

CHAPTER-I

INTRODUCTION

1.1 Background of the Study

Financial sector reforms in Nepal over the past years including the liberalization of interest rates, creation ten years including the on of the basic regulatory framework and development of long term government securities markets have led to some significant improvements in the financial sector. In order to enhance the role of this sector, it is essential to flow the financial resources easily accessible and in a simple manner which would, in turn, help to achieve the desired results through various economic activities.

Development and expansion of capital market are essential for the rapid economic growth of the country. Capital market helps economic development by mobilizing long term capital needed for productive sector. The main objective of the capital market is to create opportunity for maximum number of people to get benefits from the return obtained by directing the economy towards the productive sector by mobilizing the long term capital (Ojha: 2001:1)

Every business enterprise requires short-term, intermediate term and long term capital funds for the smooth operation and expansion of organizational activities. Among such funds, long term funds are highly significant for future growth and prosperity. Most of the organizations generate these types of funds from financial market.

Financial market consists of three principal participants. They are:-

- I) Operating Sectors
- II) Financial Intermediaries
- III) Specialized Institutions

Operating sectors refer to the users and providers of the fund in the financial market. Individuals, organizations, government sector etc. are the major participants. We cannot imagine the financial market in their absence.

Financial intermediaries are the organizations that channel the savings of government, business, and individuals into loans / investments. Thus, they position themselves between providers and users of the fund. Their role is to accumulate funds from various savers and lend to borrowers and they can actively participate in the money and capital market. They collect funds, analyze the risk and perform various legal and administrative functions required for lending and borrowing procedure. The participants under the financial intermediaries are commercial banks, savings and loan Associations, and co-operative societies, Insurance Companies, Finance Companies, Provident Fund and Mutual Fund.

Special institution facilitates the financial intermediaries for obtaining the funds. It also helps the final operating sectors (Lender and borrower) for better and effective transfer of the funds. Such institutions may be Investment Bank, Development Bank, Organized Stock Exchange, Share Brokers and Dealers.

Financial market can be mainly divided into money and capital market

Money market may be defined as short term financial markets, which facilitates liquidity and marketability of the securities. It is the market for the short term marketable instruments having less than a year maturity period, even lower risk in comparison to other securities.

The development of an efficient money market requires the development of institutions, instruments, and operating procedures that facilitate widening and deepening of the market and allocation of short term resources with minimum transaction costs and minimum delays. (Pandey; 1997:878)

Capital market refers to the financial market in which long term securities are traded. Securities having more than one year are traded in the capital market. Specifically, long term financial instruments such as stocks issued by corporation are traded in the capital market.

Securities prices play an important role by providing signals in allocating the scarce resources and investors can choose among the securities that represents ownership of the firm's activities under the assumption that securities prices at any time 'fully reflect' all available information. A market in which prices always 'fully reflect' is called 'efficient market'. (Fama; XXV: 383-417) If the capital market is efficient, the current market prices of companies fully reflect available information and there is no question of share price being under-priced and over-priced. The phenomena of under or over valuation of shares is possible only in an inefficient capital market.

In an efficient capital market, liquid asset will channel quickly and accurately where it will do the community most good. Such efficient market provides ready financing for worthwhile business venture and drain capital away from corporations which are poorly managed or producing obsolete products. It is essential that a country should have efficient capital markets if that country is to enjoy highest possible level of wealth, welfare and education for its population. (Bhall; 1997:393) thus, the efficient capital market always seeks for the available savings of the individuals and institutions and always looks for the investment in the new business ventures.

1.1.1 Securities Market

A security market can be defined as the place where securities (financial instruments) are brought and sold. Alternatively, it is a mechanism bringing together buyers and sellers of financial assets in order to facilitate trading. Financial instruments may be in the form of government bonds, corporate bonds or debentures, ordinary shares, preference shares etc.

Security market is the place where shares of listed companies are traded or transferred from one hand to another at a fair price through the organized brokerage system. In order to keep the price of the shares fair, there is a need of allocating capital efficiently and to maintain higher degree of liquidity in securities. Efficient stock market refers to the reflection over the price of the stock through all the available information. In other words, an efficient market is the one where the current price of the share gives the true worth of the share.

Liquidity of the stock market helps to make the investment less risky and more attractive, which encourages the savers to invest in the long term projects. In such projects they can easily sell the securities quickly and easily, and companies also can have easy access to the capital through issue of new shares.

Securities market can be further divided into the primary market and the secondary market.

(a) Primary Market: - Primary market is the market in which securities are sold at the time of their first issue. Hence, the transaction of securities issued for the first time takes place in the primary market. The corporation is selling the newly issued securities receives the proceeds from the sale in the primary market. The main function of the primary market is to provide financial capital available to make new investments in building, machinery, equipment and stock of the goods.

Primary market transfers the funds from the savers to the issuers of the stock. Such issuances of the new shares are made through the help of investment bankers.

All the securities whether in the money or capital markets, 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. (Lawrence, Gitmaan; 2000:033-34)

Securities available for the first time are offered through the primary securities market. The issuer may be a brand new company or one that has been in business years. The securities offered might be a new type for the issuer or additional amounts of a securities used frequently in the past. The key is that these securities absorb new funds for the coffers of the issuer. (Donald. Fisher, Jordan; 2000:19)

(b) Secondary Market: - Secondary market is the place where the existing securities are traded. Secondary market deals with previously issued shares mainly traded through stock exchange, over the counter market or direct dealing. It provides liquidity to the purchase of the securities. It is the center to convert stocks, bonds, and other securities into cash immediately.

Secondary market simply, is market in which existing, already outstanding securities are traded between investors. It is the market that creates the price and allow for liquidity. If secondary market did not exist, the investors would have no place to sell their assets. Without liquidity many people would not invest at all. The corporations whose securities are being traded are not involved in secondary market transactions and, thus, do not receive any funds from such a sale. (Brigham, Gepenski, Ehrhardt; 2001:115)

The brokers perform major role in the secondary market while trading the securities. They facilitate between the buyers and the sellers of the securities. The transactions are more in the secondary market than in the primary market, buying securities in the secondary market is less risky.

1.1.2 Development of Securities Markets in Nepal

The history of the development of securities market in Nepal is not very old. The remarkable event in the development of securities market can be observed only after the enactment of Company Act for the first time in 1936. In 1937, the ordinary shares of Biratnagar Jute Mills Ltd. and Nepal Bank Limited were issued under the Company Act, 1936.

The Nepalese capital market has its beginning with the establishment of the Securities Marketing Center in 1976. It was the first institution established for the purpose of developing the security market in the country. Initially, it was assigned the job for promoting secondary market for the government securities.

In 1983, the Securities Exchange Act was enacted with the objective of developing a market for stocks. Later in 1984, Security Exchange Act was promulgated and this institution was converted into the Securities Exchange Center (SEC) under the ownership of the HMG of Nepal, Nepal Rastra Bank (NRB), and Nepal Industrial Development Corporation (NIDC). The main function of SEC was to assist in the development of a capital market by performing the role of a broker, underwriter, and share issuer and to sell government bonds. After the

inception of the SEC, the shares of various manufacturing, trading and banking companies were listed.

The real boost into the capital market in the form of a private sector led growth began with the financial sector liberalization. In the mid 80's, Nepal opened its door to foreign investors as joint venture partners in the banking sector, which revolutionized commercial banking services in Nepal. Since then, a variety of private sector based financial institutions are evolved. In 1992, the Finance Companies Act was amended. These enabled finance companies to be established to function in various areas such as leasing, housing finances and hire purchases. These institutions were also allowed to perform capital market functions such as share issues, portfolio management, market making and custodial services. The establishment of the Nepal Stock Exchange (NEPSE) complemented the growth of these financial institutions. In 1993, the Securities Exchange Act was amended then the SEC was converted into the NEPSE for securities trading under a program initiated to develop a competitive and efficient security market.

The basic objective of NEPSE is to arrange marketability and liquidity to the government and corporate securities by facilitating transactions in its trading floor through market intermediaries such as brokers, market makers and others.

Securities Board of Nepal (SEBON) was established by the government of Nepal on June 7, 1993 as an apex regulator body of securities markets in Nepal. It has been regulating the market under the Securities Ordinance, 2005 issued on September 23, 2005. The major function of the SEBON is to build a dynamic, competitive, credible, fair, efficient transparent and responsive securities market. The objectives of the SEBON are to promote and protect the interest of investors by regulating the securities of the securities market.

The government board of SEBON is composed of seven members including one full time chairman appointed by the Government for tenure of four years. Other members of the Board include joint secretary of Ministry of Finance, joint secretary of Ministry of Law, Justice and Parliamentary Affairs, representative from Nepal Rastra Bank, representative from Institute of Charters of Commerce and Industries, and one member appointed by the Government on

the recommendation of SEBON from amongst the experts pertaining to management of securities market, development of capital market, financial or economic sector.

Stock Market is a recent phenomenon in Nepal. In the beginning of the organized open-out-cry system, there was a risk in stock market activities. The stock market probably has the greatest glamour and is perhaps, least understood. The sudden market collapse in 1994 emphasized the need to correct several deficiencies in our financial system. Financial sector is comprised of the banks and other depository as well as non-depository financial institutions, money market and capital market.

The development of capital market is closely related with the modernization and development of financial system. The stock market had lost momentum reflecting concern that more fundamental measures were needed to put the economy and financial system on a path to recovery. HMG of Nepal initiated the policy of economic liberalization in 1985 and in the first phase, measures to reform financial sector were adopted. Joint investment in the banking sector was invited, interest rate was deregulated and various provisions as to the maintenance of capital adequacy ratio. Open market operation and exchange marketing intervention, loan loss provisions and credit ceiling were made. Now, financial sector restructuring is broadly on track and the policy for corporate restructuring is largely in place. A strong financial development is underway. All these, along with the privatization policy, the government have prompted further development of capital market in Nepal.

1.1.3 A Glimpse of Nepal Stock Exchange (NEPSE)

Nepal NEPSE has its own Board of directors (BOD) to direct, control and monitor. It consists of 9 directors in accordance with the Securities Exchange Act 1983. HMG of Nepal and different institutional investors nominated 6 directors and 2 from the licensed members. The General Manager of the NEPSE is the Ex-officio director of the board.

The authorized and issued capital of the Exchange is rs.50 million. HMG of Nepal, Nepal Rastra Bank, Nepal Industrial Development Corporation and licensed members subscribe Rs.

34.91 million. HMG of Nepal has contributed 58.67 percent, NRB 34.60 percent, NIDC 6.13 percent and the licensed members 0.60 percent on its capital.

Members of NEPSE are permitted to act as intermediaries in buying and selling of government bonds and listed corporate securities. At present, there are 24 member brokers, who operate on the trading floor as per the Securities Exchange Act, 1983, rules and by – laws. Besides this, NEPSE has also granted membership to issue and sales manager securities trader (Dealer). Issue and sales manager works as manager to the issue and underwriter for public issue of securities trader (Dealer) works as individual portfolio manager. At present there are 9 sales and issue managers and dealers.

NEPSE has adopted an “open-out-cry” system. It means transactions of securities are conducted on the open auction principle on the trading floor. The buying broker with the highest bid will post the price and his code number on the buying column, while the selling broker with the lowest offer will post the price and code number on the selling column on the quotation board. The market maker quotes their bid and offer price on their own board before the floor starts. Once the bid and offer price match, contracts between the buying and selling brokers or between the brokers and market makers are concluded on the floor.

