COMPARATIVE ANALYSIS ON STOCK PRICE BEHAVIOR OF NEPALESE COMMERCIAL BANKS

A THESIS

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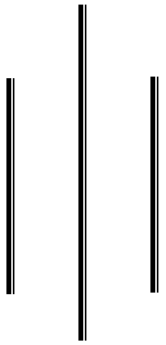

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DECLARATION

I hereby declare that in this thesis entitled "**Comparative Analysis on Stock Price Behavior of Nepalese Commercial Banks"** submitted to Sanker Dev Campus is my original work. It is done in the form of partial fulfillment of the requirement for the Master of Business Studies (M.B.S) under the supervision and guidance of Respected Dr. Mahendra Prasad Shertha and Kiran Thapa.

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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).

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, thereby 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). 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 worldwide. 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 particular 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 its 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 its liquidity and solvency and the risks related to the assets and liabilities recognized on its 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).

In today's context, most of the investors are attractive towards the banking sectors. A comparative study among the different banks, hence is necessary as banks cannot afford to remain from relevant information. It will give negative impact in long run. Most of the customers are attractive towards such banks; that provide well and efficient service. Similarly, investor invests their money in those banks that provide high dividend and profit in high amount. If banks need to survive in competitive market for a long-run, it should consider on the subject of liquidity position, profitability position, market position as well as other positions. This study depends upon the financial position of Commercial Banks that are operating in Nepal.

There are various studies on the Banking Sector's Financial Performance in Nepal, but no broad study has been made that are listed in NEPSE. This study basically is concerned with the analyze of the financial position of five Commercial Banks in Nepal.

This study tries to explore in the followings:

- How is the performance of the commercial banks?
- How is the trend of stock price behavior?
- Do the performance and the stock price behavior 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 Objective 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

Nowadays there are various sectors available for investment. Banking is one dominant among other alternate investment sectors. Therefore most of the investors would like to invest at this sector.

Financial performances of the banks are not all the same. Many factor affect stock price. Various investors who are not aware of these factors and may take benefit from this study. This study also explores the performance of banking sector.

1.5 Limitation of the Study

The study covers five years period starting from 2003-2008. Five commercial banks are selected randomly. The study is limited to profitability and performance only.

1.6 Organization of the study

This study has been organized into five chapters; Each Chapters is 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, 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 are 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.

The T**hird Chapter** describes the research methodology and explains all the methods of data collection and analysis. It comprises research design, population and sample, nature and sources of data, data analysis techniques, selection of enterprises and analysis method.

The **Fourth Chapter** is the main body 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 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 has presented.

CHAPTER -II

REVIEW OF LITERATURE

Review of literature is the important parts of the thesis. Specifically, it includes various old thesis, dissertation, newspaper, magazine and suggestion of experts of relevant field has effectively done this study. Particularly, this chapter attempts to review the theory of stock price behavior including 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.

2.1 Conceptual Framework

It is imperative to be acquainted with the general concepts of the share and other related matters and the general profiles of the banks under study before getting into the main subject matter of the share price behavior of the common stocks.

2.1.1 Common Stocks

Common stock represents equity or an ownership position in a corporation. It is a residual claim in the sense that creditors and preferred stockholders must be paid as schedule before common stockholders can receive any payments. Common stocks are generally "fully paid and non-assessable," meaning that common stockholders may lose their initial investment but not more. The great advantage of the corporate form of organization is the limited liability of its owners.

2.1.2 Financial Institution and Marketers

Most of the successful firms have ongoing needs of funds. They can obtain funds from external sources in three ways. One is through a financial institution that accepts saving and transfers them to those that need funds. Another is through financial markets, organized forums in which the suppliers and demanders of various types of funds can make transactions. A third is through the private placement. Financial institutions serve as intermediaries by channeling the saving of individuals, business, and governments into loans or investments. Many financial institutions accept customers saving deposits and lend money to other customers or to the firms; other invest customer's savings in earning assets such as real estate or stocks or bonds. Financial institutions are required by the government to operate within established regulatory guidelines. The key suppliers of funds to financial institutions and the demanders of funds from financial institutions are individuals, businesses, and governments. The major financial institutions are commercial banks, insurance companies, pension fund, mutual funds, etc.

Financial markers are forums in which suppliers of funds and demanders of funds can transact business directly. Whereas the loans and investments of institutions are made without the direct knowledge of the suppliers of funds, suppliers in the financial markers knew where their funds are being lent or invest. Security markers 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. The security markets are classified into:

i. Money market and capital market

ii. Primary market and secondary market

Transaction in short term debt instruments or marketable securities i.e. all financial assets with a term to maturity of one year or less than one year are traded in the money market. The main function of the money market is to provide short term loans to the business, loans to the government and loans to household. Long term securities, bonds and stocks are traded in the capital market. 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. That is, the company actually 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. The securities existing are bought and sold in the secondary market. In other words, financial market in which pre owned securities (those that are not new issue) are traded is called the secondary market. Its main functions are to provide liquidity to the owners of the securities.

2.1.3 Capital Market

The capital market is a market that enables suppliers and demanders of long-term funds to make transactions. Included are securities issue of 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 (long-term debt) and both common and preferred stock (equity or ownership). Bonds are long-term debt instruments used by business and government to raise large sum of money, generally from a diverse group of lenders. Shares of common stock 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)

According to Securities Exchange Act 2040 (1983)-"Securities means shares, stock bond, debenture, debenture stock issued by a corporate body or a certificate relating to unit saving scheme or group saving scheme issued by any corporate body in accordance with the prevailing laws or negotiable certificates of deposit or treasury bond issued by Government of Nepal and it includes the securities issued under full guarantee of Government of Nepal by a notification published in Nepal Gazette or receipts relation to deposits of securities as well as right and interest relating to securities".

Accordance to the above definition, the following is the securities:

1. Shares, stock bond, debenture, debenture stock issued by a corporate body.
2. Negotiable certificates of deposits (which are issued by a depository institution).
3. Certificate of unit saving schemes issued by a corporate body.
4. Treasury bills and bonds issued by Government of Nepal.
5. Securities issued under full guarantee of Government of Nepal.

6. Receipts relating to deposits of securities, and paper evidencing rights and interest relating to securities.

Thus capital market plays a vital role in the national economy. It plays a model 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 saving. Capital market also allows altering liquidity position, risk of their prospective portfolios in response to availability of information and marketability of securities.

The primary motive for buying a stock is to result it subsequently at a higher price. In many cases dividend will be expected also. Dividend and price changes are the principal ingredients in what investors regard as return in yields (Fisher, 1990). By providing 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).

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. Contrary on such stock at a given time that 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).

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

1. 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.
2. Security markets aid the digestion of new security issues and facilitated their successful floatation.

3. 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.
4. 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.

2.2 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 dividend in to two groups, fundamental and technician." (Reilly, 1986)

2.2.1 Convention or Classical Approach

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

2.2.1.1 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 steam 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)

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).

Fundamental analysis use 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.

2.2.1.2 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).

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:

1. Market value is determined by interaction of demand and supply.
2. Demand and supply are governed by numerous factors, both rational and irrational.
3. Security prices tend to move in trends that persist for an appreciable length of time despite minor fluctuations in the market.
4. Changes in trends are caused by shifts in demand and supply.
5. Shift in supply and demand, no matter why they occur, can be detected sooner or later in charts of market transactions.
6. 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 marker will move sideways in what is called a "trading range".

Charles Dow is the greatest protagonist of this theory. Since the following of this theory anticipate 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.

2.2.2 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 to 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)

"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)

Generally, markers 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 absorb 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. EMI, 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)

"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)

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 prices 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 transferred cost of investment funds refers operationally efficiency.

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

1. 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.
2. 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)
3. Information is costless and widely available to market participants at approximately the same time.
4. Information is generated in a random fashion such that announcements are basically independents of one another.
5. Transportations cost such as sales commissions on securities are ignored.
6. Investors react quickly and accurately to the new information causing stock price to adjust accordingly. (Johns, 1998)
7. 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).

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

in 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 ton the basis of available information (Weston & Copland, 1996). 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). The main assumptions of market efficiency are:

a) All investors have costless access to currently available information about the future.
b) All investors are good analyst.
c) 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:

1) Weak-form market efficiency
2) Semi-strong form market efficiency
3) Strong -form market efficiency

1) 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). 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). 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.

2) 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). 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.

3) 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 weal 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 from of market efficiency is the strong form which asserts that prices fully reflect all information public and non public." (John, 1943). 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.

2.2.2.1 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).

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 t 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).

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.

2.3 Economic Liberalization and Capital Market Development

As a precondition to economic liberalization, the Industrial Enterprise Act was enacted in 1992 and Foreign Investment and Technology Transfer Act came into effect since 1992. Since 1992 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 1992 was also enacted with a view to provide non-banking securities to the people on 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

1992 introduced various reforms in order to encourage the establishment of corporate enterprises and guaranteed the non-nationalization of private sector industrial organization.

In August1992, 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 settlement with India in its status quo ante, new democratic constitution was enacted, which enshrined in its directive principle to previous conducive for the 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 financial sector and develop capital market along with the economic liberalization in the country for private sector growth. As a result of new strategy some more joint venture companies were opened in the country and Citizen Investment Trust was established as a pioneering market institution in the capital market.

2.4 Monetary Policy Implication on Capital Market Development

It was realized after the restoration of 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 economy policy, the newly elected government followed the policy of privatizations of industrial and commercial undertaking retaining the public 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 since Fiscal Year 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 banks' 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 also came into existence. NRB in an effort to maintain the price stability to an acceptable level has issue 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.

2.5 Review of Literature

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

2.5.1 Review of Foreign Studies

Numerous of research studies have been made 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 of 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:

In 1927, Slutsky 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 for more than two decades.

In the middle of 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 be traced on French mathematician Louis Bachelier whose PhD dissertation “the theory of speculation” tested the model in commodity speculation in France was a “fair game.” He 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 1960s.However large number of studies were made most of which are briefly reviewed below.

In 1953, Kendall made significant contribution to advance 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.In 1965, Samuelson, 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 to validate hypotheses while some other studies refuted this theory as a true description of the market. This research applies various tools and mechanical rules, details of that have been presented below.

Roberts (1959) conducted simulation tests by comparing the accumulation of random numbers and the Dow- Jones Industrial Average Index (DJIAI) for about one year. Researcher observes the first difference of two series and it produce 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.

In 1965, Fama 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 significantly different from zero and lagged price changes show some degree of dependence.

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).

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).

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).

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.

2.5.2 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 (Pradhan, 1993) Shareholder's Democracy and Annual General Meeting Feedback (Shrestha,1995) and the Dividend Policy and Value of Firm in Small Stock Market (Manandhar, 1998).

The study about stock market behavior in a small capital market in Nepalese context(Pradhan, 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. This paper is based on pooled cross section analysis of 55 observations. 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, that

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) 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 earnings per share and analyze liquidity, leverage, earnings and coverage of each portfolio in terms of large and smaller and also average ratios are computed.

He concludes the result indicate that larger stock have longer price earnings ratio of market value to book value equity, lower liquidity, lower profitability and smaller dividends. Price earnings 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 earnings 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 earnings 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)

The study of Shareholder's Democracy and Annual General Meeting (Shrestha, 1995) critically analyzed the situation of common stock investors. He further emphasizes the need of separate act regarding the protection of shareholder' 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). 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. 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.

(Aryal, 1995) 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.

(Bhattarai, 2005) carried out a study on impact of securities exchange centre on capital mobilization with special reference to the government securities and share market in Nepal. The objective of the study was to evaluate the significant features of government securities make to fine out the contribution of securities exchange centre. Researcher concluded that securities exchange centre has mobilized long term capital required to the new companies launch the development activities in the country to provided the investment opportunities to investor though the primary market.

