth analysis should be undertaken in regard to stock market efficiency by concerned regulatory body for the inputs to increase market activities and decrease manipulation.

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