The rate of brokerage on equity transactions ranges from 1 percent to 1.5 percent depending on the traded amount.

The company which has to enlist the securities must have to furnish the documents along with listing and annual fees. The stock exchange goes through all these documents and if finds the listing is feasible and not against the interest of the nations make decisions to enlist. After making decisions, the proposal will be forwarded to the Board of Directors. Then they make through verification and if there is any enquiry the answers to such enquiries will be obtained from the concerned company. If the members of BOD are satisfied then only the company will be listed. The management of the NEPSE must be satisfied that the issue has been made by satisfying all the rules and regulations and the terms and conditions, if any, given, by the concerned authorities. The structure of listing and annual fees is based on issued and paid up capital.

At present, 135 companies are listed under the NEPSE. Due to the non-compliance of rules and regulation of exchanges, some of the listed companies have been de-listed.

1.2 Focus of the Study

Business enterprises require tremendous amount of capital funds for smooth operation and regulation. Short-term, intermediate term and long term capital funds are essential for growth and expansion of organizational activities. Out of that, long-term funds are highly significant for future growth and prosperity of business organizations. Most of the organizations generate these funds from the financial market through issuing securities.

Securities market provides an effective way of procuring long-term funds by issuing shares and debentures or bonds for commercial enterprises and at the same time provides investment opportunity for individuals and institutions. (Praghan & Upadhyaya; 2004:2)

In Nepal, there is a lack of wider investment opportunities that provide good return. Most of the public investors have not well enough knowledge about the real strength and weaknesses of the public companies in which they are going to invest or they are investing. In addition to it, they may not be able to analyze and interpret the real financial position of the firm on the basis of available data and information.

This study will be mainly focus on providing information to the individual, institution or potential investors about the movement of the stock prices or the behavior of the share prices over the specific time period. This study may also show the efficiency of the stock market where they are going to make investment. On the basis of the findings of the study, investors can even restructure their investment portfolio for better return by taking timely correct investment decisions.

1.3 Statement of the Problem

Capital market investment in tenth present context of Nepal plays crucial role in the development of the country. The development of the capital market depends on the economic condition, savings and investment opportunity etc.

Stock market is the backbone of the development of investment sector in the country. Promotion of the stock market facilitates the economic development by mobilizing funds into productive sectors through making appropriate investment. For analyzing investment environment, element like price trend, NEPSE index, volume of stock trend, rate of listing and signaling factors are crucial.

Although, there are various institutions involved in the capital market, they are being unable to show better performances as expected by the investors. At the same time, the investors are making investments haphazardly without having proper and adequate knowledge about the securities of the certain companies. In the same way, most companies are found ignoring the investor's preferences and not making transparency in information dissemination system and its operation.

In Nepal, listing of securities in Stock Exchange Center (SEC) is recent phenomena. There are lots of problems in Nepalese stock market like limited price movement, low trading volume etc. There is an absence of professional brokers and skilled manpower. There is a lack of co-ordination among concern authorities, market players and individuals. Due to such factors, there may be possibility for few individuals or institutions to manipulate the price of the securities and making undesirable practices.

Regarding the share price behavior in the market and the market efficiency, there are various approaches available. According to the technical analysis, historical prices and trading of the stock provides clear picture of future price movement. However, fundamental analysis argues that selection of right stock is based on the intrinsic value of the stock.

On the other hand, efficient market theory argues that market is efficient in pricing the shares. In a situation, where stock price movement follows random walks and at every point

in time actual prices represent good estimate of its intrinsic values, general investors tend to select any security randomly to form his/her optimum portfolio. (Fama; 1965:40)

Thus, the study shall make an attempt to address the following issues:-

- ⊕ What is the overall situation of the stock market in Nepal?
- ⊕ Whether the price changes are random phenomenon or not?
- ⊕ Whether the stock market is efficient or inefficient in pricing of shares?
- ⊕ To what extent it is possible to predict future price movement based on the historical prices?
- ⊕ What could be the reasonable price paid for a stock in the secondary market?
- ⊕ Does the Random Walk Hypothesis exist in Nepalese stock market?

1.4 Objectives of the Study

The major objective of this study is to highlight the stock market performance and the behavior of stock price of listed commercial banks in Nepal. However the other specific objectives of this study are as follows:-

1. To analyze the behavior of stock price of listed commercial banks in NEPSE.
2. To analyze the efficiency of the stock market in pricing shares.
3. To determine whether the successive price changes of stocks are dependent or independent.
4. To examine whether the Random Walk Hypothesis exists in Nepalese stock market or not.
5. On the basis of the findings of this study, an attempt will be made to forward suggestions for the improvements of the Nepal Stock Exchange.

1.5 Significance / Importance of the Study

In the Nepalese context, there is a lack of wider investment opportunities that provides good rate of return. There has still been a huge amount of unutilized saving funds with the general public. The investors are attracted by the increasing trend of market price per share of public companies mainly of the joint venture commercial banks. They are investing their saving funds in the common stocks of the public companies with the expectation of high capital gain in the future.

The stock market efficiency is the major part in the investment management. If the imperfections are prevailed in the stock markets then the investor can utilize them to achieve handsome return. So, there is a need of analysis, whether the stock market is efficient or not. For that purpose, this study attempts to apply the efficient market hypothesis approach.

But most of the investors, i.e. existing and potential investors do not possess knowledge about real financial strengths and weakness of the public companies in which they are going to invest or investing their funds. Further they cannot well analyze and interpret the actual financial position of a company on the basis of available data and information to reach the right conclusion.

Lots of study has been conducted previously to measure the performance of the company listed in the security market. Separately some studies have also been conducted to study the stock price market. It will be helpful to the stock market in Nepalese context. Further, it will add little worth to those who want to conduct a research work in related topic. This study is assumed to be helpful to the financial manager of corporate firms to know about the behavior of their share price with respect to the changes in financial position of the firm.

1.6 Limitation of the Study

This study attempts to analyze the efficiency of Nepalese stock market and determine the stock price behavior of sampled listed commercial banks in Nepal. Due to the various difficulties, this study will be accompanied by some limitations.

Basic limitations of this study are as follows:-

- a)** The major portion of analysis and interpretation is based on the available secondary data and information. So, the consistency of findings and conclusions will be strictly based on the reliability of the secondary data and information.
- b)** This study is concentrated on the banking sector, which is just a part of total capital market. The conclusion might not be generalized on the total market.
- c)** This study only deals with selected commercial banks.
- d)** For the purpose of study, only the common stocks or an ordinary stock is taken.
- e)** this study carries out only a period of five to six years trend of commercial banks, covering 01/02 to 08/09.
- f)** Time constraint and financial constraint will be the major limitations of the study.
- g)** This study has been done for the partial fulfillment for the requirements of M.B.S. Degree in Management.

1.7 Organization of the Study

This study has been organized into five chapters in order to make the study easy to be understood.

First Chapter: Introduction

This chapter deals with the introduction part of the study. It includes background of the study, focus of the study, statement of the problem, objectives of the study, significance/importance of the study, limitation of the study and organization of the study.

Second Chapter: Review of Literature

This chapter reviews the available literatures which are concerned with this study. It includes conceptual framework, review of previous studies both in foreign and Nepalese context, review of published articles in Journals/ books, review of unpublished master degree dissertation.

Third Chapter: Research Methodology

This chapter includes research design, population and sample, nature and sources of data, sample commercial banks, period covered in the study, hypothesis of the study, test methodology and data analysis tools (i.e. statistical tools).

Fourth Chapter: Data Presentation and Analysis

This chapter deals with the presentation and analysis of the available data using various research methodologies. It includes number of listed companies in NEPSE, comparative analysis of NEPSE index and commercial banks index, group wise annual turnover, trading performance of sampled stocks, graphical analyses of stock price behavior of sampled commercial banks, serial correlation analysis, runs test analysis and volatility of daily stock prices of sampled stocks. At the end of the chapter, it covers the major findings of the study.

Fifth Chapter: Summary, Conclusions and Recommendations

This is the last chapter of the study; it deals with summary, conclusions and recommendations. It presents the overall summary and conclusions of the study with necessary suggestions and recommendations to the concerned authorities, companies, investors and forthcoming researchers.

Finally, Bibliography and Appendices are also presented at the end of this Thesis.

CHAPTER II

Review of Related Literature

In this chapter, some of the basic literatures on the stock price movement are reviewed. It includes literatures regarding theories on the topic and review of the empirical; evidences of previous studies.

The first section of this chapter contains a brief description of the stock price movement. It includes the technical analysis, fundamental analysis and efficient market theories. The second section provides reviews on empirical experience of previous studies.

2.1 Conceptual Framework

2.1.1 Financial System and Market

Financial market the transaction of transaction of financial assets like deposits, loan, bonds, securities, stocks, cheque, bills etc. Financial market refers to all the activities of financial institution those transact on financial assets and liabilities.

Financial market is defined as place where fund supplier and fund borrowers are brought together with the help of financial intermediaries directly or indirectly. These intermediaries channel nation's savings into most productive uses. Lenders or suppliers of funds exchange money for other financial assets that tend to provide a better future return. The net effect such a transaction is that they buy a claim against some one's money holding at some future date. In fact, they create loan able funds in the financial market (Hemming and Pigot; 1975:11). Financial market in functional perspective is a rational system of collecting savings and allocating them efficiently to the ultimate users for investment in productive assets or current

consumption (Kiddwell and Peterson; 1981:25). Likewise Mishkin (1992), Baye R. and Jansen W. (1996), Mayo B. (2002) consent that financial market in the arrangement that helps to allocate resources efficiently.

Financial market can be understood with a full fledged knowledge on their various types and categories. The lines of demarcation are not clear cut in practice. Even then for the purpose of simplification and made it understandable, financial market is classified in the following order.

Capital Market

Capital market is an important part of financial market. The market in which long term financial instruments, such as equities and bonds, are raised and traded is capital market (Definitions and data notes, world development report, 1989:9).

Capital market securities include such market able debt securities with maturities of a year or more and equity securities. Most of associated markets come under the scope of capital market. In fact, capital market deals with longer term and relatively riskier securities. All those who needed longer term funds depend on capital market. Likewise, business and industries issue shares and other securities to raise funds from capital market. In the context of our own country, capital market is slowly growing as well as improving. Growth of capital market has made it possible for the public limited companies to raise long term capital by issuing shares and other industrial bonds to the investing public. On the whole, capital market is providing very significant to enhance the country's financial sector development. It is mainly because capital market as much more diverse than those found in money market. Capital market is further classified into Stock market, Money lenders and Local Businessmen etc. Thus one can observe that stock market is the important part off capital market.

Money Market

Money market is also known as short term financial market. The financial market in which funds are borrowed for short borrowed. Generally money market trades and commercial papers, certificate to deposit, short- term bond & Government Treasury bill.

The money market is founded on the large amounts of funds, which companies, banks and other financial institution wish to hold in highly liquid form to meet short-term fluctuations in their finance. Generally, the money market is divisible under two sector-organized and unorganized.

Primary Market

The company to trade in the capital market issues the new securities. Here the securities of large business firms issued for the first time sold and bought. The issuer of such securities may directly sell through private placement without underwriting to the investors. Besides, the securities may be sold after being made underwriting by the institution like investment banking. The issuer (company) collect amount and invest in the productive sector to earn the profit.