(Timilsina, 2000) 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.

(Pradhan and Upadhaya, 2002) conducted a study on the efficient market hypotheses and the behavior of the share prices in Nepal. The objective of the study was to make comprehensive investigation of weak and other form of efficient market hypotheses. Different statistical tools were uses in the study serial correlation, the run test, weighted mean, median, chi-square test, and spear's rank correlation. Twenty- three equity shares listed and activity traded in the Nepal Stock Exchange Ltd. The main factors affecting share prices perceived by the respondents were dividends, retained earnings, bond share, and right issue. The study also found more volatile than expected dividends. The study also found that the shareholders in high bracket did not prefer retained earning instead of dividend.

(Poudel, 2006) study on share price behavior of listed companies in Nepal. The study was conducted with the objective to test the daily share price behavior of listed companies in Nepal. The sample for the study comprised of 21 companies representing from each sector listed in Nepal stock exchange. This study was base on the secondary data. Different statistical tools like serial correlation and run test were uses. Researcher concluded that NEPSE index showed a steady increase in the later month of the study period, which also shows the better performance of NEPSE. Stock market performance was more or less market performance was steadily increasing with the increase in the number of listed companies. The badly affected sectors were

hotels, trading, manufacturing, & processing sector due to different reasons. The NEPSE index showed a better performance during the study period. NEPSE index of commercial banks was in increasing trend as compared to the other sectors.

(Bhattarai,2005) carried out a study on share market in Nepal. The sample for the study comprised of 12 companies this study was base on secondary data. Different statistical tools and financial tools were applied. Researcher conducted that the investors in capital market through broker's network raised the transaction volume of share and investors had facilitated by providing alternatives to make diversified portfolio.

(Manandhar, 2007) 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 2002/03 to 2006/07. 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, 2007) 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. The study 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.

(Ghimire, 2008) study on stock price behavior in Nepal included major aspect of EMH and reasons on non- random price change phenomenon. The non-random share prices changes phenomenon is because stock market is in early stage of development and excessively speculative behavior of the investors. With respect to causes of deficiency in the development of stock market in Nepal the broker gave the first priority to government policy. The major cause of deficiency in stock market was government policy regarding investment and the company information. Bonus and right share issue had been regarded as the most significant observation in the list of observation of researcher

2.5.3 Research Gap

Review of literature reveals that the major areas are comparative analysis on stock price behavior of Nepalese commercial bank, market price per share, earning per share, dividend per share to coverage the whole financial position of the bank.

These studies show the guideline for investor. Previous research are concerned with analysis of the stock price behavior and trend analysis, but this research is about comparative analysis of different stock price behavior of commercial bank. So this study can help the people who want to invest in primary and secondary share market.

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 in the 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 has revised some previously used methods as well as 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 ones with high trading value and high frequency of trading in the security market that 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 contribute in the practical side of capital and 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.

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.

3.1 **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 2003/04 to 2007/08. 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
- 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.

Then clearly,

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

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

So that the effective sample becomes

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

$\underline{+\ +} = \underline{+\ +} \ldots\ldots\ldots\ldots\ldots\ldots \underline{+}$

1 2 3…….r

Definition of Run

A run is a sequence of similar symbols.

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

1.Test Statistic

For large sample case, the sample distribution or r is approximately normal with mean μ_r and variance σr^2.

Symbolically,

$r \approx N(\mu_r, \sigma r^2)$

Where,

μ_r = Mean = $\dfrac{2n_1n_2}{n_1+n_2} + 1$

σr^2 = variance = $\dfrac{2n_1n_2(2n_1n_2-n_1-n_2)}{(n_1+n_2)^2 (n_1+n_2-1)}$

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

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

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.

3.4.1.6 Critical Value:

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

3.4.1.7 Decision Rule:

Reject H_0 V_s H_1 at x 100% level of significance, if $p_0 \leq \propto$ 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 = $\mu_r \pm Z_{\propto\backslash 2x}\sigma r$

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:

$$\overline{X} = \frac{\sum X}{N}$$

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:

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

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;

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

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 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 at 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 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 such as earning price, market price, dividend price, 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.

4.2.1Earning 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.	49.45	49.05	47.91	59.24	60.66	53.26
2. Nepal Investment Bank	39.56	51.70	39.50	59.35	62.57	50.54
3. NABIL Bank Ltd.	84.66	92.61	105.49	129.21	137.08	109.81
4. Standard Chartered Bank, Nepal	149.30	143.55	143.14	175.84	167.37	155.84
5. Everest Bank Ltd.	29.90	45.58	54.22	62.78	78.4	54.18

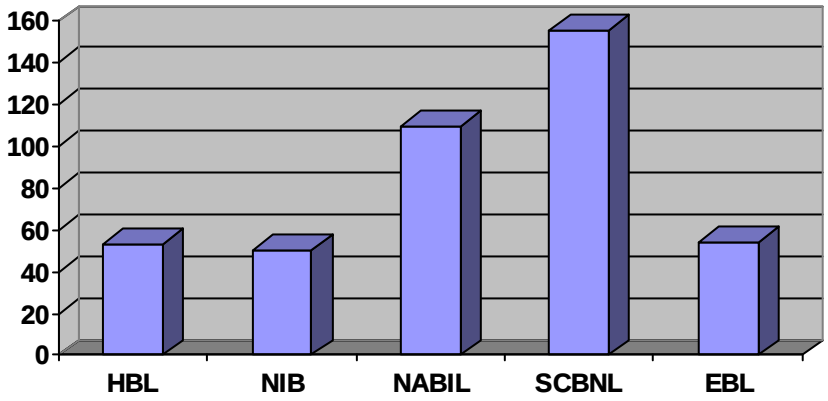
The average EPS of all sample banks are more than Rs. 50. The market leader in this segment is SCBL with the average EPS of Rs. 155.84. The lowest average EPS is Rs. 50.54 of NIB. The SCBNL is the only bank that has EPS more than Rs. 100 in the period

of 5 years. Other than SCBL, only NABIL has EPS more than Rs. 100 in the years 2005/06, 2006/07 and 2007/08. The lowest EPS recorded was Rs. 29.90 of EBL in the year 2003/04. The reason of this low EPS was due to the fact that the earning declined sharply in the year and there was a declared 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.

Fig.4.1:

EPS of sample Banks



The figure clearly shows that the average EPS of SCBNL is the highest among all 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.

4.2.2 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 by the number of ordinary shares outstanding. That is,

$$\text{Dividend Yield} = \frac{\text{Dividend available to ordinary shareholders}}{\text{No. of stocks outstanding}}$$

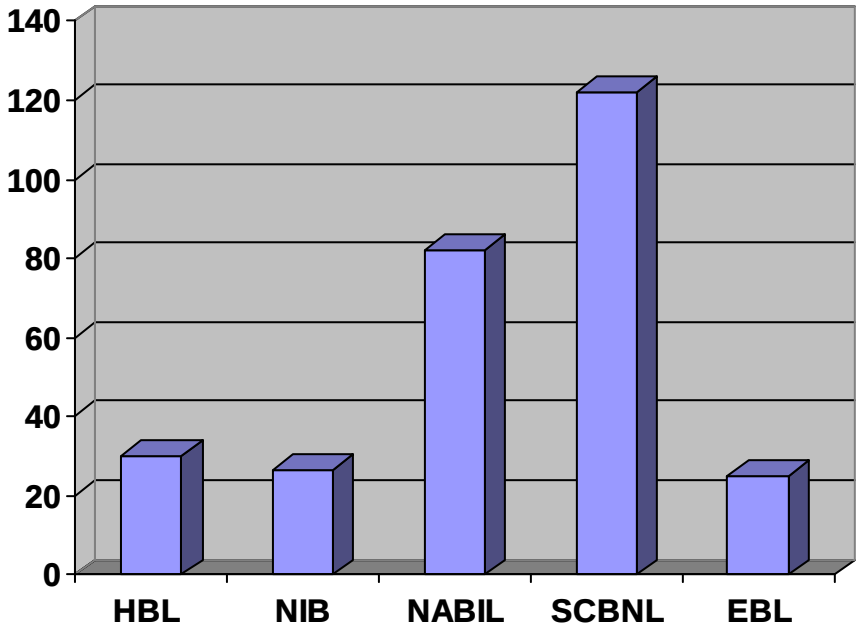
Table 4.4:
DPS of the sample banks (in RS.)

Years / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	**Average**
1. Himalayan Bank Ltd.	25	20	31.58	35	40	30.32
2. Nepal Investment Bank	20.10	15	12.5	55.46	30	26.61
3. NABIL Bank Ltd.	50	65	70	85	140	82
4. Standard Chartered Bank, Nepal	110	110	120	140	130	122
5. Everest Bank Ltd.	20	20	20	25	40	25

Standard Chartered Bank seems prominent in declaring large amount of dividend. The average dividend of SCBNL is Rs 122 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. Everest bank has the lowest DPS in average Rs.25 only. The following figure presents the average DPS of sample banks during the period of 5 years.

Fig 4.2*:*

DPS of sample Banks



The figure clearly states that the SCBNL is on 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.

4.2.3 Market Price per Share

The market price of share is very important for all stakeholders. 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:

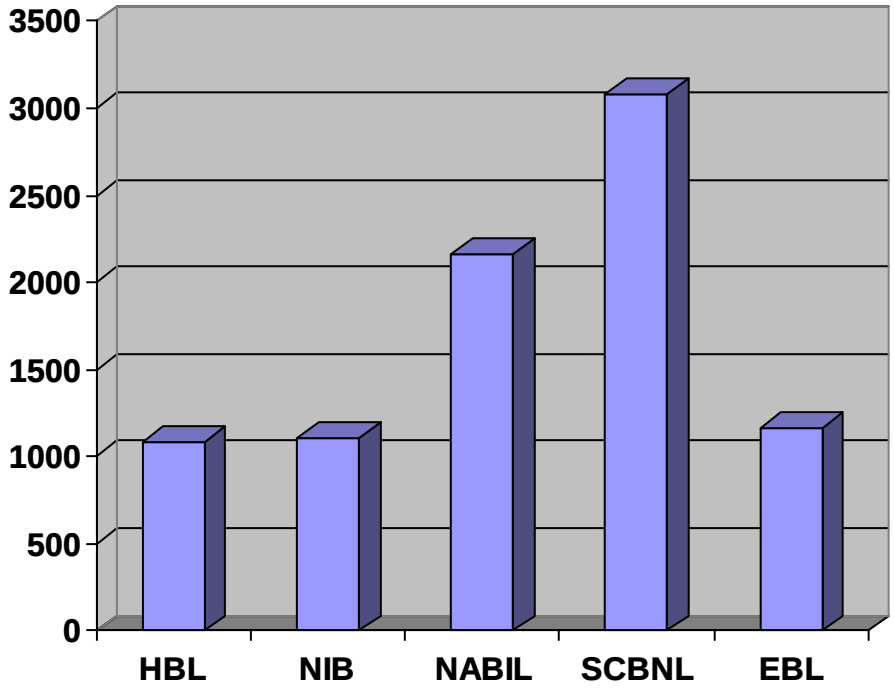
MPS of the Selected Banks (in RS.)

Years / **Banks**	2003/04	2004/05	2005/06	2006/07	2007/08	**Average**
1. Himalayan Bank Ltd.	836	840	920	1100	1740	1087.2
2. Nepal Investment Bank	795	940	800	1260	1729	1104.8
3. NABIL Bank Ltd.	735	1000	1505	2240	5050	2160
4. Standard Chartered Bank, Nepal	1640	1745	2345	3775	5900	3081
5. Everest Bank Ltd.	445	680	870	1379	2430	1160.8

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. 3081. That means SCBNL is showing good performance over this period. The lowest of all banks is the HBL, which has average MPS of Rs. 1087.2. The market prices of all the banks are in the increasing trend except for decrease in market price of NIB in 2005/06.

Fig 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.

4.2.4 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.

$$\text{P\E ratio} = \frac{\text{Market price of a share}}{\text{Earning price per share}}$$

Table 4.6:

Price earning ratio of sample banks

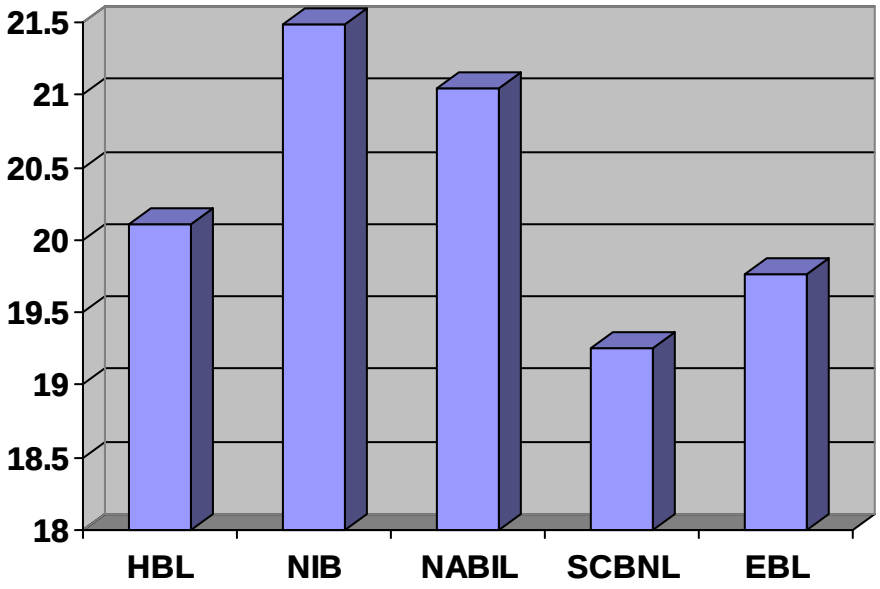
Years / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	**Average**
1. Himalayan Bank Ltd.	16.91	17.12	19.20	18.57	28.69	20.11
2. Nepal Investment Bank	20.10	18.18	20.25	21.23	27.63	21.48
3. NABIL Bank Ltd.	8.68	10.80	14.27	17.34	36.84	21.05
4. Standard Chartered Bank, Nepal	10.98	12.16	16.38	21.47	35.25	19.25
5. Everest Bank Ltd.	14.9	14.9	16.0	22.0	31.0	19.76

The P\E ratio is an important indicator of the performance of stock in stock market. In this criterion, the NIB has the highest average P\E ratio among all samples. It has 20.48 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. It's average P\E ratio is only 19.25 throughout the period of study and is less volatile. 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.

Fig. 4.4:

Price Earnings Ratio of Sample Banks



4.2.5 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:

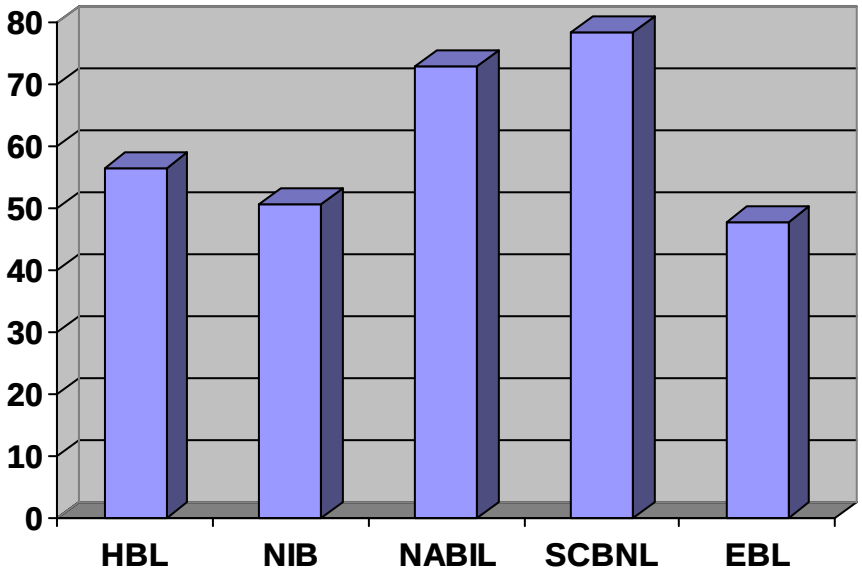
Dividend Payout Ratio of Sample Banks

Years / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	**Average**
1. Himalayan Bank Ltd.	50.56	40.78	65.91	59.08	65.94	56.45
2. Nepal Investment Bank	50.81	29.01	31.65	93.45	47.95	50.57
3. NABIL Bank Ltd.	59.10	70.19	66.38	65.78	102.13	72.72
4. Standard Chartered Bank, Nepal	73.68	76.63	83.83	79.62	77.67	78.29
5. Everest Bank Ltd.	66.89	43.89	36.89	39.82	51.02	47.70

On average, the SCBNL has the highest rate of payout among all selected samples. The table shows the average payout ratio of SCBNL is 78.29% while the second highest payout ratio is 72.72% of NABIL. The highest payout ratio among all samples during the period of study was 102.13 of NABIL in the year 2007/08. 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 59.10% payout ratio that has been increasing 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 HBL 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.

Fig 4.5

Dividend Payout Ratio of Sample Banks



4.2.6 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,

$$\text{Dividend Yield} = \frac{\text{Dividend per share}}{\text{Market value per share}}$$

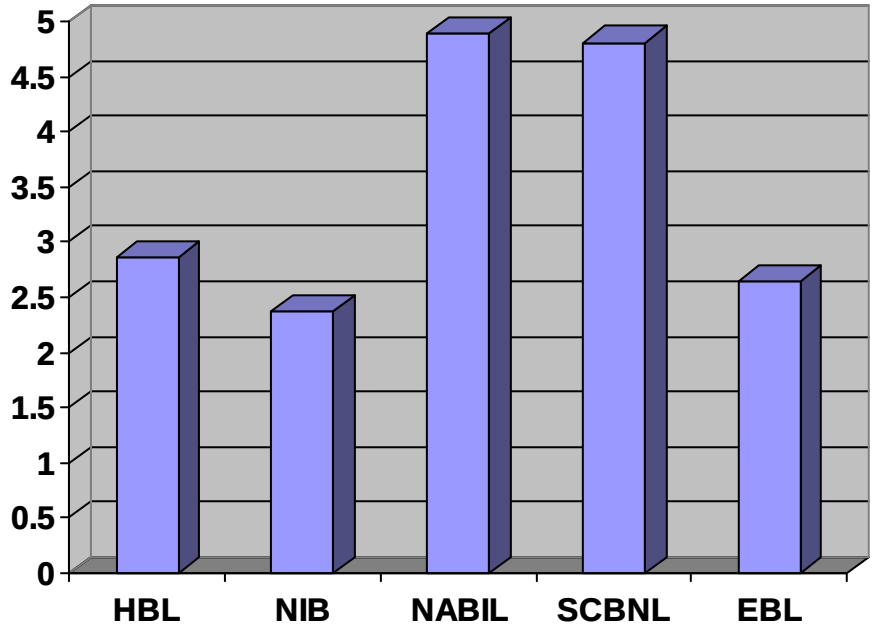
Table 4.8:
Dividend Yield of Sample Banks

Years / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	**Average**
1. Himalayan Bank Ltd.	2.99	2.38	3.43	3.18	2.31	2.86
2. Nepal Investment Bank	2.53	1.61	1.56	4.40	1.74	2.37
3. NABIL Bank Ltd.	6.80	6.50	4.65	3.79	2.77	4.90
4. Standard Chartered Bank, Nepal	6.71	6.30	5.12	3.71	2.20	4.81
5. Everest Bank Ltd.	4.49	2.94	2.31	1.81	1.65	2.64

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 NABIL 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 yield rate of stock always has the negative impact on the movement of stock price. The yield rate of NIB is very low comparative to other banks. It's share is yield only 2.37% 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.

Fig: 4.6:

Dividend Yield of Sample Banks



4.2.7 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:

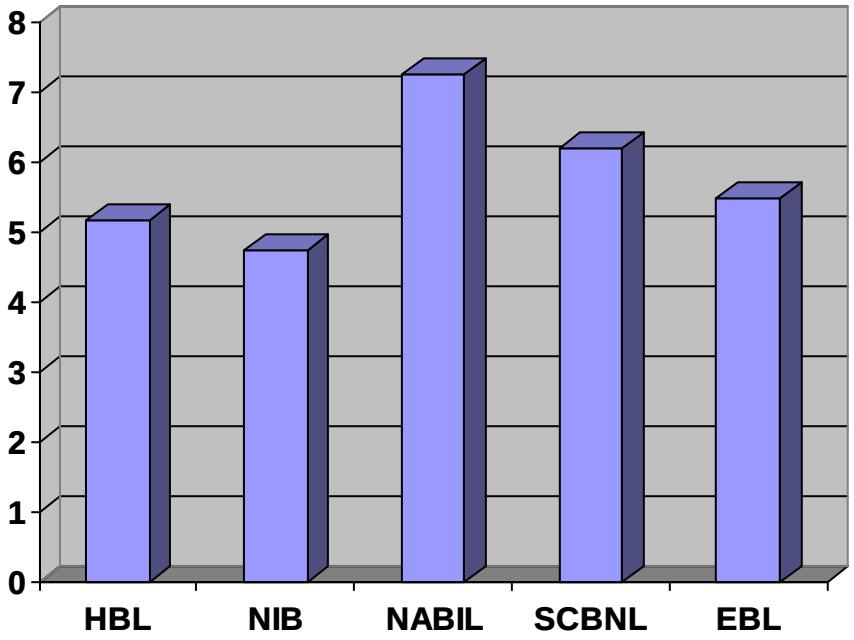
Earning Yield of Sample Banks

Years / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	**Average**
1. Himalayan Bank Ltd.	5.92	5.84	5.21	5.39	3.49	5.17
2. Nepal Investment Bank	4.98	5.50	4.94	4.71	3.62	4.75
3. NABIL Bank Ltd.	11.52	9.26	7.01	5.77	2.71	7.25
4. Standard Chartered Bank, Nepal	9.10	8.23	6.10	4.66	2.84	6.19
5. Everest Bank Ltd.	6.72	6.70	6.23	4.55	3.23	5.49

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 7.25% of NABIL and the lowest yield is 4.75% of NIB. In individual yield, the stock of NABIL had highest yield of 11.52% in the year 2003/04 and also NABIL had the lowest yield of NABIL 2.71% in the year 2007/08. The average earning yield is presented in the following figure.