Secondary Market

Secondary Market provides the liquidity and marketability opportunity to stock market. Stocks are traded second time in the agreement of buyer and seller in the stock market. Stock market either may be OTC market or registered market. Usually, those buying the securities for the first time went to see the securities within a short period. There is the provision of secondary market for this the secondary market can be sub-divided into two parts as below.

Stock Market

Stock itself represent an ownership position in a corporation (Shrestha and Bhandari; 2005:188). By purchasing a share of a corporation, a person can be become a shareholders with some degree of control over the company. Hence common stockholders are the owners of a corporation, and as such they certain rights and privileges. Common stock gives several rights to the stockholders. Stockholders enjoy right to vote, right to dividend, and right to have right-share etc.

Stock market is also a mechanism to bring buyer and seller together to deal on stock through the primary or secondary market (Thygeson; 1992:69). Common stock is most favored

financial instrument to finance the assets of firms so in most of the country stock market bears large amount of total securities market.

2.2 Theories of Stock Price Movement

There are two approaches to explain share fluctuations. Market efficiency is the basis for both approaches. Conventional approach has considered that market is inefficient, which includes technical analysis theory and fundamental analysis of theory. Contrary approach was argued the market is efficient under which there are forms of efficient market hypothesis. “Prior to the development of the efficient market theory, investors were generally divided into two groups: fundamentalists and technician” (Reilly; 1986:367). Based on incorporation of various types of efficient market theories such as weakly efficient market or Random walk, semi-strongly efficient and strongly efficient market theory.

2.2.1 Technical Analysis Theory

Technical theory involves study of the past volume and price data of the stock in order to predict future price fluctuations. This approach studies various graphs and charts of the past share price and deduce from the analysis about the future price movement of seeking to interpret-past pattern on the assumption that history tends to repeat itself (Kean; 1983:11). Main assumptions of the technical theory are as follows (Levy; 1966:348).

- I)** Price is determined by the interaction of demand and supply.
- II)** Demands and supplies are governed by various factors, both rational and irrational.
- III)** Series of price content trends that persist for appreciated length of time.
- IV)** The changes in trend caused by shifts in demand and supply are detectible in the analysis of past price and volume data, and
- V)** The pattern tend to repeat it self.

Technical analysis discerns past pattern or trend, which they believe to repeat in the future and recommended for the timely holding and disposing mechanism which is profitable or that recommended for short term speculation based in its forecast of profitable patterns.

The technicians usually attempts to predict short term price movements and thus makes recommendations concerning the timely of purchase and sales of their specific stocks or group of stocks (Sharpe and Alexander; 1990:683)

2.2.2 Fundamental Analysis Theory

Fundamental analysis theory claims that at any point of times an individual stock has an intrinsic value, which is equal to present value of future cash flows from security discounted at appropriate risk, adjusted discount rate. “The value of common stock is simply the present value of all future income which the owner of share will receive”, (Francis; 1986:398). And the actual price should reflect the intrinsic value of the stock i.e. good participation of cash flows and capitalization rates corresponding to future time period. But in practice first, it is not known in advance what a stock’s income will be in the future period, and second, it is not clear what the appropriate discount rate should be for a particular stock. So, fundamentalists attempt to reach best estimate of the intrinsic value of share by studying company’s sales, profit, dividends, management competency, and numerous other economic and industrial factors, which determine its future income and prospect of business opportunities. “Fundamental analysis delves into companies, earnings, petition, market conditions, and many other factors.” (Francis; 1986:425).

Since in world of uncertainly, the anticipation, of values cannot be known exactly, there will be disagreement on the option about prices fluctuate closely around the economic value of share, because too far than true value is profitable for the participants and they do not miss to exploit ht situation. Over the time, with continuous generation of new information related to company’s coming prospect, the instructive value of changes. As a result price stocks just too intrinsic value. The actual of securities therefore is considered to be function of a set of anticipation. Price changes as anticipation changes within in turn change as a result of new

information (Bhalla; 1983:283). Whenever the stocks are over or under the true value of stock, the recommendation of sales or purchases is called for “after extensive analysis, the investors derive an estimate of the ‘intrinsic’ value of security, which is then compared to its market price. If the ‘value’ exceeds the market price, the security should be acquired and vice versa. (Reilly; 1986:347) following this rule they believe, above – average return can be attained, given that market is inefficient in pricing the shares.

The two theories explained above have assumed that the pricing of the shares in the market is not efficient. Therefore, while making investment decision, technical analysis theory suggests for the right time of purchasing and selling whereas fundamental analysis theory recommends for the selection of appropriate stocks. Another approach to describe share price behavior has supposed that the market is efficient in pricing the share. The detail explanation of efficient market theory is followed in the following section.

2.2.3 Efficient Market Theories

Market efficient may be defined in the context of number of areas for instance organization efficiency, investment efficiency and so, on. The word “efficiency” as applied to securities market has unfortunately been used to represent a variety of logically distinct concept. In particular, it may mean as follows (Rubin stein; 1979:812).

- (a) Exchange efficiency
- (b) Production efficiency
- (c) Information efficiency

However, in this study it is concerned only with information efficiency in pricing of stock efficient market theory contends that in free and perfect competitive market, stock price always reflects all available information and adjust instantaneously every influx of new information. In an efficient markets, security prices “fully reflect” available information (Fama; 1977:133).

About the assumptions of the efficient market theory, Fama asserts that first it is easy to determine sufficient conditions for the capital market efficiency. For example, consider a market which (i) there is no transactions costs in trading securities (ii) all information are cost less available to all market participants and (iii) all agree on the implications of current information for the current price of a security obviously “fully reflects” all available information. similarly according to Rubinstein “In a perfect and competitive economy composed of rational individual with homogeneous beliefs about future prices, by any meaningful definition present security must fully reflect all available information about future prices” (Fama; 1975:812).

The subject to market efficiency has been much concerned area of the study for the academicians and researchers in recent times. An initial and very important premise for the efficient market is that there are large numbers of knowledgeable and profit maximizing independent buyers and sellers as such new information is generated randomly and investors adjust the information rapidly (Redilly; 1986:166).

An efficient market is concerned with the pricing mechanism of securities market, it has two dimension of price adjustment one is the type of information reacting to and another is the speed and quality of security to the information. As any random infusion of information instantaneously and correctly adjusted in prices there will be no subsequent dependencies or large that is profitable. Pricing not only should be instantaneous but should discount accuracy of information so that the prices get fluctuate closing around its intrinsic value. So Kean right pointed out “It would be clearly an odd interpretation of efficiency if a doubling in the price of share were regarded as an efficient reaction to new information in fact warranted a substantial reduction in the price (Kean; 1983:9).

The efficient market theory being extreme hypothesis i.e. prices fully reflected all the information, can not be tested in the empirical data in its precise form. However, postulating pricing mechanism with the types of information jet being impounded in the stock market. It can be done. There are three of market hypothesis depending upon types of information set impounded into the prices. If the pricing in the stock market has absorbed, all the information will be available in the stock market. It is considered as weakly efficient and participation of

the technical analysis approach in the market becomes futile. In this market past information has already been discounted in price, so excess profit can not be derived from the investment strategy based on past information. If current prices of the stocks reflect all the publicly available information. If current prices of the stocks reflect all the published accounting information i.e. past price and volume data and all the published accounting information, the market is semi strongly efficient. In that market, even fundamental analysis of the published accounting information has no value, because it would have been discounted by participants accurately and instantaneously when are disclosed. When stock prices fully reflected all the relevant information i.e. published and unpublished that have impact on the future prices, the strongly efficient market hypothesis is hold. In this market, insider information can not beat the market because no single participant has monopolistic access to that kind of information.

These three levels of efficiency described above are not indifference each other but they are serially higher in degree of market efficiency. If the market is semi-strongly efficient, it must be efficient in the weak sense also because the past prices data is one form of published information, which must have been important for the price. If the market is not efficient in weak sense also because the past prices data is one form of published information, which must have been important for the price. If the market is not efficient in weak sense, past price information could be used to predict the future prices to exploit abnormal profit. It implies that information contained in past price has not been reflected fully into the current prices. Similarly, for the market to be strongly efficient it must also be efficient at the semi-strong and weak levels, otherwise prices are not reflecting all relevant information. These literatures are the brief description about the theories of stock market of random walk theory will be explained, testing of which the prime objectives of this study is so that it makes clear about the study traced in the succeeding chapter. Following factors are included in efficient market theory.

2.2.4 Theory of Weakly Efficient Market or Random Walk Hypothesis

The weak form of efficient market hypothesis (EMH) states that current prices fully reflect in information contained in the historical price movements according to Kean. “The market is efficient in the weak sense if share prices fully reflect the information implied by all prior movements. Price movements in effects are totally independent of previous movements implying the absence of any price patterns with prophetic significance”, (Kean; 1983:10). So, the past prices have no meaningful information to predict future course of price fluctuations, which can be used to earn above average return. The movements of future prices are independent from previous prices or the series of price changes are random phenomenon. Actually, the weak form of EMH is reflected to as random walk form efficient market hypothesis is popularly known as the random walk theory” (Fischer and Pardon; 1995:540).

Random walk theory implies the future path of price level of security is no more predictable than the path of a series of cumulated random numbers. The series of price margins has no memory, that is part can't best used to predict the future in any meaningful way, It means that current size and direction of price changes is independent and unbiased outcome of previous price changes. The random walk models in pristine form in two main hypothesis states that (I) Successive price change are independent and (II) The price changes conform some probability distribution for the price change during the time period 't' is independent from the sequence of price changes during previous time periods. Mathematically,

$$\Pr (x_t=x [X_{t-1}, X_{t-2}, \dots]) = \Pr(X_1=X)$$

In above equation, the term of the left side of equation is the conditional probability that price change during the time will take the value x_1 conditional on the knowledge, the previous price changes too the value X_{t-1}, X_{t-2} etc. But the term on the right of the equality is the unconditional probability that the price change during 't' will take the value x . The expression means the distribution of an independent random variable are identical (Gupta; 1981:31)

Out of two hypothesis of random walk theory, independence of successive price changes is strong and most important one to make theory valid. The second one is price change conforms to some probability distribution but its shape or form of distribution need not be specified i.e. any distribution is consistent with theory as long as it correctly characterized the process generating the price changes (Fama, 1965:35-41). However, the parameter of the distribution should be stationery but not so strongly imposed if independence hypothesis is holding true. However, still the form of distribution if price changes are important from investment decision, academic and research point of view (Gupta; 1981:41).

Proponents of random walk recognize that is general, perfect independence assumption doesn't exist in real world. So, they argue that for practical purposes small degree of dependence does not isolate random walk hypothesis as long as it cannot be used to forecast future to earn more than average market return. Random walk model is valid as long as knowledge of the past behavior of the series of price changes cannot be used to increase expected gain (Fama; 1965:35).

For practical purposes, independence hypothesis is accepted as long as the degree of dependence considered in the series of price change is not sufficient of forecast the future from the historical price movements in a way it makes higher profit than they would be under the naive buy and – hold policy.

Actually market mechanism establishes the existence of random walk theory that the successive price changes to be independent. The stock market poses steady inflow information that influences the set of anticipation of the individuals. There are some information that have whole market wide impact such as change in monetary and fiscal policy on security prices and information have an effect on industry. There is information such as announcement of earning and divided that affect price of the particular security. The change in the set of anticipation resulted from either of the above information is unique to each individual and may be caused by psychological and other groups of participants who estimate the intrinsic value “the existence of intrinsic value for individual securities is not consistent with random walk hypothesis” (Fama; 1965: 63)

The intrinsic value of given securities depends on earning prospects of the company which in turn are related to economic political, industrial and company specific factors. At many point of time, there exist implicitly an intrinsic value of each share but in the world of uncertainty the intrinsic value are not known exactly. Therefore, there can be disagreement among the participants about the estimated intrinsic value of the share and actual price differ from its intrinsic values. Over the time, the intrinsic value itself change, as new information appears that affects the prospects of company. New information may be about deregulation in the quota system on the efficiency licensing, a change in management, success in research and development and tariff imposed on the raw materials etc. It steady inflow of various types of information (i.e. pessimistic, optimistic and so on.) arise independently across the time and it participants do not show dependent tendency about intrinsic value, the subsequent prices in stocks will be independent. However, in the real world, these conditions always do not hold true. True may be dependencies in the reaction of participants toward to estimation of new intrinsic value or whimsical tendency. For exchange certain individuals or institutions action on new anticipation value for below the above from the true values which result unhindered dependencies in subsequent price changes. In this situation, we can assumed that there exists many sophisticated traders of two types : (1) traders having much better capacity to predict the appearance of new information and estimation of its effects on intrinsic values that others, generally named superior intrinsic – value analysis, (2) trader having much better skill at doing statistical analysis of price behaviour named technical analysis. The sophisticated traders can recognize the situation where the price of stock is beginning to run up or down from its intrinsic value because of inappropriately under or over discounting of information and its adjustment in the securities prices. This situation provides them incentive for speculation in the market because the price is expected to move eventually to its intrinsic value. Thus, the existence of profit maximization strategy of these sophisticated traders lead to neutralize the dependence in the price change and the price changes follow to independence of successive price change.

Of course in the uncertain world, sophisticated traders cannot always estimate intrinsic value exactly and their efforts towards erasing the dependencies may not be sufficient. In this case sophisticated chartists can reinforce the neutralizing mechanism, because as long as there are

important dependencies they can easily discern the 'trends and patterns' and initiate value maximization strategy over the time the infusion of the new information in the market may move dependently which will tend to create dependence in the successive price changes of new security. For example, optimistic information tends to follow more often by optimistic information and pessimistic news tends to be more often followed by pessimistic news than good news. In this case also, the sophisticated traders eventually learn that it is profitable for them to estimate price changes of current new information and subsequent dependence of the same information and through their active speculation dependence in price series and establish independence assumption of the random walk theory of stock market price behaviour.

2.3 Financial Market in Nepal.

The history of financial market in Nepal is not so old and it is in the growth stage. However, the development pace of share market is not completely satisfactory compare to the development and emergence of various financial and non-financial institutions.

The financial market is still in infancy in Nepal. Since, the financial market plays an important role in the efficient distribution and use of resources. It is extremely important in a poor country like Nepal.

The system of lending and borrowing in an un-organized way is prevalent in Nepal since the ancient time. Everybody substantial portion of rural credit is available from unorganized sectors. The system of providing loan through the organized sector was initiated by Tejarath Adda established in 1993 B.S. the scope of this institution which made available loans only to the government employees in the beginning was limited.

The system of collecting deposit and granting loans in the organized sector has started with the establishment of Nepal Bank Ltd. in 1994 B.S. the mobilization of funds by selling the securities to the general public had, started with the establishment of Biratnagar Jute Mill in 1993 B.S.

In fact, the prosperity of a nation and her people depends much on the manner how financial market plays in the transfer of funds. This helps in integrating the various sectors of the economy. Taking the case from our own country, financial system is slowly bringing significant macro economic policy transformation effects. It is because the government role is proving vital in the growth of financial institutions as well as financial market. Altogether, there exist at present 17 commercial banks that comprise 2 local banks and 15 joint venture commercial banks. There are 21 development banks that include rural development Banks as well. Then in the chain, financial system covers 59 finance companies, 18 insurance companies, 34 saving and credit co-operatives with NRB license and 38 NGO's licensed to perform limited banking functions under the supervision of NRB. There are numerous other cooperatives with multi purpose functions and characteristics registered under department of cooperatives. Moreover there are two non bank financial institutions like CIF and provident fund.

The total networks of the financial system in the economy constitute financial institutions and countless cooperatives. These institutions differ in age, scope, size; capital base, magnitude, function and risk- return considerations. Because of the government's economic and financial liberalization policies. Funds transfer effects between users and suppliers of capital tend to be positive.

---- In tenth plan (2002-2007), capital market development plans, objectives, policies and programs have been already spelled out to create sufficient enabling conditions for the sound and steady growth of capital market in the country. Despite all these developments, the gross domestic savings continue to be minimal and the ratio of total savings to income of is very low. Even then, the tenth has specified the target to raise funds of Rs, billion from primary issues, to generate secondary market of Rs, 12 billions and raising the value of market capitalizations to 15% of GDP, in addition, there is plan to increase 40 companies in list of stock exchange. How far this target of tenth plan will be fulfilled is a big question mark of future capital market growth in Nepal.

There are mainly two type of financial market, first one is money market and end one is capital market. Short-term funds of firms are raised money market & middle term funds of firms are raised from secondary market. Following are the types of financial market.

2.3.1 Money Market in Nepal

The organized market in Nepalese context comprises Nepal Rastra bank and commercial banks. It is called organized because the activities of commercial re systematically coordinated by the central bank. The unorganized market is largely made of indigenous bankers and money lenders. It is unorganized because Nepal Rastra Bank does not systematically coordinate the activities of these indigenous bankers and money lenders.

Nepalese money market is not well developed in terms of securities dealt with and institution involved in the market, Institution that dealt completely on money market instruments is absent, similarly, many f the instruments which are in developed money market like commercial paper, banker's acceptances, have not yet entered the Nepalese money market. Therefore the institutions that operate in the money market are basically Nepal Rastra Bank and commercial banks and instruments dealt are treasury bills, commercial bills and short term loan.

Treasury bill market is major component of money market in Nepal, started in the year 1961-62. Since then it has been an important source for short term fund for the government except for few years taking from 1968 to 1974. But, because of low yield and absence of active secondary market with brokers, t remained mostly at the band of the central bank. The holding of treasury liquid ratio was uneven in the past particularly because of low yield. The interest rate was five percent until mid November 1988. Since then, the rate is determined through auction in the market , the weighted average (annualized) ratio on 91-day treasury bill increased form 5.2 percent I 1988/99. It then slightly increased to 4.96 percent in 2000/01, treasury bills are being held mostly by commercial banks (Shrestha and Bhandari: 2003:105)

Commercial banks are major borrowers and lenders in the short term money market although, commercial bank have been dealing with commercial bills since long. The bill market has its position as under developed in Nepal. Only a small amount of commercial banks lending is export and domestic bills and larger amount is invested in import and LCs and the purchaser of export bills. Besides treasury and commercial bills, short term credits also forms another important money market in Nepal. Though short term credit has not fully developed to encourage growth of money market in Nepal, even then it has been the convenient vehicle for lending and borrowings. This type of finance was largely the monopoly of commercial banks in the past but in recent years, NIDC and other development banks also provide such finance.

2.3.2 Capital Market

Capital market is known as long-term financial market & long-term funds of firms are collected from the capital market. Hence, capital is a long-term credit market. The meaning of capital market can be made clear from its definitions.

According to Peter S. Rose – the capital market is designed to finance long-term investments, financial instruments traded in the capital market have original matures of more than one year.

Investors are the real owner of joint stock company they purchase the shares and establish the company to get divided and capital gain, but who protect theirs investment and right?

Yes, securities Board Nepal (SEBO) protect and promote the interest of investors by regulating the securities Exchange Act, 1993 (First amendment). Besides the regulation rule, it is also responsible for the development of security market in country. Nepal is developing country, for the balanced development country, she has been adopting planned economic development requires a steady supply of Medium and long-term capital funds. supply of capital Market are the institution, which are engaged in mobilization of ideal saving in

productive opportunity, development and expansion of capital market. Markets are essential for rapid economic development by mobilizing the long term (Ojha; 2001: 96).

Nepal Stock Exchange Ltd. (NEPSE) is the only one – license holds Mediator of Securities Board of Nepal (SEBO). All the broker company (who has received the certificate of stock trading and become the market of NEPSE) trade in the trading floor of NEPSE. This is the secondary market of stock which market provides the liquidity in stock. In the respect, capital market plays a crucial role in mobilization a constant flow of saving and changing these financial resources for expanding productive in the country, stock market is a medium through which corporate sector mobilizes funds to finance productive projects by issuing share in the market, Similarly stock market provides the best investment opportunity to the investor. Further, many profitable projects require long-term venture capital to finance. Most investor tempts to provide risk and is reluctant to tie their saving into long term commitment liquid stock market makes the investment less risky and more attractive. It encourages savers to invest in the long term project because they can sell the securities quickly and easily, if they want get bank their saving before the project matures. At the same time, companies receive easy access to capital through new issuance of shares (Shrestha; 1996:3).

The organized stock is recent phenomenon in Nepal. The history and securities market began with the floatation of shares by Biratnagar Jute Mill ltd. and Nepal Bank Ltd. 1937 A.D. Introduction of company act in 1951. The first issue of government bond in 1996 and the establishment of securities exchanges center in 1976 were other significant developments relating to capital markets. Securities exchange center was in 1976 with the objective of facilitating and promoting the growth of capital markets. Before conversion in to a stock exchange it was the only capital market institution under taking the job of brokering, underwriting, managing public issues, market making for government bonds and other financial services.

The basic objective of NEPSE is to import free marketability and liquidity of government bond and corporate securities by facilitating transaction in its trading floor through market intermediaries, such as brokers, market makers etc.

In broad sense, capital market can be classified into two markets. First one is securities market and second one is non-securities market. Under the securities market, share, debenture bond and stocks are traded by the government and reputed organization where as under non-securities market financial institutions period the long term loan to the industries and business. The market where securities are traded is known as capital market. The capital market is broadly categorized into two markets. They are primary capital market and secondary market.

2.2.3 Primary Capital Market

The company to trade in the capital market issues the new securities. Here the securities of large business firms issued for the time bought and sold. The issuer of such securities may be directly sold through private placement without underwriting to the investors. Besides, the securities may be sold after being made underwriting by the institution like investment bonding. The issuers (company) collect amount and investment in the productive sector to earn the profit.

2.3.4 Secondary Capital Market

Secondary market provides the liquidity and marketability opportunity to stock market. Stocks are traded second time in the agreement of buyer and seller in the stock market. Stock market either may be OTC Market or Registered market. Usually, those buying the securities for the first time went to sees the securities within a short period. There is the provision of secondary market for this the secondary market can be sub-divided in two parts as below.

2.4 Introduction of NEPSE

The history of securities market began with the floatation of shares by Biratnagar Jute Mills Ltd. in 1937. The first issue of government bond in 1964 and the establishment of Securities Exchange Center Ltd. In 1976 was significant development resulting to capital markets.

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

Nepal Stock Exchange in short NEPSE, in non-profit organization operating under Securities Exchange Act 1983.