Fig. 4.7:

EY of Sample Banks



4.2.8 Market Price to Book Value Ratio

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

MV/BV Ratio = Market Value per Share

Book Value per Share

Table 4.10:

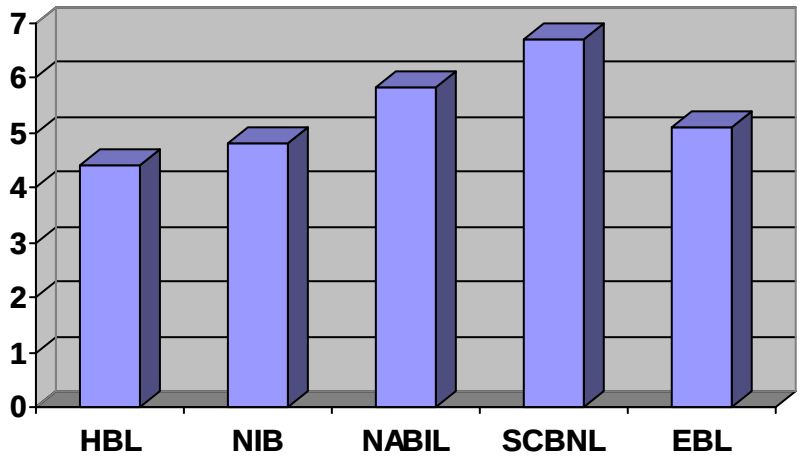
MV/BV Ratio of Sample Banks

Years / Banks	2003/04	2004/05	2005/06	2006/07	2007/08	**Average**
1. Himalayan Bank Ltd.	3.37	3.40	3.84	4.81	6.57	4.41
2. Nepal Investment Bank	3.68	3.81	3.98	5.26	7.38	4.82
3. NABIL Bank Ltd.	2.75	3.32	4.46	5.87	12.8	5.84
4. Standard Chartered Bank, Nepal	4.07	4.37	5.55	8.06	11.52	6.71
5. Everest Bank Ltd.	2.96	3.97	3.96	6.34	8.30	5.11

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 6.71 while the lowest ratio is 4.41 of HBL. In the year 2007/08 the stock of SCBNL has 11.52 times ratio which means that the market price of the share is 11.52 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.

Fig.4.8:

MV/BV Ratio of Sample Banks



4.2.9 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.

Liquidity Ratio = Current Assets

Current Liabilities

Table 4.11:

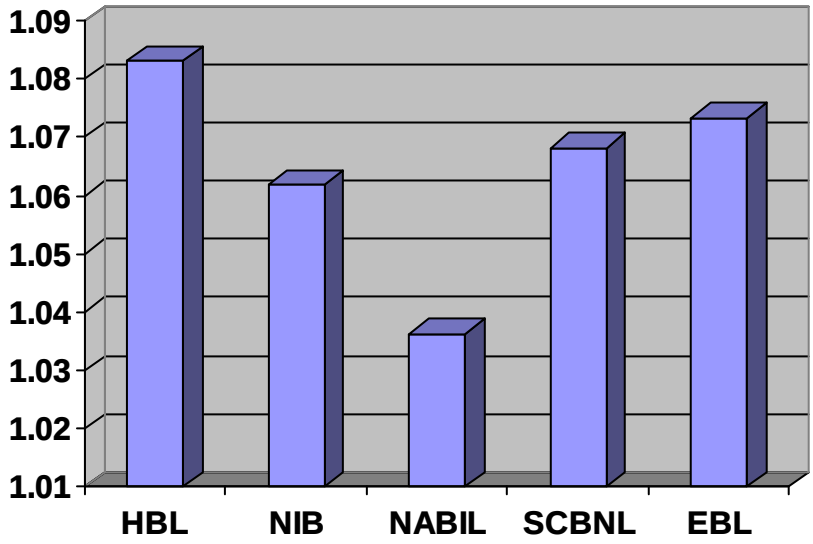
Liquidity Ratio of Sample Banks

Years / **Banks**	2003/04	2004/05	2005/06	2006/07	2007/08	**Average**
1. Himalayan Bank Ltd.	1.0111	1.0091	1.6328	0.6995	1.0623	1.0831
2. Nepal Investment Bank	1.0534	1.0383	1.0569	1.0838	1.0770	1.0619
3. NABIL Bank Ltd.	1.0697	1.0749	.9666	.9997	1.0702	1.0362
4. Standard Chartered Bank, Nepal	1.0611	1.0614	1.0745	1.0688	1.0752	1.0682
5. Everest Bank Ltd.	1.0676	1.0629	1.0942	1.0756	1.0668	1.0734

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



4.2.10 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:

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

Table 4.12*:*

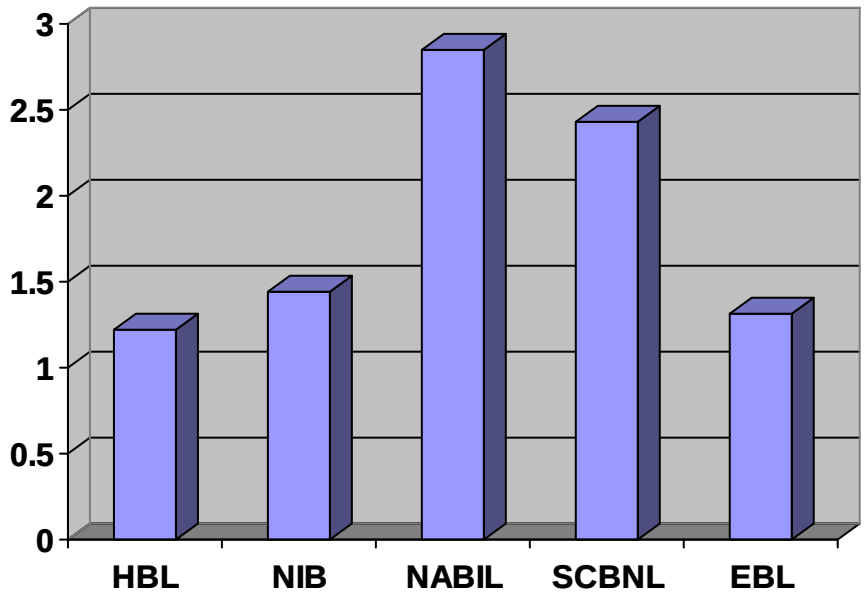
ROA of Sample Banks

Years / **Banks**	2003/04	2004/05	2005/06	2006/07	2007/08	**Average**
1. Himalayan Bank Ltd.	.91	1.06	1.11	1.55	1.47	1.22
2. Nepal Investment Bank	1.27	1.13	1.42	1.61	1.79	1.44
3. NABIL Bank Ltd.	2.51	2.72	3.06	3.23	2.72	2.85
4. Standard Chartered Bank, Nepal	2.42	2.27	2.46	2.56	2.42	2.43
5. Everest Bank Ltd.	1.2	1.05	1.4	1.5	1.4	1.31

The ROE of NABIL is the highest with 2.85% while the lowest ROA is 1.22% 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. 2003/04 to 2007/08.

Fig 4.10:

ROA of Sample Banks



4.2.11 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:

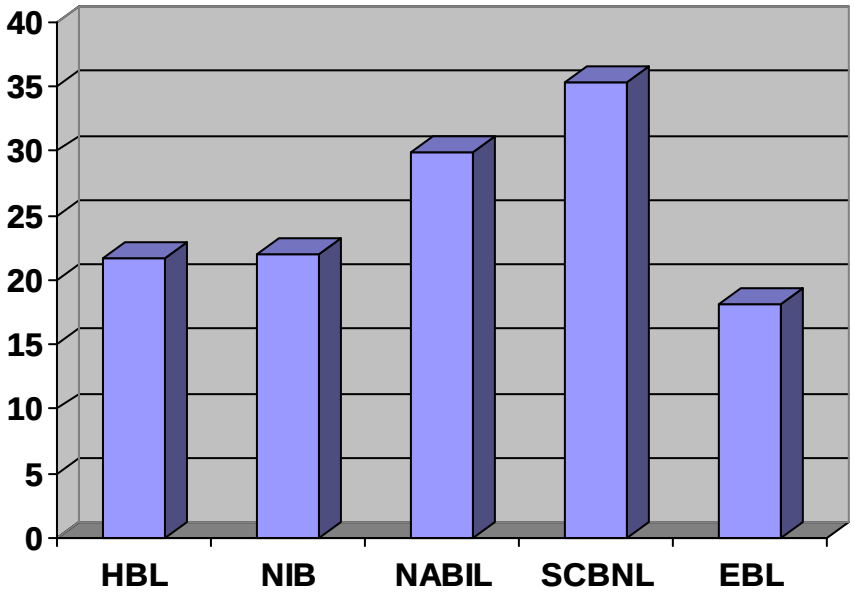
ROE of Sample Banks

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	18.29	20.88	19.67	24.77	26.69	22.06
3. NABIL Bank Ltd.	20.69	30.77	31.30	33.91	32.79	29.89
4. Standard Chartered Bank, Nepal	37.03	35.96	33.89	37.56	32.68	35.42
5. Everest Bank Ltd.	15.34	18.84	17.12	19.82	19.57	18.14

The ROE of SCBNL is the highest among all selected banks. SCBNL's average ROE is 35.42%. The lowest ROE is 18.14 of HBL. 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.

Fig.4.11:

ROE of Sample Banks



4.3 Analysis of Relationship of Price with Earnings and Dividend

This study tries to analyze whether earning and dividend is directly affected 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 share price also increases. This relationship can be measured through various statistical tools. Amongst them, coefficient of correlation (Karl Pearson's) is widely used.

4.3.1 Coefficient of Correlation between Price and Earning

Correlation analysis establishes the closeness of relationship between two 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.

A) Himalayan Bank Limited

Table 4.14:

Correlation between EPS and MPS of Himalayan Bank Limited

Year	**EPS**	**MPS**
2003/04	49.45	836
2004/05	49.05	840
2005/06	47.91	920
2006/07	59.24	1100
2007/08	60.66	1740
Average	53.26	1087.2
Standard Deviation	6.15	379.75
Coefficient of Correlation	0.83	

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. 53.26 and the average market price per share is 1087.2. The standard deviation of earning per share and market price per share is 6.15 and 379.75 respectively. The standard deviation shows the volatility of EPS and MPS. The coefficient of correlation between earning per share and market price per share is 0.83. This shows that EPS and MPS are positively correlated.

A) Nepal Investment Bank

Table 4.15:

Correlation between EPS and MPS of Nepal Investment Bank

Year	**EPS**	**MPS**
2003/04	39.56	795
2004/05	51.70	940
2005/06	39.50	800
2006/07	59.35	1260
2007/08	62.57	1729
Average	50.54	1104.80
Standard Deviation	10.81	396.78
Coefficient of Correlation	0.92	

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 Rs. 50.54 and the average market price per share is 1104.80. The standard deviation of earning per share and market price per share is 10.81 and 396.78 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 0.92. This shows that EPS and MPS are highly positively correlated.

B) NABIL Bank Limited

Table 4.16:

Correlation between EPS and MPS of NABIL Bank Limited

Year	**EPS**	**MPS**
2003/04	84.66	735
2004/05	92.61	1000
2005/06	105.49	1505
2006/07	129.21	2240
2007/08	137.08	5050
Average	109.81	2106
Standard Deviation	22.73	1742.78
Coefficient of Correlation	0.88	

The table shows the earning per share and market price per share of NABIL Bank Limited from the year 2003/04 to 2007/08. The average of earning per share is Rs. 109.81 and the average market price per share is 2106. The standard deviation of earning per share and market price per share is 22.73 and 1742.78 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 0.88. 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	149.30	1640
2004/05	143.55	1745
2005/06	143.14	2345
2006/07	175.84	3775
2007/08	167.37	5900
Average	155.84	3081
Standard Deviation	14.9	1791.05
Coefficient of Correlation	0.76	

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. 155.84 and the average market price per share is 3081. The standard deviation of earning per share and market price per share is 14.9 and 1791.05 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 0.76. 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	29.90	445
2004/05	45.58	680
2005/06	54.22	870
2006/07	62.78	1379
2007/08	78.4	2430
Average	54.18	1160.8
Standard Deviation	18.19	788.44
Coefficient of Correlation	0.94	

The table shows the earning per share and market price per share of Everest Bank Limited from the year 2003/04 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.