The basic objective of NEPSE is to free marketability and liquidity to the government and corporate securities by facilitating transaction in its trading floor through market intermediaries such as broker, market and market maker etc. NEPSE open its trading floor on 13th January 1994 through licensed members.

His Majesty's the government, Nepal Rastra Bank, Nepal industrial development corporation and licensed members the shareholders of the NEPSE.

2.5 Review of Journals and Articles

Investors were enlightened and they stated inquiring about company's financial health and future prospect before buying or selling shares. People turned to price earning multiples; NEPSE indexes informed trading became short of a norm when stock market entered 1995. Many who could not cope with the system of intelligent speculation left the ground? As a result, the number of buyers gradually came down and so did the prices (The Kathmandu Post; May 18, 1999).

ADB experts have seen any obstacles to the growth of the capital market. This includes low level of investors' confidence, disclosure of poor and manipulated financial information, weak enforcement of regulation, absence of institutional investors, lack of diversity in range of financial instruments and the scope of active participation for the various intermediaries limited by vertical barriers (the Rising Nepal, Jan 20th 2001). The current downtrend in share market is not so easy to recover unless strong regularly measures are not enforced. The honeymoon days of share practices that went undetected during the period of share market boom among all, the regulation of share market to control on the unfair trade practice would be done of the strong measures to revive the share market in future. In order to curb the fraudulent practices and discourages the dissemination of misleading information in the current share market of Nepal, the regulating authorities must govern the activities in the share market. There should be immediate check on the unfair share trading practices. Wash sales should be discouraged by immediate action. Nepal Stock Exchange can form a watchdog team to investigate on the real existence of a share transaction. The present practice of share trading by mutual consent is a kind of wash sales that should be discouraged as it creates distortion in the price determined by the market force. Such action helps in avoidant fictions name created by several different share brokers in share transaction and also to check on the creating an illusion of rising price. Moreover, the challenge for the regulating authority is to control on the hidden establishment of share market corners and pool by some market price manipulators. Surprise inspection and vigilance by professional team (without making known who are its members and advisors) can check on the functioning of the office of such price manipulators interested to corner a share market dealings, action should be taken against such price manipulators by imposing heavy penalties and punishment depending upon the nature of offence.

At the same time, the concerned authority has to discourage the practice of churning by the brokers since it helps brokers to generate sales commissions regardless of benefits of such transaction to the client. Moreover, it is a right time for the concerned authorities to develop transparent guidelines to have strict vigilance and control on misuse of insiders should be debarred from leaking price sensitive information by imposing heavy penalties and punishment for breach of legal provision. The revival of the share market requires minimum

fulfillment of the responsibilities and accountabilities among company management to respond to shareholders expectation of return from their investment in shares of companies. Management should make it a habit to change attitude to think what is good for shareholders is good for company as a whole.

Immediate measures lies in giving attention to shareholders' grievances like timely conduction of annual general meeting, improving the quality, standard and coverage of reporting, developing minimum return on investment strategy and index. In order the downtrend in share market, various reformative measures are urgently necessary to curb on unfair share market practices through the development of comprehensive and transparent stock exchange guidelines by the concerned authorities. The existing company management has to reorient its positive attitude towards investors and shareholders by improving the quality of timely reporting and providing the expected return to win the losing confidence of shareholders. Investors should be self-conscious in the selection of brokers for trading in securities and organize themselves to be active to protect their rights. All these will help in the revival of share market to make it more active by attracting the investing public (the Rising Nepal; Feb 22, 2002).

Capital market is a crucial element in the national economy. Its role in reinvigorating and boosting the economic activities in the country holds significant. The strategic plan released by security board can, to great extent, energize the investor's dealer by increasing investor interest in it. Security market experience both boom and boast soon after the beginning of securities trading through brokers members in the stock exchange floor. Though the market started to function quickly boosting the prices of shares to an unexpected level, it could not sustained. There is an urgent need for proficient development of a market standard and information dissemination system focusing mainly on corporate financial disclosure practices and transparency, corporate accounting and auditing securities markets regulation and corporate governance. The implement the above, security Board has a great responsibility as to reviewing and developing regulatory standards to make them a relevant with the need of issuers, investors along with promoting efficient capital formation (Business age; April 1999:15).

Rating the institutions on the basis of price earning ratio or dividend has traditionally done investment in share. Hardly do investors compare current assets with current liabilities or take a look at the debt equity ratio. Unless investors begin analyzing the intricate financial details of corporate institutions before making investment decision, the market cannot develop smoothly. Share investment has traditionally been guided by the investors' returns. Most earning of investor here have been in the form of dividends rather than capital gains, through high dividend are often seen, in corporate finance theory as a wasteful use of scares capital. With the commercial bank becoming the only potential investment destination, with other stock market participants hardly making profit, and event if they did failing to meet investor's expectations, demand for shares of commercial banks outpaced supply and their prices boomed.

Now, the latest slums in the secondary market, despite a pretty good performance by commercial banks, make it more apparent that investment in the past was done on whim. Even officials at the stock exchange and the securities board, refuting investors' allegations of the market manipulation and insiders' trading of last February, discreetly claimed that the Nepalese stock market is in a nascent stage.

And that, investment are made more on an impulse, rather than through market study and credit rating, business age; 2001:25)

There are many loopholes in our Stock Exchange Act. Investors feel insecure here. A few years back there was a company called Nimrod Pharmaceutical Company that floated in shares, but where are they now? Similarly, it has been more than a year that Bansbari Lather age has allotted its shares, but why didn't the company list its shares in the market? It has been three years that Gorkhali Rubber Udhhyog hasn't called for its AGM Government remained silent in all these cases. This is why the general public as well as the institutional buyers is not feeling secure investing in stock market (Business Age; Jan, 2000:25).

Share trading scandal formed the headline of major dailies of Nepal a few days ago. The news was that some of the staffs of Nepal Merchant Banking and Finance Ltd. (NMB), the share registrar of Standard Chartered Bank Nepal Ltd. were involved in unauthorized sale of

the share of investors not present in the country. They were also alleged of cheating such shareholders of their dividend. As a share registrar, the company's duties were to update the shareholders and to verify the signature of the shareholders and to claim themselves the dividend allotted to such shareholders. When the media reported this scandal, NMB blamed on its staffs and registered a forgery case in the District Police Office, Kathmandu. The accused is still learnt to be in the police custody. As stated in the news, though some other staffs also were involved in this scandal, NBM has registered the case against only one of its staff. Another of the NMB staff accused in this scandal is reported to have escaped out of the country. If such types of scandals, whether they are reported by the media or not, are repeated frequently and no attempts are made to rectify the flaws in the system and to punish the guilty, there is not doubt that sooner or later the capital market will lose the investor.

A close study of this case brings the deficiencies of our market to the forefront. The major deficiencies are obviously lack of professionalism among the market participants and lack of interest in compliance. The issuer company cannot escape from its responsibility simply by blaming the registrars are found to be careless and a question can be raised on their professionalism and honesty. The stockholder has also made mistake by executing the share trading without identifying the client and thus violating the codes of conduct for stockholders issued by securities Board (SEBO), the regulator of the capital market in Nepal. As the code clearly states that the brokers must identify their clients, such scandal could have been avoided had the broker complied with the code. Also the regulators are equally responsible as they are not effectively monitoring the activities of securities businesspersons and taking legal action against their non-compliance under the prevailing rules and regulation. As the capital market of Nepal is still in the infant stage, the regulatory system established to systematize and regularize the securities trading still has deficiencies. This leaves scope for anyone to take unfair benefit from the market at the cost of ordinary investors. Not only the investors are found to be irrational and concerned with short term gains, in this scenario, we cannot expect perfect behavior from all the market participants. The major problems seen in the system are duality and ambiguities in the regulations, inadequate legal provision to control the market, lack of adequate market infrastructure, lack of clear demarcation of duties of the regulators, poor corporate culture, lack of professionalism of the market participants,

poor compliance and lack of clear legal provision for taking action to address the noncompliance cases.

In its annual report for the fiscal year 2001/01, SEBO states that has made some attempts to address the issues through issuance of guidelines, directives and disclosure formats to the market participants, codes of conduct for the stock brokers etc. It has also prepared a draft for the new securities exchange act, which was presented to the Ministry of Finance in 1998 to initiate the necessary legislative process. However, it is still to be enacted by the parliament. Even though SEBO has made attempts to solve the problems, they are still there. It cannot escape of its duty to explain the present state of the market and deficiencies existing in the system. Taking necessary support from the government is should take the required step to better coordinate the market participants to develop a healthy capital market in the country. Moreover it is important to discipline the market participants and educate them of their moral duty to make others comply with the prevailing rules and regulation. Only this can create the atmosphere where scandals like this can not be repeated (New Business age; April 2003:44).

Investment in the capital market now has become very uncertain, sending the investors in search of avenues of more certain retains. The equity investment I considered riskier than investment in bond, preferred stock etc. The secondary market is not performing well. The NEPSE index is hovering around 208 and 215 since long. After great slump in Nepal Stock Market in fiscal year 2000/01, dissatisfaction has increased in the mind of invertors. The NEPSE index on 23rd Nov. 2000 had reached the peak of 545.82 and after it is continuously on the decline. (The Business age; March 2004:42).

A study conducted by Pradhan and Balampaki (2004) on the title of “Fundamentals of Stock Return in Nepal” has given some important insight regarding nature of stock return in Nepal.

This study deals with fundamentals of stock return. It examines if dividend yield, capital gain yield and total yield are related to earning yield, size, book to market ratio and cash flow yield. The study is based on pooled cross sectional data of 40 enterprises whose stocks are listed in Nepal Stock Exchange Limited and traded in the stock market. The study reveals

that earnings yield and cash flow have significant impact on dividend yield. Other main findings of the study are:

Earning yield and cash flow yield have insignificant impact on book to market value whereas; size has negative impact in dividend yield. In the case of earning yield and cash flow yield, cash flow yield has been found to be more informative than earning yield.

Capital gain yield positively influenced by earnings yield and size, whereas the same is negatively influenced by book to market value and cash flow yield. Book to market value has been found to be statistically strong in predicting capital gain yield.

Similarly, total yield is positively determined by earning yield and size, whereas the same is negatively by book to be market value and cash flow yield. Book to market value also been found to be more informative than other variable.

MR. K.C. (2004) has conducted a study entitled “Development to Stock Market and Economic Growth in Nepal” based upon the data of 10 years. The study reports that the relationship between financial development and economic growth, with focus on development role of stock markets, has been in debate for some time in the past. Empirical studies suggest that financial development does matter and stock markets do spur economic growth. Unfortunately, in Nepal, despite a history of about half a decade of f planned economic activities to develop real sector of the country, little attention was paid the development of financial sector the past one and half decade, financial sector despite many problems has developed significantly in Nepal. However, most of developments were confined to the banking sector. Stock market has virtually remained stalled because of his priority in the government’s financial reform policies.

Various measures of stock market deployments indicate that the stock market in Nepal us underdeveloped and has failed to show impact on the overall national economy. Low turnover ratio and value traded ratio to volatility, and high concentration ratio indicate that the stock market in Nepal is highly illiquid and risky. Investors tend to avoid stock market because they so not have options to it because stock market is less reliable source of raising funds for them. Due to this financial system in Nepal has remained basically bank dominated.

2.6 Review of Thesis

There are many dissertations written by various researchers in past years. Among them some dissertations are reviewed here for analysis of literature.

Mr. Khatiwada (1996) has conducted the report on “Security Investment”. He has used the data from 1993 to 1996. Among different objective one to analyze the stock market performance is related to subjects market about market price movement of common stock.

The researchers concludes as “living some exceptional cases aside, almost all the companies’ experience their market price goes down by less than 50% in 1991. Even the banking group could not spare the share price going down more specially; the year 1995 was a decreasing period for the stock price. It is because the entire companies share price during the year was down even in some cases before the face value”. Why this deep declination in price was held? The researcher did not look in this aspect.

Mr. Timilsina (1997) has conducted research “Dividend and stock price”. The study was carried out by the data for 16 enterprises from 1990 to 1994. The objectives of this study were as follows:

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

In order to explain the price behavior, the study used simultaneous equation model as developed by friend and Pocket (1964). The main findings of his study are as follows:

The difference between dividend per share and stock price is positive in the sample companies. Dividend per share affects the share prices variedly in difference sectors. Changing the dividend policy or dividend per share might help to increase the market price of share. The difference between stock prices and lagged earnings ratio is negative. Though

there were above-mentioned studies in the context of Nepal, it has overcome necessary to find whether their findings are still valid.

Tilisen's study was based on 45 observations. The number of companies included in the sample was only 16, which is quite low. Studies on dividends conducted in the context of Nepal are based on secondary data only. No study has been conducted on dividends by using primary data as yet. There is need to conduct a survey of financial executives in order to find out more qualitative facts on dividends which can not be determined through the use of secondary data. This is the first attempt that studies dividends based on questionnaire survey. Moreover, the earlier studies on dividends have become old and need to be update and validated because of the rapid changes taking place in financial market of Nepal.

Mr. Bhatta (1997) has also conducted research on the topic "Dynamics of Stock Market in Nepal". The objectives of the research were as follows:

1. To analyze, the trends of the Nepalese stock market.
2. To diagnose and compare, the sectoral financial status of the stocks in Nepalese Stock Market.
3. To analyze the market share prices of the Nepalese stock market.
4. To find out the impact of the secondary on primary market and vice versa.

He has concluded in his research as follows:

The stock market and economic activities move in the similar direction. They influence each other. The development of the former is reflected in the latter. The Stock Market raises, and mobilizes the invest-able resources to finance the long term large projects in the economy. The stock market therefore can be regarded as a heart of economy.

The investors are interested to invest their resources in the shares of corporate sector through the stock market in the Nepalese economy. It is necessary to develop the entrepreneurship and encourage the entrepreneurs to start the productive venture as soon as possible. Management capability of the entrepreneurs is a key for better performance of the firms. Government should launch programs to enhance management capability of the entrepreneurs,

which may contribute to raise the return from the investment. Development of manufacturing sector is the backbone of an economy, which in turn, assists to foster banking, finance and insurance sectors. Unfortunately, the manufacturing sector doesn't have a good performance in Nepalese economy. Almost all firms in this sector have a sustained loss.

The secondary aspect of the stock market is not also functioning well in Nepal. There is almost on liquidity in the stock market for shares except that of banking and some finance and insurance sectors.

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

Mr. Shrestha (1999) has conducted research on "Stock price Behavior in Nepal", this study aims to examine the efficiency of the stock market in Nepal.

The objectives of this study are as follows:

1. To examine the serial correlation of the successive daily price changes of the individual stocks.
2. To determine whether the sequence of price changes is consistent with changes of the series of random number of expected under the independent Bernoulli process.
3. To determine the efficiency of the stock market through the theoretical model of efficient market hypothesis in the Nepalese stock market.
4. To provide feedback policy input towards institutional development of efficient market.

The main findings of this study were as follows:

The serial correlation coefficients of the daily price changes for 1 and 2 lag days, and runs of the series of daily price changes lead to conclude that the successive price changes are not independent random variable for the 30 sample stocks listed in the Nepal Stock Exchange

Ltd. (NEPSE). Therefore, the random walk theory is not a suitable description for the stock market price behavior in Nepal.

The dependence in the series of price changes observed imply that the price changes in the future market will not be independent from the price changes of the previous days. It implies that the information of the past changes is helpful in predicting future price changes in a way that the speculation through technical analysis can make higher expected profit than they would be under naive buy and hold policy (i.e. average market return). Therefore, opportunities are available to sophisticated (both institutional and individual) investors to earn higher return in the market. The existence and participation of the sophisticated investors have not been realized from the findings of this study. It is realized that mostly the naive investors have dominated in the market that can cause prices to diverge significantly from intrinsic values because the very existences of the sophisticated traders cause to erase the opportunities of persistence in prices which establish independence of successive price changes.

Mr. Adhikari (1999) has also conducted a research on “Corporate Practice in Nepal”. The main objectives of the study were as follows:

1. To explain whether companies paying larger dividends have a good financial position or not, whether the companies with higher payouts have an improved or not.
2. Whether the companies with higher yield having an improved financial ratio or not.
3. Whether the difference between dividends and stock prices, dividend payout affect the share prices of finance and non-finance sectors differently or not.
4. The motives of paying cash and stock dividends whether dividend is a residual decision or not.
5. If there is any types of company’s announcements of earning on market price of a share.
6. Whether legal retraction on share repurchases should continue to prevail or not.
7. Kind of dividend policy should be followed by Nepalese enterprises.

The major findings of the study were as follows:

Stocks with larger ratio of dividend per share to book value per share have higher liquidity. However, liquidity position of stocks paying higher dividends is also more variable as compared to stocks paying lower dividends. Stocks with larger ratio of dividend per share to book value per share have lower leverage ratios. It shows that companies paying higher dividends are reluctant to employ higher degree of leverage in their capital structure. Leverage ratios of stocks smaller dividends are also more variables as compared to stocks paying higher dividends.

When the difference between dividends and profitability is studied, it revealed that stocks with larger ratio of dividend per share to book value per share have higher profitability. However, these profitability ratios of stocks paying larger dividends are reluctant to employ higher degree of leverage in their capital structure. Leverage ratios of stocks smaller dividends are also more variables as compared to stocks paying higher dividends.

When the difference between dividends and profitability is studied, it revealed that stocks with larger ratio of dividend per share to book value per share have higher profitability. However, these profitability ratios of stocks paying larger dividends are also more variable as compared to stocks paying smaller dividends. Positive difference is observed between the ratio of dividend per share to book value per share also have higher turnover ratios. However, turnover ratios of stocks paying larger dividends are also more variable that of stocks paying smaller dividends.

There is also a positive difference between the ratio of dividend per share to book value per share and interest coverage. Stocks with higher ratio of dividend per share to book value per share also have higher interest coverage. A positive difference is found between payouts and quick ratio. It may be due to more reduction of quick assets rather than current assets when more dividends are paid out. The position of current ratio of stocks paying larger dividends is also more variable as compared to stocks paying lower dividends where as the position of quick ratio of stocks paying larger dividends is less variable as compared to stocks paying lower dividends. There as a negative difference observed between dividend payouts and

earnings before tax to net worth. On the other hand, there is a positive difference between dividend payouts and earnings before tax to net worth. On the other hand there is positive difference between dividend payouts and earning before tax to total assets and net worth is more variable for stock paying higher dividends.

The difference between dividends payout and turnover ratios has observed to be positive. Stocks with larger dividend payouts have higher turnover ratios. However, turnover ratios of stocks paying larger dividends are more variable.

Positive difference is also observed between dividend payouts and interest coverage, interest coverage stocks paying larger dividends are also have move variables.

When studied the difference between dividend per share to market price per share ratio and liquidity ratio, the study revealed that the stocks with larger ratio of dividend per share to market price per share have higher liquidity. Liquidity positions of stocks paying larger dividends are also more variable as compared to stocks paying lower dividends.

Mr. Ojha (2000) has conducted a research on “Financial Performances and Common Stock Pricing”. The main objectives of his research were as follows:

1. To study and examine the difference of financial performance and stock prices.
2. To examine the relationship of dividends and stock price.
3. To explore the signaling effects in on stock price.

The main findings of his study as follows:

Nepalese stock market is in infancy stage. In general, it is very new and just started to develop. Dominance of banking sector is prevalent in the market due to other industries including finance companies, insurance and manufacturing is not encouraging. Corporate firm with long history have a relatively stable profitability parameters than the firms established after the economic liberalization of 1990. Older firms have been issuing bonus shares more times than the new one. Dividend per share is relatively more stable than the dividend payout ratio. That's why payout ratio and dividend yields have been highly

fluctuating. Due to lack of proper investment opportunity most of the investors have directed their saving towards the secondary stock market. This computed by such agency. People have a misconception that the issuance of bonus shares and right shares, which actually decrease the net worth per share and resultantly ought to decrease the market price of stock also, do not decrease the price and this makes them on invest even at a too high price with the expectation of getting the same to increase their overall wealth. There is significant positive correlation between the dividends paid and stock price of banking and manufacturing industries. All other industries have not a perfect correlation between the net worth per share and stock prices of banking, airline, and hotel industries, there is no perfect correlation between the net worth per share and common stock price.

Mr. Dahal (2001) has conducted the research entitled “Stock Market Behavior of Listed Joint Stock Companies in Nepal”. Main objective of his research were as follows:

1. To study and analyze the rate of listing of new companies and maintenance of listed companies in NEPSE.
2. To study and examine the signaling factor on stock price with the help of Nepal Stock Exchange index.

The study concluded that signaling factor plays major role for fluctuating NEPSE index. The study was verified by taking major seven events such as Royal Palace Massacre, Lease Fire, and September 11 attack, State of emergency, Prime Minister’s visit to USA, Parliament’s practices towards stock market and King’s visit to India.

Mr. Adikari (2002) has conducted the research “Performance and Return to Investors “of listed Commercial Bank in NEPSE. Major objectives of the thesis were as follows:

1. To identify and mathematically present some common variables to measure the performance of the related companies listed in Nepal Stock Exchange.
2. To trace the stock price movement with special refers to the performance of the study.

These objectives directed the study towards determining the representative ness of the market by the floor Major finding of the research:

Net income of the entire bank taken under study was in good figure. EPS of bank like NBB, SBI & EBL are grouping continuously the EPS of NABIL, HBL, NEB & NIB are not constant or in increasing order the reason behind this is the increase in to of shares outstanding as a result of announcement of bonus shares. Earning held shows the decline trend in the banking sector. All the banks under study have downward moving earning yields. The reason is the great market expectations, which is not in tune with EPS. To related to the pre-stated problems financial performance and return to investors. Share price of the commercial bank in the stock exchange were found to be increasing. Even though some fluctuation were found out the market is inefficient in determining the accurate value. As a result of which return are abnormal. Capital appreciation has not been guided by the financial performance of the institution. Rather other forces were found playing role. The information disseminated by the bank is not reflected in the share priced.

Mr. Baral (2003) has conducted thesis entitled “Stock Price Movement in the Nepalese Securities Market”. Main objectives of this study were as follows:

1. To study and analyze the stock price and volume.
2. To study and analyze the investors views regarding the decision on stock investment.
3. To study signaling factors impact on stock price with help of NEPSE index.

The major findings of this study were as follows:

Company's dividend affects the stock price. The price of bullish trend of stock price movement is suitable for Nepalese security market. In the context of the Nepal investors generally decide about their investment on the basis of their own analysis.