4.3.2 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	25	836
2004/05	20	840
2005/06	31.58	920
2006/07	35	1100
2007/08	40	1740
Average	30.32	1087.2
Standard Deviation	7.94	380.29
Coefficient of Correlation	0.83	

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. 30.30 and Rs. 1087.2. The standard deviation of dividend per share and market price is 7.9 and 380.29. The coefficient of correlation between dividend per share and market price per share is 0.83. 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	20.10	795
2004/05	15	940
2005/06	12.5	800
2006/07	55.46	1260
2007/08	30	1729
Average	26.61	1104.8
Standard Deviation	17.46	396.78
Coefficient of Correlation	0.53	

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. 26.61 and Rs. 1104.8. The standard deviation of dividend per share and market price is 17.46 and 396.78. The coefficient of correlation between dividend per share and market price per share is 0.53. This shows that DPS and MPS are positively correlated.

NABIL Bank Limited

Table 4.21:

Correlation between DPS and MPS of NABIL Bank Limited

Year	**DPS**	**MPS**
2003/04	50	735
2004/05	65	1000
2005/06	70	1505
2006/07	85	2240
2007/08	140	5050
Average	82	2106
Standard Deviation	34.75	1767.23
Coefficient of Correlation	0.99	

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. 82 and Rs. 2106. The standard deviation of dividend per share and market price is 34.75 and 1767.23 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 0.99. 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	1640
2004/05	110	1745
2005/06	120	2345
2006/07	140	3775
2007/08	130	5900
Average	122	3081
Standard Deviation	13.04	1791.05
Coefficient of Correlation	0.75	

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. 122 and Rs. 3081. The standard deviation of dividend per share and market price is 13.04 and 1791.05. The coefficient of correlation between dividend per share and market price per share is 0.83. This shows that DPS and MPS are positively correlated.

C) Everest Bank Limited

Table 4.23:

Correlation between DPS and MPS of Everest Bank Limited

Year	**DPS**	**MPS**
2003/04	20	445
2004/05	20	680
2005/06	20	870
2006/07	25	1379
2007/08	40	2430
Average	25	1168
Standard Deviation	8.66	788.49
Coefficient of Correlation	0.97	

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. 30.30 and Rs. 1087.2. The standard deviation of dividend per share and market price is 7.9 and 380.29. 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 0.97. This shows that DPS and MPS are highly positively correlated.

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

The simple regression equation 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,

$\sum X=423$, $\sum Y=8594$, $\sum YX=893791$, $\sum X^2=44661$

Regression equation of MPS on DPS,

$\sum X=286$, $\sum Y=8594$, $\sum YX=644472$, $\sum X^2=23862$

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	129.17	18.79	X (EPS)
Y	553.15	20.38	X (DPS)

Sources: appendix IV

When independent variable EPS and DPS is zero, the value of dependent variable Y becomes 129.17 and 553.15 respectively. Similarly, if per rupee change in independent

variable then the rate of change in dependent variable is Rs. 18.79 and Rs. 20.38 respectively. It also shows the positive relationship between MPS and EPS and also MPS and DPS respectively.

4.3.4: 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)

$\sum X_1Y = a\sum X_1 + b_1\sum X_1^2 + b_2\sum YX_1$ …… (iii)

$\sum X_2Y = a\sum X_2 + b_1\sum YX_2 + b_2\sum X_2^2$ ……. (iv)

Here,

$\sum Y = 8594$, $\sum X_1 = 423$, $\sum X_2 = 286$, $\sum YX_1 = 893791$,

$\sum X_1^2 = 44661$, $\sum YX_2 = 644472$, $\sum X_2^2 = 23862$, $\sum X_1X_2 = 32342$

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	162.92	18.56	-0.25	.99	201.12

Sources: appendix IV

Now, we have the regression equation as $Y = 162.92 + 18256X_1 - 0.25X_2$

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 18.56 and -0.25 which shows that increase or decrease in rupee 1 EPS and DPS leads to increase or decrease of RS. 18.56 And RS. (25) 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.

4.4 Analysis of Primary Data

In this section, the collection 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, it was asked to 12 brokers 60 investors and public too. The analysis of primary data was classified into analysis of opinion survey and test of hypothesis.

4.4.1 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 no. 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 from public and 12 were 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 phenomenon 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 no. 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**

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 the following two groups.

Table no. 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**

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

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 no. 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**

In the group of investors, 69% of investors were aware of investment and rests of 29% were 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 no. 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**

Most preferred sector to invest

In this present situation 135 companies are listed in NEPSE. Large numbers of company's shares of different sectors were available for investment. In such of mass alternatives, investors can sacrifice 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 no. 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**

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 others respectively.

Satisfaction from securities investment

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

Table no. 4.32:

Satisfaction from securities investment

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

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 no. 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**

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 have invested in different sectors. Banks and other financial institutions are being 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 tried to know the main cause for Nepalese people to be reluctant to invest in securities.

Table no. 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**

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 no.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**

In this research, 52% of investors have invested for capital gain. 24% of investors invest for dividend. Similarly,13% for social status and 11% for management position.

Responsible for NEPSE performance

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

Table no. 4.34:

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**

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

4.4.2 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**

Formation 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 χ^2 i.e. 1.9669 is lower than tabulated value of χ^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 order word, there is 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**

Formation 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 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 χ^2 i.e. 1.2477 lower than tabulated value of χ^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 other word, there is no 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 4.3:

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**

Formation 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 χ^2 i.e. 21.6963 more than tabulated value of χ^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 association between the people with academic background of management and economics and securities investment.

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 no. 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**

Formation 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 χ^2 i.e. 2.4874 lower than tabulated value of χ^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.

4.4.3 Major Findings

- The total number of transaction is in increasing trend during the study period. In total the number of transaction in commercial bank is the highest. Second position is occupied by the development bank in terms of number of transaction. Thus, the investor is encouraged to invest in this sector.

- The number of EPS, DPS and MPS of commercial bank are in increasing trend from 2003 /04 to 2007/08.
- The number of peoples preferred sector to invest is in banking sector than other sector like insurance, finance, hotels, manufacturing & trading etc.
- Most of the investors are satisfied with the earning from investment.
- Most of the population was interested to invest in banking sector.
- Most of the investors in view that the government role is important for smooth functioning of Bank.
- Regarding their preference of investment sectors, Majority of the people were found preferring to invest in Banking and finance company.
- The total number of transaction is in increasing trend during the study period.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Security market is one of the constituents of capital market. It has wide embrace 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. liquidity markets makes less expensive to tradable equities and also reduces disincentives for the investors. It also facilitated to invest in highest return projects and best productivity growth. Moreover liquidity makes easier to sell. Like liquidity, market efficiency is another most profound idea to affect the investment decision process in security market. The security values are also determined by investor's expectation about earning risk and so on. Values are going to be changed in efficient market 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 cannot 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 the increasing trend were lower during the first two years. The number was 108 in F\Y 2003/04, 114 in F\Y 2004/05, 125 in F\Y 2005/06 and 135 in both F\Y 2006/07 and F\Y 2007/08 respectively. The market capitalization increased from Rs. 35240.40 million in F\Y 2003/04 to Rs 186301.28 million. There was fluctuation in percentage of turnover to market capitalization, which eventually increased from 1.63 in F\Y 2003/04 to 7.35 from F\Y 2005/06, then there was dramatically decrease in F\Y 2005/6 and again there was slightly increase from 3.57 to 4.49 in F\Y 2007/08. The percentage of turnover to paid up value also was in increasing trend for initial three years but it has been down and then up in later two years. The paid-up values of listed companies are in increasing trend. The paid-up value was Rs 118998 million F\Y 2003/04 and Rs 21746 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 summarize table presented below gives the exact idea about the companies' performance in major aspects.

5.2 Conclusion

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 in order to find 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 development of stock market is not in the satisfactory level. Only the banking sector is having the high performance.
3. The market price has high variability during study period. SCBNL has high average price of Rs.3081 and HBL has the lowest market price of Rs.1087.2. This high market price of shows that SCBNL has the better performance than others.
4. 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.155.84 whereas

Nepal Investment Bank Limited has the low EPS of Rs.50.54. The better the earning, the better is the performance.

5. There is a fluctuation in dividend per share. SCBNL shows high average dividend of Rs.122 whereas EBL shows the lowest of all i.e. Rs.25. The investor who is eager to invest for the long term chooses the company with high dividend.
6. All the banks have the healthy and positive P\E multiples. Earning and price relation shows the mixed behavior. NIB has the highest P\E multiple among the entire sample banks i.e. 21.48 which shows a good performance due to their managerial efficiency and professional management whereas NABIL, SCBNL and HBL has low but consistent P\E ratio with average P\E ratio of 17.58, 19.25 and 19.76 respectively.
7. Among the sample banks SCBNL has the higher average dividend payout ratio of 78.29 in average. EBL has the lowest dividend payout ratio of 47.70.
8. The earning yield, which measures that yield of outstanding stock, of NABIL is the highest with all selected sample banks, which was 7.25%. Similarly, the lowest average earning yield was registered by NIB with 4.75%. However, each bank has good earning yield which is one of the reasons why banking sector is domination the stock market. On the other hand, the dividend yield, which measures the return of each outstanding stock, is irregular and is in decreasing tend 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 NABIL has the highest average with 4.90% while the dividend yield of NIB is the lowest with 2.37%. The study found a mixed behavior between price and dividend, price and earning during the period of study.
9. The market value to book value that shows the efficiency of stock price in market than the book. In this regard, all the selected samples have ratio greater than 4. These shows the market prices of banks are exceeding their book values. The stock of SCBNL is priced 6 times more than its book value. The lowest ratio is of HBL with 4.41 times which can be considered satisfactory.
10. 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.

11. 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.
12. 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.
13. 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 0.94, which is slightly higher than that of NIB. It indicates that if EPS increases by 100%, MPS will also increase by 94% and vice-versa. All the sample banks have positive correlation between EPS and MPS.
14. The coefficient of correlation between DPS and MPS shows mixed pattern. The degree of correlation between the DPS and MPS of NABIL is the highest with 0.99. All sample banks are positively correlated in terms of DPS and MPS which can be considered as satisfactory. NIB has the lowest coefficient of correlation with 0.53. It indicates that if the DPS increases by 100%, the MPS will also increase by 53% and vice-versa.
15. During the collection of primary data, discussion with both brokers and investors, it has been seen that they blamed each other regarding their roles and performance.
16. 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.

17. 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.

18. The cause and effect relationship is clearly indicated through regression analysis than by correlation.

19. The regression analysis shows the positive relationship between MPS with EPS and DPS respectively.

5.3 Recommendations

Following recommendations are made based on analysis:

- Since the random walk hypothesis is not accepted by NEPSE market, the rational investors should study the past trend and pattern of price behavior 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 policy 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 sector therefore, 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.
- Due to continuous movement in share price 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

BIBLIOGRAPHY

Arther L. (1984) *Venture's Guide to Investing in Private Companies*, Dow Jones Irwin U.S.A, III

Bajracharya, R.R. (2047 B.S.). Rastriya Banijya Bank : A Comparative performance study. RBB Rajat Jayanti Smarica, Kathmandu: RBB Publication.

Berk, Jonathan B., Richard C. Green & Vasant N; (1999). "*Optimal Investment, Growth options and security returns*", Journal of Finance Vol. 54.

Bhalla, V.K. (1983). *Dynamic of Srtock Markets in Nepal.* Kathmandu: Unpublished Thesis submitted to Central Department of Management. T.U. Kirtipur.

Bhatta, G.P. (1995). Assessment of *the Performance of Listed Companies*. Kathmandu: Unpublished Master's thesis submitted to Central Department of Management. T.U. Kirtipur.

Brown, L. S. (1978). *Earning Changes, Stock Price and Market Efficiency*. Oxford: The Journal of Finance. Vol. XXXIII. No.1.

Doodha, K.S. (1962). *Stock Exchange in Developing Economy*. University of Bombay.

Fama, E. F. (1965). *The Behavior of Stock Market Prices*. Chicago: Journal of Business Finance, Volume 38.