Mr. Purna Maharjan (2008) has conducted thesis entitled “Investment Analysis of Commercial Banks in Nepal”. Main objectives of the study are as follows:

1. To study and analyzing percentage of Investment made by selected commercial banks in total Investment made by commercial banks.
2. To study the relationship between Investment and Deposit of the banks

Main findings of the study were as follows:

1. On analyzing the primary data more people would like to invest their money in banking sector.
2. Political environment is not suitable for investment in Nepal and there is not more investment sector.
3. Social status, income and marketing are seen for landing process at bank when analyzing primary data.

Mr. Laxmi Tiwari (2009) has conducted thesis entitled “Financial Performance of Commercial Banks in Nepal”. Main objectives of the study are as follows:

1. To evaluate the trend of total deposit, total investment, net worth, net profit and growth of banks.
2. To draw conclusion and to recommend some strategies for implementation to the concerned banks base on the analysis.

Main findings of the study were as follows:

Deposit money is mainly tied up in loans, the largest item of the bank in the assets side is loan and advances. Negligence in administrating this asset could be the main cause of a liquidity crisis in the bank one of the main reasons for bank failure. It has been revealed from the study that NBB loan and advances to total deposits ratio are little bit lower.

2.7 Concluding Remarks (Research Gap)

From the review of literature it is obvious that the sophisticated and the most contentious theories of trend analysis were developed. Studying the annual trend analysis of Nepalese stock market, it was found that stock price trend is decreasing from many years as smoothly but from one year price of stock is decreasing as rapidly. So from this trend analysis we can say there is no relationship of price trend between 3 successive years. Also, due to the time gap of few years, there is need to carryout a study specific to the effect of capital structure on cost of capital. This study is expected & devoted to test the latest (new) relationship between stock market efficiency and stock price behavior.

CHAPTER III

Research Methodology

Keeping in mind the proposed objective stated in chapter I, this chapter outlines the methodology followed by us in analyzing the problem.

3.1 Research Design

This study carried out to get the empirical result of the stock price movements in Nepal. To conduct the study, analytical and descriptive research approach is adopted for the readily available historical data. All the data used in this study are secondary in nature. Some statistical tools have been used to analyze factors in this research study.

3.2 Population and Sample

There are altogether 149 companies listed in NEPSE by FY 2008/09 on 20th Jun, 2010 (Source: [http:// www.nepalstock.com](http://www.nepalstock.com)). Out of them 26 listed commercial banks are considered as population. In order to minimize biasness, researcher has adopted the random sampling technique. Using random number table, around thirty two percent of the population has been selected as sample. That means 9 listed commercial banks has been used for the study. (Source: See Appendix A)

3.3 Nature and Sources of Data

This study is based on the secondary data. The basic use of the secondary data is to explore the objectives set in the chapter I and it is also expected that this study will help in analyzing the stock market and aimed at producing tested of historical information on future price movements of the commercial bank's stocks.

The sources of secondary data and information are:

- <http://www.nepalstock.com>
- <http://www.sebonp.com>
- <http://www.nrb.org.np>
- <http://www.bm.com.np>
- Annual trading report of NEPSE
- Annual reports of sample commercial banks
- Websites of sample commercial banks
- Annual reports of Nepal Rostra Banks
- Various reports and research studies
- Various journals and magazines
- Various articles and publications
- Daily newspaper

3.4 Sample Commercial Banks

In this study, 9 listed commercial banks were taken. They are as follows:

1. Nail Bank Ltd.(NABIL)
2. Nepal Investment Bank Ltd.(NIB)
3. Himalayan Bank Limited (HBL)
4. Nepal SBI Bank Limited(SBI)
5. Bank of Katmandu (BOK)
6. Nepal Industrial and Commercial Bank Limited (NICB)
7. Lame Bank Limited.(LAXMI)
8. Kumara Bank Limited. (KBL)
9. Lumina Bank Limited. (LUBL)

(Source: See Appendix A)

3.5 Tools for Analysis of Data.

Following are the tools employed to analyze and interpret the data.

3.5.1 Market Capitalization Ratio

It is the aggregate market value of the listed shares divided by gross domestic product. This ratio indicates the relative importance of stock market to the national economy.

$$\text{Market Capitalization Ratio} = \frac{\text{Market Capitalization}}{\text{Gross Domestic Product}}$$

3.5.2 Indicators of Market Liquidity

Liquidity allows investors to alter their investment portfolio conveniently at any time and low cost. Liquidity makes the financial assets less risky.

i) **Stock Traded to GEP Ratio**

This ratio indicates the extent of case in trading in stock market in a country. The volume of organized trading of equities as a share of national output increases when such trading is less costly and easy.

$$\text{Stock Traded to GDP Ratio} = \frac{\text{Value of Stock Traded}}{\text{GDP}}$$

ii) **Ratio of Shares Traded to Market Capitalization**

This measure also known as turnover ratio, equals the value of shares traded divided by market capitalization and is indicative of the trading relative to the size of stock market.

$$\text{Value of Stock Traded to Market Capitalization Ratio} = \frac{\text{Value of Stock Traded}}{\text{Market Capitalisation}}$$

iii) **Value Traded Ratio to Volatility**

This ratio measures the ability of stock market to provide high liquidity with less price swings. High ratio indicates the ability of stock market to provide liquidity and handle risk. This is calculated by employing the equation below:

3.5.3 Concentration

Market concentration ratio measures the extent of shares concentration in a stock market. Whether the trading of shares centered to certain firms, industry, and people or not is answered by this tool.

3.5.4 Trend Analysis

The general tendency of data is to increase or decrease or stagnate during a long period of time is shown by the help of trend analysis. Here stock market development is analyzed through these tools.

3.5.5 Standard Deviation (SD)

Standard deviation measures the dispersion of the outcomes from the expected value. It is the measure of absolute dispersion of the mass of figures in a series.

We can know the volatility of the outcomes by calculating the S.D. To illustrate, let's suppose that $X_1 + X_2 + \dots + X_n$ is a set of 'n' observation then its S.D. is given by

$$\dagger = \sqrt{\frac{\sum(X - \bar{X})^2}{n}}$$

Where,

\dagger = Standard Deviation

\bar{X} = Arithmetic mean

n = Total No. of Observation

3.5.6 Arithmetic Mean:

Arithmetic Mean is the average of certain variable over periods. Arithmetic mean of a given set of observation is their sum divided by the number of observations. To illustrate it, let's suppose that $X_1, X_2, X_3, + \dots$ denote the value of certain variables of given 'n' number of observations and \bar{X} is the Arithmetic Mean of the given observation. It is calculated by,

$$\bar{X} = \frac{X_1 + X_2 + X_3 + \dots + X_n}{n}$$

Or, $\bar{X} = \frac{\sum X}{n}$

Where, \bar{X} = Arithmetic mean return,
 $X_1, x_2, x_3, \dots, X_n$ = Set of observation
 n = total no. of observations
 $\sum x$ = Sum of given observation

3.5.7 Correlation Coefficient

Correlation is defined as the relationship (or association) between (or among) the one dependent variable (or factor) and one (or more than one) independent variable (S) or factor (S) n (Shrestha & Silwal; 2057:315). It is the statistical tool which can be used to describe the degree to which one variable is linearly related to another and measures the directions of relationship between two set of figures. Correlation coefficient can be either positive or negative. More precisely, if both variables are changing in the same direction, then correlation is said to be positive. On the other hand, if both variables are changing oppositely to each other, then correlation is known as negative. Correlation can be seen between or among several variables.

3.5.8 Coefficient of Multiple Determinants (R²)

Coefficient of multiple determinants is very useful in interpreting the value of multiple correlations. R² measures the degree (extent or strength) of linear association or correlation between two variables. One of which happens to be independent and other being dependent variable(s). More precisely, it measures the total variation in dependent variables, which is expressed as percentage.

3.5.9 Regression Constant

Regression Constant is a value of dependent variable when other independent variables are zero. In another word, it is the intercept of the model, which indicates the average level of dependent variable when independent variable is zero. If all the variables are omitted from the model, the regression constant indicates the mean or average effect on dependent variable. It is denoted by 'a'.

3.5.10 Regression Coefficient

Regression coefficients describe, how changing of independent variables affects the value of dependent variables estimate. Alternatively, the regression coefficient of each independent variable indicates the marginal relationship between that variables and value of dependent variable holding constant the effect of all other independent variables in the regression model. They are denoted by b₁, b₂, b₃ ... etc. It is to be noted that a, b₁, b₂, b₃ etc. are the regression parameters of the equation or regression line whose values are to be determined. The equations for calculating these parameters have been mentioned in part.

3.5.11 Regression Analysis

This tool is employed to show the relationship between dependent variable and independent variables.

Regression equation: $X_1 = a + b_1X_2 + b_2X_3 + b_3X_4 + b_4X_5$

Where,

X_1 is dependent variable,

$X_2, X_3,$ and X_4 are independent variables,

a is regression constant, and

b_1, b_2, b_3 and b_4 are regression parameters.

Following Feature shows these variables more clearly.

Model 1 helps to assess the relationship of value of stock traded with stock volatility. Regression model of part two helps to identify the effect of the macro economic indicators of NEPSE index. While model 3 identifies, the effect of some stock market variables on NEPSE. Last model is for a regression of GDP on Market capitalization and stock turnover.

3.5.12 F statistics

F-statistics is considered to be more appropriate for the test of hypothesis of equality among several sample means. It is also known as 'F-test' or 'variance ratio test'. Generally, it is applied in testing.

1. The equality of population variation.
2. The equality of several population variations.
3. The significance of an observed sample correlation ratio and
4. The linearity of regression (Shrestha & Silwal, 2057; P0 :344)

In the present study, F-test has been applied to test the significance of mean value of NEPSE Index among industrial sectors.

3.5.13 T-statistics

The t-statistics states that if the sample size is less than 30, then the sampling distribution of the sample mean follow t-distribution. It was developed by Sir William S, Gosset which is used to test the hypothesis when population variance is not known. As per this hypothesis, if the calculated t-value exceeds the table value, it can be concluded that the difference is significant at the given level of significance.

3.5.14 Formulation of Hypothesis

A pair of hypothesis is formulated at a same time when it is going to be tested. In the pair, the one is null hypothesis denoted by 'H0' and another is alternative hypothesis denoted by 'H1'. Statement of hypothesis should be able to show the relationship between selected variables. Again, it should carry implications for testing the stated relation.

In this research these are altogether 4 sets of hypothesis that are going to be tested. These sets are as following:

Set 1st

Ho: There is no significant difference between NEPSE index and after Dashain festival.

H1: There is significant different between NEPSE index before and after Dashain festival.

Set 2nd

Ho: There is no significant difference between NEPSE index and after people's movement 2062.

H1: There is significant different between NEPSE index before and after people's movement 2062.

Set 3rd

Ho: There is no significant difference between NEPSE index and after the Royal Palace Massacre.

H1: There is significant different between NEPSE index before and after the Royal Palace Massacre.

Set 4th

Ho: There is no significant difference between sector wise NEPSE.

H1: There is significant different between sector wise NEPSE.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

This chapter deals with the analyzing and findings of the collected data. It includes number of listed companies in NEPSE, comparative analysis of NEPSE index and commercial banks index, group-wise annual turnover, trading performance of sampled stocks, graphical analyses of stocks price behavior of sampled commercial banks, serial correlation analysis, runs test analysis and volatility of daily stock prices of sampled stocks. And finally, the major findings of the analysis have been highlighted.