Fama, E. F. (1991). *Efficient Capital Market*: II. Oxford: The Journal of Finance, Vol. XLVI.

Fama, E.F.& Keneth R. French (1999*). "The Corporate Cost of Capital and the Return on Corporate Investment"*, Journal of Finance Vol. 54.

Fisher, D. E. & Ronald J. J (2000). *Security Analysis and Portfolio Management*, Prentice Hall New Delhi.

Fransis, J.C. (1993). *Investment Management*. New York: McGraw Hill Publishing Limited.

Jack Clark, Francis (1997). *Investments: Analysis and Management*, McGraw Hill, USA.

John, P. C. (1990). *Investment analysis and Management*. London: John wiley & sons Publishing Limited.

Joshi, D. (1993). *A study on commercial banks of Nepal with reference to financial analysis of Rastriya Banijya Bank*. Unpublished Master's Thesis (CDM) T.U. Kathmandu.

Kimpton, M.H. (1985). *The Stock Market*: Theories and Evidences. Illinois.

Pandy, I.M. (1994), *Financial management.* India: Vikas Publishing House Pvt. Ltd.

Pathak, R.R. (2001). *A comparative study on financial performance between HBL and NGBL*. Unpublished Master's Thesis (CDM) T.U. Kathmandu.

Poudel, R.C. (1997). *A comparative analysis of financial performance between Nepal Bank Ltd. and Nepal Grindlays Bank Ltd.* Unpublished Master's Thesis (CDM) T.U. Kathmandu.

Poudyal, P. K. (2003). *Study on Share Price Behavior of Joint Venture Commercial Banks*. Kathmandu: Unpublished Thesis submitted to Faculty of Management. Shanker Dev Campus. Putalisadad, Kathmandu.

Pradhan R.S. (1994). *Financial Management Practices in Nepal*. New Delhi: Vikash publishing House.

Pradhan, R.S. (1993). *Stock Market Behavior of Small Capital Market*: In Case of Nepal, Kathmandu: the Nepalese Management Review. Vol.IX:216

Pradhan, R.S. (1994). *Financial Management Practices in Nepal*, Bikash Publishing House. New Delhi.

Sah B. K. (2002). *Capital Structure and Cost of Capital*. Kathmandu: Unpublished Thesis submitted to Central Department of Management. Kirtipur, Kathmandu.

Shakya, S. (2000). *Comparative Analysis of financial performance selected joint venture banks: A case study of NABL and HBL*. Unpublished Master's Thesis (CDM) T.U. Kathmandu.

Sharpe, William F., Alexender J. Gordon& Geffery V. Bailey (1995). *Investment***.** (5th Ed) prentice Hall Inc. USA.

Shrestha M. K. (1992). "Capital Market in Nepal Changing Dimension and Strategies", *Nepalese Management Review* Vol VIII

Shrestha, M.K. (2047 B.S.) *Commercial banks comparative performance evaluation*. Kosh Nepal: Karmachari Sanchaya Kosh Publication.

Shyaka, D.R. (1995). *Financial Analysis of Joint Venture Banks*. Unpublished Master's Thesis (CDM) T.U. Kathmandu

Van Horne, J. C (2000). *Financial Management and Policy*, Prentice Hall of India, New Delhi.

Van Horne, James C. Wachowicz and John, M. (1998). *Fundamental of Financial Management*. New York: Prentice Hall Inc.

Websites

Weston & Brigham, E.F. (1982), *Management Finance*. London: Holt-Saunders International Edition.

Weston & Brigham, E.F. (1985), *Management Finance*. London: Holt-Saunders International Edition.

Wolf, H.K. & Pant, P.R. (2002). *Social Science Research and Thesis writing*, Buddha Academic Enterprise Pvt. Ltd., Kathmandu.

www.bis.org

www.himalayanbank.com

www.nabilbank.com

www.nepalstock.com.np

www.nibl.com

APPENDIX I

Table: I
Current Assets of Sample Banks **(Rs. In Million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
1.HBL	22536.47	23704.43	42948.87	19119.43	32945.19
2.NIB	8823.13	13005.7	15953.48	20986.69	26831.38
3.NABIL	16310.71	16407.37	16825.09	20449.88	26966.49
4.SCBNL	20808.79	23505.83	21822.18	25674.94	28471.09
5. EBL	7942.62	9490.21	11598.44	15807.17	21262.61

Table: II
Current Liabilities of Sample Banks **(Rs. In Million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
1.HBL	22292.09	23493.20	26302.93	27334.21	31012.65
2.NIB	8375.71	12526.45	15093.89	19364.71	24912.72
3.NABIL	15248.43	15263.81	17406.69	20454.98	25196.33
4.SCBNL	19631.59	22146.31	20310.17	24022.19	26480.34
5. EBL	7439.38	8928.25	10599.9	14696.48	19931.07

Table: III
Total Assets of Sample Banks **(Rs. In Million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
1.HBL	24197.79	24817.36	27844.69	29460.38	33519.14
2.NIB	9163.91	13463.94	16390.65	21330.13	27590.84
3.NABIL	16562.61	16745.48	17186.32	22329.97	21253.39
4.SCBNL	21000.50	23642.05	21781.67	25776.33	28596.68
5.EBL	8052.20	9608.57	11732.52	15959.29	21432.57

Table: IV
Net Profit of Sample Banks **(Rs. In Million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
1.HBL	210.66	263.05	308.27	457.45	491.82
2.NIB	116.82	152.26	232.15	350.53	501.39
3.NABIL	271.63	455.31	518.64	635.26	673.95
4.SCBNL	506.93	537.80	536.24	658.75	691.66
5.EBL	94.17	143.56	170.81	237.38	296.41

Table: V
Book Value of Sample Banks

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
1.HBL	247.81	246.93	239.59	228.71	264.74
2.NIB	216.24	246.89	200.80	239.66	234.36
3.NABIL	267	301	337	381	418
4.SCBNL	403.15	399.25	422.38	468.21	512.11
5. EBL	150.10	171.52	219.87	217.67	292.75

Table: VI
Shareholder's Equity of Sample Banks **(Rs. In Million)**

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
1.HBL	1063.11	1324.16	1541.76	1766.18	2146.54
2.NIB	638.53	729.04	1180.17	1415.39	1878.04
3.NABIL	1312.71	1479.87	1656.87	1873.20	2055.11
4.SCBNL	1368.89	1495.75	1582.40	1754.10	2116.31
5.EBL	613.95	762.16	998.03	1197.97	1514.67

Table: VII
Market price per share (MPS) of Sample Banks

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
1.HBL	836	840	920	1100	1740
2.NIB	795	940	800	1260	1729
3.NABIL	735	1000	1505	2240	5050
4.SCBNL	1640	1745	2345	3775	5900
5.EBL	445	680	870	1379	2430

Table: VIII
Earning per share (EPS) of Sample Banks

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
1. HBL	49.45	49.05	47.91	59.24	60.66
2.NIB	39.56	51.70	39.50	59.35	62.57
3.NABIL	84.66	92.61	105.49	129.21	137.08
4.SCBNL	149.30	143.55	143.14	175.84	167.37
5. EBL	29.90	45.58	54.22	62.78	78.4

Table: IX
Dividend per share (DPS) of Sample Banks

Banks	2003/04	2004/05	2005/06	2006/07	2007/08
1. HBL	25	20	31.58	35	40
2.NIB	20.10	15	12.5	55.46	30
3.NABIL	50	65	70	85	140
4.SCBNL	110	110	120	140	130
5. EBL	20	20	20	25	40

APPENDIX II
Correlation Co-efficient between EPS and MPS

1.Himalayan Bank Limited

Year	EPS (X)	X- $\overline{X}$	(X- $\overline{X}$)^2	MPS (Y)	Y- $\overline{Y}$	(Y- $\overline{Y}$)^2	(X- $\overline{X}$) (Y- $\overline{Y}$)
2003/04	49.45	-3.81	14.52	836	-251.2	63101.44	957.07
2004/05	49.05	-4.21	17.72	840	-247.2	61107.84	1040.71
2005/06	47.91	-5.35	28.62	920	-162.2	26308.84	867.54
2006/07	59.24	5.98	35.76	1100	12.8	163.84	76.54
2007/08	60.66	7.40	54.76	1740	652.8	426147.84	4830.72
	266.31		151.38	5436	576829.8		7772.82

i. Mean

$$(\overline{X}) = \frac{\sum X}{N} = \frac{266.31}{5} = 53.26$$

$$(\overline{Y}) = \frac{\sum Y}{N} = \frac{5436}{5} = 1087.2$$

ii. Standard Deviation.

$$6_x = \sqrt{\frac{\sum (X - \overline{X})^2}{N-1}} = \sqrt{\frac{151.38}{5-1}}\sqrt{\frac{151.38}{4}} = 6.15$$

$$6_Y = \sqrt{\frac{\sum (Y - \overline{Y})^2}{N-1}} = \sqrt{\frac{576829.8}{5-1}} = \sqrt{\frac{576829.8}{4}} = 379.75$$

iii. Correlation Co-efficient

$$(r) = \frac{\sum (X - \overline{X})^2}{\sqrt{\sum \left(X - \overline{X}\right)^2}\sqrt{\sum \left(Y - \overline{Y}\right)^2}} = \frac{7772.82}{\sqrt{151.38}.\sqrt{576829.8}}$$

$$= \frac{7772.82}{12.304 \times 759.493} = \frac{7772.82}{9344.803} = 0.83$$

2. Nepal Investment Bank.

Year	**EPS (X)**	X- $\overline{X}$	(X- $\overline{X}$)^2	**MPS (Y)**	Y- $\overline{Y}$	(Y- $\overline{Y}$)^2	(X- $\overline{X}$) (Y- $\overline{Y}$)
2003/04	39.56	-10.98	120.56	795	-309.8	95976.04	3401.60
2004/05	51.70	-1.16	1.35	940	-164.8	27159.04	191.17
2005/06	39.50	-11.04	121.88	800	-304.8	92903.04	3364.31
2006/07	59.35	8.81	77.62	1260	155.2	24087.04	1367.31
2007/08	62.57	12.03	147.72	1729	624.2	389625.64	7509.20
	252.68		466.13	5524		629,750.8	15,834.20

i. Mean

$$\overline{X} = \frac{\sum X}{N} = \frac{252.68}{5} = 50.54$$

$$\overline{Y} = \frac{\sum Y}{N} = \frac{5524}{5} = 1104.8$$

ii. Standard Deviation (S.D)

$$6_x = \sqrt{\frac{\sum \left(X - \overline{X}\right)^2}{N-1}} = \sqrt{\frac{466.13}{5-1}} = \sqrt{\frac{466.13}{4}} = 10.81$$

$$6_Y = \sqrt{\frac{\sum \left(Y - \overline{Y}\right)^2}{N-1}} = \sqrt{\frac{629750.8}{5-1}} = \sqrt{\frac{629750.8}{4}} = 396.78$$

iv. Correlation Coefficient.

$$(r) = \frac{\sum \left(X - \overline{X}\right)\left(Y - \overline{Y}\right)}{\sqrt{\left(X - \overline{X}\right)^2 \sqrt{\sum \left(Y - \overline{Y}\right)^2}}}$$

$$= \frac{15834.20}{\sqrt{466.13}.\sqrt{629750.8}}$$

$$= \frac{15834.20}{21.59 \times 793.57}$$

$$= \frac{15834.20}{17133.14}$$

$$= 0.92$$

2. NABIL

Year	EPS (X)	X- $\overline{X}$	(X- $\overline{X}$)^2	MPS (Y)	Y- $\overline{Y}$ =	(Y- $\overline{Y}$)^2	(X- $\overline{X}$) (Y- $\overline{Y}$)
2003/04	84.66	-25.15	632.52	435	-1371	1879641	34480.65
2004/05	92.61	-17.20	295.84	1000	-1106	1223236	19023.2
2005/06	105.49	-4.32	18.66	1505	-60	17956	2599.6
2006/07	129.20	19.4	376.36	2240	134	17956	2599.6
2007/08	137.08	27.27	743.65	5050	2944	8667136	80282.88
	549.05		2067.04	10530		12,149,170	138,982.65

i. Mean

$$\overline{X} = \frac{\sum X}{N} = \frac{549.05}{5} = 109.81$$

$$\overline{Y} = \frac{\sum Y}{N} = \frac{10530}{5} = 2106$$

ii. Standard Deviation. (S.D)

$$6_x = \sqrt{\frac{\sum\left(X - \overline{X}\right)^2}{N-1}} = \sqrt{\frac{2067.04}{5-1}} = 22.73$$

$$6_Y = \sqrt{\frac{\sum\left(Y - \overline{Y}\right)^2}{N-1}} = \sqrt{\frac{12149170}{5-1}} = 1742.78$$

iii. Correlation coefficient. (r)

$$(r) = \frac{\sum\left(X - \overline{X}\right)\left(Y - \overline{Y}\right)}{\sqrt{\sum\left(X - \overline{X}\right)^2}\sqrt{Z\left(Y - \overline{Y}\right)^2}}$$

$$= \frac{138982.65}{\sqrt{2067.04}\sqrt{12149170}}$$

$$= \frac{138982.65}{45.465 \times 3485.566}$$

$$= \frac{138982.65}{158{,}471.26}$$

$$= 0.88$$

4. Standard chartered Bank Nepal Limited (SCBNL)

Year	**EPS (X)**	X- $\overline{X}$	(X- $\overline{X}$)^2	**MPS (Y)**	Y- $\overline{Y}$	(Y- $\overline{Y}$)^2	(X- $\overline{X}$) (Y- $\overline{Y}$)
2003/04	149.30	-6.54	42.77	1640	-1441	2076481	9424.14
04/05	143.55	-12.29	151.04	1745	-1336	1784896	16419.44
05/06	143.14	-12.7	161.29	2345	-736	541696	9347.2
06/07	175.84	20	400	3775	694	481636	13880
07/08	167.37	11.53	132.94	5900	2819	7946761	32503.07
	779.2		888.04			12831.470	81573.85

i. Mean

$$\overline{X} = \frac{\sum X}{N} = \frac{779.2}{5} = 155.84$$

$$\overline{Y} = \frac{\sum Y}{N} = \frac{15405}{5} = 3081$$

ii. Standard Deviation (S.D)

$$6_x = \sqrt{\frac{\sum\left(X - \overline{X}\right)^2}{N-1}} = \sqrt{\frac{888.04}{5-1}} = 14.9$$

$$6_Y = \sqrt{\frac{\sum\left(Y - \overline{Y}\right)^2}{N-1}} = \sqrt{\frac{12831470}{4}} = 1791.05$$

iii. Correlation Coefficient.

$$(r) = \frac{\sum\left(X - \overline{X}\right)\left(Y - \overline{Y}\right)}{\sqrt{\sum\left(X - \overline{X}\right)^2}\sqrt{\left(Y - \overline{Y}\right)^2}}$$

$$= \frac{81573.85}{\sqrt{888.04}\sqrt{2831470}}$$

$$= \frac{81573.85}{106746.7031}$$

$$= 0.76$$

5. Everest Bank Limited (EBL)

Year	**EPS (X)**	X- $\overline{X}$	(X- $\overline{X}$)^2	**MPS (Y)**	Y- $\overline{Y}$	(Y- $\overline{Y}$)^2	(X- $\overline{X}$) (Y- $\overline{Y}$)
2003/04	29.90	-24.28	589.52	445	-715.8	512369.64	17379.62
2004/05	45.58	-8.6	73.96	680	-480.8	231168.64	4134.88
2005/06	54.22	0.04	0.002	870	-190.8	84564.64	-11.63
2006/07	62.78	8.6	73.96	1379	218.2	47611.24	1876.52
2007/08	78.4	24.22	586.61	2430	1269.2	1610868.64	30740.02
	270.88		1324.05	5804		24865882.8	54119.42

i. Mean

$$\overline{X} = \frac{\sum X}{N} = \frac{270.88}{5} = 54.18$$

$$\overline{Y} = \frac{\sum Y}{N} = \frac{5804}{5} = 1160.8$$

ii. Standard Deviation (S.D)

$$6_x = \sqrt{\frac{\sum\left(X - \overline{X}\right)^2}{N-1}} = \sqrt{\frac{1324.05}{5-1}} = 18.19$$

$$6_Y = \sqrt{\frac{\sum\left(Y - \overline{Y}\right)^2}{N-1}} = \sqrt{\frac{2486582.8}{5-1}} = 788.44$$

iii. Correlation coefficient.

$$(r) = \frac{\sum\left(X - \overline{X}\right)\left(Y - \overline{Y}\right)}{\sqrt{\sum\left(X - \overline{X}\right)^2}\sqrt{(Y - \overline{Y})^2}}$$

$$= \frac{54119.42}{\sqrt{1324.05}.\sqrt{2486582.8}}$$

$$= \frac{54119.42}{36.39 \times 1576.89} = \frac{54119.42}{57383.0355}$$

$$= 0.94$$

APPENDIX– III

Correlation coefficient between DPS and MPS.

1. Himalayan Bank Limited.

Year	**DPS (X)**	X- $\overline{X}$	(X- $\overline{X}$)^2	**MPS (Y)**	Y- $\overline{Y}$	(Y- $\overline{Y}$)^2	(X- $\overline{X}$) (Y- $\overline{Y}$)
2003/04	25	-5.32	28.30	836	-251.2	63101.44	1336.38
2004/05	20	-10.32	106.50	840	-247.2	61907.84	2551.10
2005/06	31.58	1.26	1.59	920	-167.2	27955.84	-210.67
2006/07	35	4.68	21.90	1100	12.8	163.84	59.90
2007/08	40	9.68	93.70	1740	652.8	426147.84	6319.10
	151.58		251.997	5436		578476.8	10055.82

i. Mean

$$\overline{X} = \frac{\sum X}{N} = \frac{154.58}{5} = 30.32$$

$$\overline{Y} = \frac{\sum Y}{N} = \frac{5436}{5} = 1087.2$$

ii. Standard Deviation.

$$6_x = \sqrt{\frac{\sum \left(X - \overline{X}\right)^2}{N-1}} = \sqrt{\frac{251.997}{5-1}} = 7.94$$

$$6_Y = \sqrt{\frac{\sum \left(Y - \overline{Y}\right)^2}{N-1}} = \sqrt{\frac{578476.8}{5-1}} = 380.29$$

iii. Correlation coefficient.

$$(r) = \frac{\sum \left(X - \overline{X}\right)\left(Y - \overline{Y}\right)}{\sqrt{\sum \left(X - \overline{X}\right)^2}\sqrt{\sum \left(Y - \overline{Y}\right)^2}}$$

$$= \frac{10055.82}{\sqrt{251.997}\sqrt{578476.8}}$$

$$= \frac{10055.82}{15.87 \times 760.58}$$

$$= 0.83$$

2. Nepal Investment Bank.

Year	DPS (X)	X- $\overline{X}$	(X- $\overline{X}$)^2	MPS (Y)	Y- $\overline{Y}$	(Y- $\overline{Y}$)^2	(X- $\overline{X}$) (Y- $\overline{Y}$)
2003/04	20.10	-6.51	42.38	795	-309.8	95976.04	2016.798
2004/05	15	-11.61	134.78	940	-164.8	27159.04	1913.34
2005/06	12.5	-14.11	199.09	800	-304.8	92903.04	4477.52
2006/07	55.46	28.85	832.32	1260	155.2	24087.04	4477.52
2007/08	30	3.39	11.49	1729	624.2	3896225.64	21164.04
	133.06		1220.08	5524		629750.8	14824.41

i. Mean

$$\overline{X} = \frac{\sum X}{N} = \frac{133.06}{5} = 26.61$$

$$\overline{Y} = \frac{\sum Y}{N} = \frac{5524}{5} = 1104.8$$

ii. Standard Deviation.

$$6_x = \sqrt{\frac{\sum\left(X - \overline{X}\right)^2}{N-1}}\sqrt{\frac{1220.08}{5-1}} = 17.46$$

$$6_Y = \sqrt{\frac{\sum\left(Y - \overline{Y}\right)^2}{N-1}} = \sqrt{\frac{629750.8}{5-1}} = 396.78$$

iii. Correlation coefficient.

$$(r) = \frac{\sum\left(X - \overline{X}\right)\left(Y - \overline{Y}\right)}{\sqrt{\sum\left(X - \overline{X}\right)^2}\sqrt{\sum\left(Y - \overline{Y}\right)^2}}$$

$$= \frac{14824.41}{\sqrt{1220.08}\sqrt{629750.5}}$$

$$= 0.53$$

3. NABIL

Year	**DPS (X)**	X- $\overline{X}$	(X- $\overline{X}$)^2	**MPS (Y)**	Y- $\overline{Y}$	(Y- $\overline{Y}$)^2	(X- $\overline{X}$) (Y- $\overline{Y}$)
2003/04	50	-32	1024	735	-1371	1879641	43.872
04/05	65	-17	289	1000	-1106	1223236	18,802
05/06	70	-12	144	1505	-601	361201	7,803
06/07	85	3	9	2240	601	361201	1,803
07/08	140	58	3364	5050	2944	8667136	170,752
	410		4830	10530		12,492,415	242,441

i. Mean

$$\overline{X} = \frac{\sum X}{N} = \frac{410}{5} = 82$$

$$\overline{Y} = \frac{\sum Y}{N} = \frac{10530}{5} = 2106$$

ii. Standard Deviation.

$$6_X = \sqrt{\frac{\sum \left(X - \overline{X}\right)^2}{N-1}} = \sqrt{\frac{4830}{5-1}} = 34.75$$

$$6_Y = \sqrt{\frac{\sum \left(Y - \overline{Y}\right)^2}{N-1}} = \sqrt{\frac{12492415}{5-1}} = 1{,}767.23$$

iii. Correlation coefficient.

$$(r) = \frac{\sum \left(X - \overline{X}\right)\left(Y - \overline{Y}\right)}{\sqrt{\sum \left(X - \overline{X}\right)^2 \sqrt{\sum \left(Y - \overline{Y}\right)^2}}}$$

$$= \frac{242441}{\sqrt{4830}\sqrt{12492415}}$$

$$= 0.99$$

4. Standard Chartered Bank Nepal Limited.

Year	**DPS (X)**	X- $\overline{X}$	(X- $\overline{X}$)^2	**MPS (Y)**	Y- $\overline{Y}$	(Y- $\overline{Y}$)^2	(X- $\overline{X}$) (Y- $\overline{Y}$)
2003/04	110	-12	144	1640	-1441	2,076,481	17,292
2004/05	110	-12	144	1745	-1336	1,784,896	16,032
2005/06	120	-2	4	2345	-736	541,696	1,472
2006/07	140	18	324	3775	694	481,636	12,492
2007/08	130	8	64	5900	2819	7,946,761	22,552
	610		680	15,405		12,831,470	69,840

i. Mean

$$\overline{X} = \frac{\sum X}{N} = \frac{610}{5} = 122$$

$$\overline{Y} = \frac{\sum Y}{N} = \frac{15405}{5} = 3081$$

ii. Standard Deviation.

$$6_X = \sqrt{\frac{\sum \left(X - \overline{X}\right)^2}{N-1}} = \sqrt{\frac{680}{5-1}} = 13.04$$

$$6_Y = \sqrt{\frac{\sum \left(Y - \overline{Y}\right)^2}{N-1}} = \sqrt{\frac{12831{,}470}{5-1}} = 1{,}791.05$$

iii. Correlation coefficient.

$$(r) = \frac{\sum \left(X - \overline{X}\right)\left(Y - \overline{Y}\right)}{\sqrt{\sum \left(X - \overline{X}\right)^2} \sqrt{\sum \left(Y - \overline{Y}\right)^2}}$$

$$= \frac{69{,}840}{\sqrt{680}\sqrt{12831470}}$$

$$= 0.75$$

5. Everest Bank Limited.

Year	DPS (X)	X- $\overline{X}$	(X- $\overline{X}$)^2	MPS (Y)	Y- $\overline{Y}$	(Y- $\overline{Y}$)^2	(X- $\overline{X}$) (Y- $\overline{Y}$)
2003/04	20	-5	25	445	-723	522,729	3615
04/05	20	-5	25	680	-488	238144	2440
05/06	20	-5	25	870	-298	88804	1490
06/07	25	0	0	1379	211	44521	0
07/08	40	15	225	2430	1262	1592644	18930
	125		300	5840		2,486,842	26475

i. Mean

$$\overline{X} = \frac{\sum X}{N} = \frac{125}{5} = 25$$

$$\overline{Y} = \frac{\sum Y}{N} = \frac{5840}{5} = 1168$$

ii. Standard Deviation.

$$6_X = \sqrt{\frac{\sum \left(X - \overline{X}\right)^2}{N-1}} = \sqrt{\frac{300}{5-1}} = 8.66$$

$$6_Y = \sqrt{\frac{\sum \left(Y - \overline{Y}\right)^2}{N-1}} = \sqrt{\frac{2486842}{5-1}} = 788.49$$

iii. Correlation coefficient.

$$(r) = \frac{\sum \left(X - \overline{X}\right)\left(Y - \overline{Y}\right)}{\sqrt{\sum \left(X - \overline{X}\right)^2} \sqrt{\sum \left(Y - \overline{Y}\right)^2}}$$

$$= \frac{26475}{\sqrt{300}\sqrt{248{,}6842}}$$

$$= 0.97$$

A survey on stock market in Nepal (App. IV & V)

Name:

Please use tick mark (√) in an alternative.

1. Have you invested in any securities?
   a. Yes ( ) b. No. ( )
2. How did you first get the idea about securities investment?
   a. From friends ( )
   b. From stock holders ( )
   c. From relatives ( )
   d. Myself ( )
3. What do you consider before investing in securities?
   a. Return only ( )
   b. Risk only ( )
   c. Risk and return ( )
   d. I don't know ( )
4. Do you know some portion of total risk can be diversified by portfolio investment?
   a. Yes ( ) b. No. ( )
5. What type of share should buy from securities market?
   a. undervalued ( )
   b. Overvalued ( )
   c. I don't know ( )
6. In which sector's share do you like to invest most?
   a. Banking
   b. Insurance
   c. Development banks
   d. Finance companies
   e. Hotels

f. Manufacturing and processing
g. Trading
h. Others

7. Are you satisfied with the return that you are presently getting from share investment?
   a. Yes ( ) b. No ( )
8. Are you satisfied with government efforts to develop stock market in Nepal?
   a. Yes ( ) b. No ( )
   If no, please provide three good suggestions in short
   ……
   ……
   ……
   ……
   ……
   ……
9. In your opinion, which is the main cause for Nepalese people to be reluctant to invest in securities?
   a. Lower return ( )
   b. More risky ( )
   c. Lack of knowledge ( )
   d. No protection of investor's right ( )
10. How is your annual income level?
    a. below 50000
    b. Above 50000
    c. Above 100000
    d. Above 200000
11. For what purpose do you want to invest?
    a. Dividend ( )
    b. Management participant ( )

c. Capital gain ( )

d. Social status ( )

12. In your opinion which of the following is most responsible for NEPSE performance?

a. Government ( )

b. Investors ( )

c. Brokers ( )

d. NEPSE ( )

Appendix - VI

Hypothesis-1

Chi-square test

R, C	O	$E = \frac{RT \times CT}{N}$	(O–E)	$(O-E)^2$	$\frac{(O-E)^2}{E}$
1,1	11	8.71	2.29	5.2441	0.6020
1,2	6	6.22	-0.22	0.0484	0.0078
1,3	23	23.64	-0.64	0.4096	0.0173
1,4	16	17.42	-1.42	2.0164	0.1157
2,1	3	5.29	-2.29	5.2441	0.9913
2,2	4	3.78	0.22	0.0484	0.0128
2,3	15	14.35	0.64	0.4096	0.0294
2,4	12	10.58	1.42	2.0164	0.1906
Total					$\Sigma\left[\frac{(O-E)}{E}\right]^2 = 1.9669$

Formula : $\chi^2 = \Sigma\left[\frac{(O-E)}{E}\right]^2 = 1.9669$

Degree of freedom (d.f.) = (R-1) (C-1)

= (2-1) (4-1)

= 1×3

= 3

Where,

O= observation frequency

E= expected frequency

RT= row total

CT= column total

R= number of row

C= number of column

N= total number of observations.

Hypothesis-2

Chi-square test

R, C	O	$E = \frac{RT \times CT}{N}$	(O–E)	$(O-E)^2$	$\frac{(O-E)^2}{E}$
1,1	46	43.82	2.18	4.7524	0.1084
1,2	12	14.18	-2.18	4.7524	0.3351
2,1	22	24.18	-2.18	4.7524	0.1965
2,2	10	7.82	2.18	4.7524	0.6077
Total					$\Sigma[\frac{(O-E)}{E}]^2 = 1.2477$

Formula : $\chi^2 = \Sigma[\frac{(O-E)}{E}]^2 = 1.2477$

Degree of freedom (d.f.) = (R-1) (C-1)

= (2-1) (2-1)

= 1×1

= 1

Where,

O= observation frequency

E= expected frequency

RT= row total

CT= column total

R= number of row

C= number of column

N= total number of observations.

Hypothesis-3

Chi-square test

R, C	O	$E = \frac{RT \times CT}{N}$	(O–E)	$(O–E)^2$	$\frac{(O-E)^2}{E}$
1,1	18	28.8	10.8	116.64	4.05
1,2	36	25.2	-10.8	116.64	4.6285
2,1	30	19.2	-10.8	116.64	6.075
2,2	6	16.8	10.8	116.64	6.9428
Total					$\Sigma[\frac{(O-E)}{E}]^2 = 21.6963$

Formula : $\chi^2 = \Sigma[\frac{(O-E)}{E}]^2 = 21.6963$

Degree of freedom (d.f.) = (R-1) (C-1)

= (2-1) (2-1)

= 1×1

= 1

Where,

O= observation frequency

E= expected frequency

RT= row total

CT= column total

R= number of row

C= number of column

N= total number of observations.

Hypothesis-1

Chi-square test

R, C	O	$E = \frac{RT \times CT}{N}$	(O–E)	$(O-E)^2$	$\frac{(O-E)^2}{E}$
1,1	18	20.98	-2.98	8.8804	0.4232
1,2	14	11.8	2.2	4.84	0.4102
1,3	27	26.22	0.78	0.6084	0.0232
2,1	14	11.02	2.98	8.8804	0.8058
2,2	4	6.2	-2.2	4.84	0.7806
2,3	13	13.78	-0.78	0.6084	0.0441
Total					$\Sigma[\frac{(O-E)}{E}]^2 = 2.4874$

Formula : $\chi^2 = \Sigma[\frac{(O-E)}{E}]^2 = 2.4874$

Degree of freedom (d.f.) = (R-1) (C-1)

= (2-1) (3-1)

= 1×2

= 2

Where,

O= observation frequency

E= expected frequency

RT= row total

CT= column total

R= number of row

C= number of column

N= total number of observations.

Appendix VI

Regression equation of Y (MPS) on X (EPS)

Dependent Variables(MPS)	**Independent Variables(EPS)**	**XY**	**X^2**
1087.2	53.26	57611	2809
1104.8	50.54	55250	2500
2160	109.81	237600	12100
3081	155.84	480636	24336
1160.8	54.18	62694	2916
8594	**423**	**893791**	**44661**

Regression equation of Y (MPS) on X (DPS)

Dependent Variables(MPS)	**Independent Variables(DPS)**	**XY**	**X^2**
1087.2	30	32610	900
1104.8	27	29835	729
2160	82	177120	6724
3081	122	375882	14884
1160.8	25	29025	625
8594	**286**	**644472**	**23862**

Regression equation of MPS(Y) on EPS(X1) and DPS (X2)

Dependent	**Independent**		**X_1^2**	**X_2^2**	**X_1X_2**	**YX_1**	**YX_2**	**Y^2**
Y	**X_1**	**X_2**						
1087.2	53.26	30	2809	900	1590	57611	32610	1181569
1104.8	50.54	27	2500	729	1350	55250	29835	1221025
2160	109.81	82	12100	6724	9020	237600	177120	4665600
3081	155.84	122	24336	14884	1903	480636	375882	9492561
1160.8	54.18	25	2916	625	1350	62694	29025	1347921
8594	**423**	**286**	**44661**	**23862**	**32342**	**893791**	**644472**	**17908676**

Appendix VI

Brief Introduction of the Banks under study

This section contains general introduction of the banks under study for the easy reference of the sample to the research which is supposed to be useful in the proper understanding and its inferences.

A) Himalayan Bank Ltd.

HBL was established in 1993, under the company act. It is also foreign joint venture bank and the foreign partner is Habib Bank Ltd. of Pakistan. This is the first joint venture bank managed by Nepalese chief executive. The listing date of this company is Ashad 21, 2050(1993 A.D). It has 18 branches operating currently in different cities of Nepal.

B) Nepal Investment Bank Ltd.

Nepal Investment Bank Ltd. is third joint venture bank, incorporated in 1986 AD under the company act. The bank is managed by Banque Indosuez, Paris till now in accordance with joint venture and technical services agreement signed between the bank and Nepalese promoters. It has 25 branches operating currently throughout Nepal.

C) Nabil Bank Ltd.

Nabil Bank Ltd. is the first joint venture commercial bank incorporate in 1984 A.D in Nepal. Initially Dubai Bank Ltd. (DBL) invested 50% of equity shares of Nabil Bank Limited. The shares owned by DBL were transferred to Emirates Bank International Ltd. (EBIL) Dubai. Later on EBIL sold its entire stock to the National Bank Ltd., Bangladesh (NBLB). NABIL is managing the bank in accordance with the technical services agreement signed between NABIL and the bank on June 1995. The listing

date of Nabil Bank Ltd. in stock exchange was Mangsir 9, 2042 B.S (1986). It is delivering its services through 19 branches in different cities of Nepal currently.

D) Standard Chartered Bank Nepal Ltd.

Standard Chartered Bank Nepal Ltd. was incorporated in 1987 as a second foreign joint venture bank under the company act. The foreign joint venture partner was ANZ Grindlays Bank PLC that was managing the bank under joint venture and technical services agreement sighed between it and Nepalese promoters. Now, the bank has its partner, Standard Chartered Banking Group. The listing date of Standard Chartered Bank Nepal Limited in stock exchange was Ashad 21, 2045 B.S (1988). This bank is currently providing its services from 11 points of representation including 15 branches.

E) Everest Bank Ltd.

Everest Bank Limited was established in 1994, under the company act. It is also a foreign joint venture bank and the foreign partner was United of Bank Ltd. and was managed from the very beginning till November 1996. Later on it handed over the management to Punjab national Bank Ltd., India that holds 20% equity on the bank's share capital. The listing date was Chaitra 25, 2052(1995). It is providing its services through 29 branches in different places of Nepal.