4.1 Number of Listed Companies

The number of listed companies presented in table 4.1, shows that the number of listed companies decline by 16.52% in the fiscal year 2002/03 compared with the previous year. In the year 2003/04, the number of listed companies increased by 12.50% and reached to 108. By following, the increasing trend, the numbers of listed companies were 135 in fiscal year 2006/07. Also, the no, of listed companies increased by 5.19%, and reached to 142 in fiscal year 2007/08 and it rose to 149 in fiscal year 2007/08 by being 4.93% change to the previous year. Thus, it can be concluded that the companies are very much attracted to list their stocks in NEPSE and make their securities traded in the secondary market; the trends of listing companies in NEPSE are shown clearly in the figure 4.1.

Table 4.1
Listing Rate of Companies in NEPSE for Different Fiscal years

Year	No. of Listed Companies	Percentage Change
2001/02	115	-
2002/03	96	-16.52
2003/04	108	12.50
2004/05	114	5.56
2005/06	121	6.14
2006/07	135	11.57
2007/08	142	5.19
2008/09	149	4.93

(Source: NEPSE, Annual Trading Report: 2009/10 and Previous Year)

Figure 4.1
Graphical representation of Listing of Companies in NEPSE for Different Fiscal years



4.2 Comparative Analysis of NEPSE Index and Commercial Banks Index

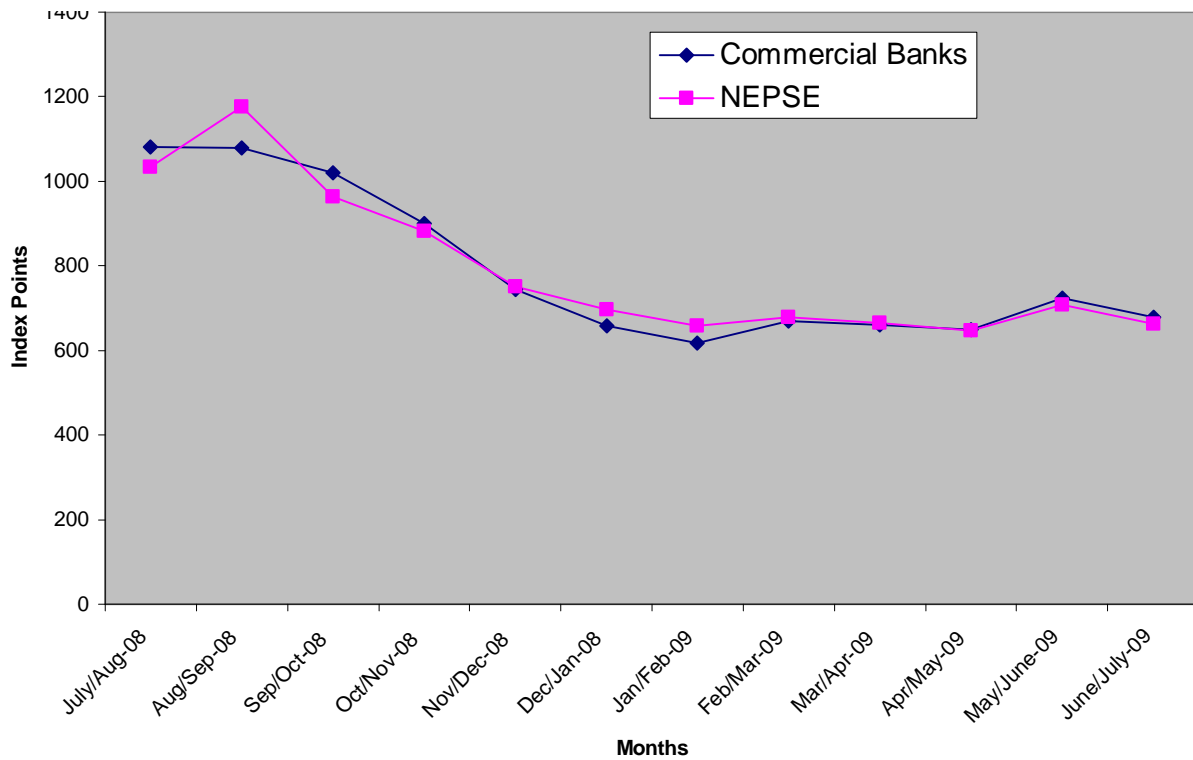
Market index has always been of great importance in the world of security analysis and portfolio management. Both individual and institutional investors use the market index as a benchmark against which they evaluate the performance of their own or institutional portfolio. This clearly focuses on the price of stocks that is increasing or decreasing in the market. Higher index means better performance and efficiency of the stock market and vice-versa. Comparative analysis between NEPSE index and commercial bank index has been presented in table 4.2.

Table 4.2
Monthly Closing NEPSE Index and Commercial Banks Index for the Fiscal Year 2009/10

Months	Index		Index Difference	
	Commercial Banks	NEPSE	Commercial Banks	NEPSE
July/Aug-08	1081.05	1034.02	*	*
Aug/Sep-08	1079.38	1175.38	-1.67	141.36
Sep/Oct-08	1019.15	962.55	-60.23	-212.83
Oct/Nov-08	899.06	881.86	-120.09	-80.69
Nov/Dec-08	745.06	750.71	-154	-131.15
Dec/Jan-08	657.10	695.50	-87.96	-55.21
Jan/Feb-09	617.46	658.83	-39.64	-36.67
Feb/Mar-09	668.61	677.52	51.15	18.69
Mar/Apr-09	660.39	664.13	-8.22	-13.39
Apr/May-09	649.56	647.78	-10.83	-16.35
May/June-09	722.72	707.89	73.16	60.11
June/July-09	679.64	662.63	-43.08	-45.26

(Source: NEPSE, Annual Trading Report: 2009/10)

Figure 4.2
Co-Movement between Indices of Commercial Banks and NEPSE.



From table 4.2, it is clear that there are ups and downs in both the NEPSE and commercial bank indices during fiscal year 2009/10. The peak of the NEPSE index was in the month of Aug/sep-08 (1175.38) and there was decline in the month of Jan/Feb-09 (658.83). In the same way, the highest commercial banks index was 1081.45 in the month of Jul/Aug-08 and the lowest index was 617.46 in the month of Jan/Feb-09. During the month of Apr/May-09 and May/Jun, most of the companies declare dividends and right shares which will increase the stock price in the market. So that, the NEPSE and commercial banks index was in higher position. In addition to it, they also submit the quarterly financial position of the firm in NEPSE. And the company having sound financial position attracts the investors then obviously it increases the price of the stock of that company. However, it can be said that the performance of NEPSE index and commercial banks index during the fiscal year 2008/09 was satisfactory despite some declines due to political and trading disturbances. Through the performance of NEPSE index, we can see the good sign of the development of overall capital

market and the economy of the country. The co-movement between the commercial banks index and NEPSE index are shown in the figure 4.2.

According to the appendix B, the computed values of SD are 44.22 and 32.39 respectively. They convey that the index series of commercial bank and NEPSE are highly volatile. Whereas, the computed values of CV are 12.37% and 9.88% respectively. The computed CV of commercial banks is larger than that of the NEPSE index. This implies that the commercial banking sector is highly sensitive in the Nepalese stock market. However, the computed value of correlation is 0.9986= (tends to) 1. It conveys that correlation between these two index series is perfectly correlated and both the indices move together throughout the study period. In other words, the change in one index will automatically affects the other one.

4.3 Group-Wise Annual Turnover

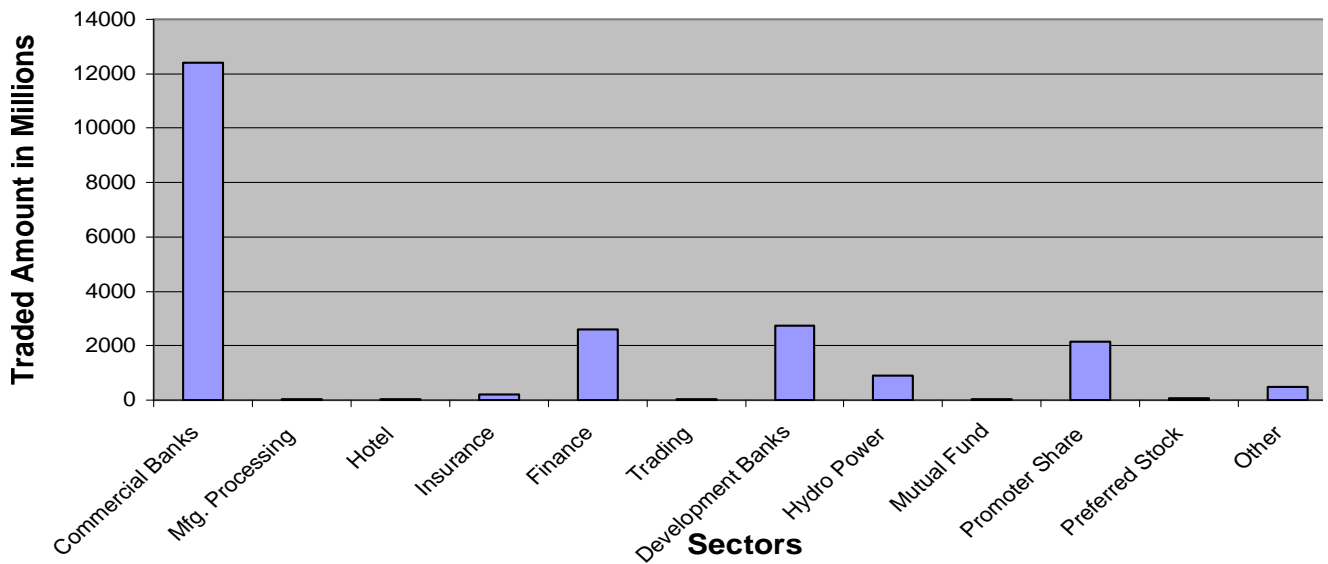
The stock market performances of all companies in terms of traded amount whose shares are traded on the floor of NEPSE are presented in table 4.3. Among the various groups, commercial banks are dominant in terms of traded amount. The total traded amount of commercial banks stood at Rs. 12406.45 million, covering almost of total annual trading amount. The higher number of traded amount implies attractive stocks. This indicates that the stocks of commercial banks are blue-chip stocks. After the commercial banking sector, the other major is the Development Banks sector. Its total turnover is Rs. 2740.36 million. Third sector is Finance Sector which covers 2615.40 million and fourth sector is promoter share which covers 2146.73. Manufacturing and processing, hotel, insurance, trading, and others etc. are unable to make sound turnover with compare to the commercial banks sector. So their stocks are less attractive for the investors. It can be concluded that the commercial sector is very sensitive in the Nepalese stock Market.

Table 4.3
Group-Wise Annual Turnover for the Fiscal Year 2008/09

Sectors	Traded Amount (in million)
Commercial Banks	12406.45
Mfg. Processing	26.08
Hotel	18.69
Insurance	212.80
Finance	2615.40
Trading	33.49
Development Banks	2740.36
Hydro Power	890.30
Mutual Fund	22.40
Promoter Share	2146.73
Preferred Stock	74.05
Other	494.39
Total	21681.14

(Source: NEPSE, Annual Trading Report 2008/09)

Figure 4.3
Group- Wise Annual Turnover for the Fiscal Year 2008/09

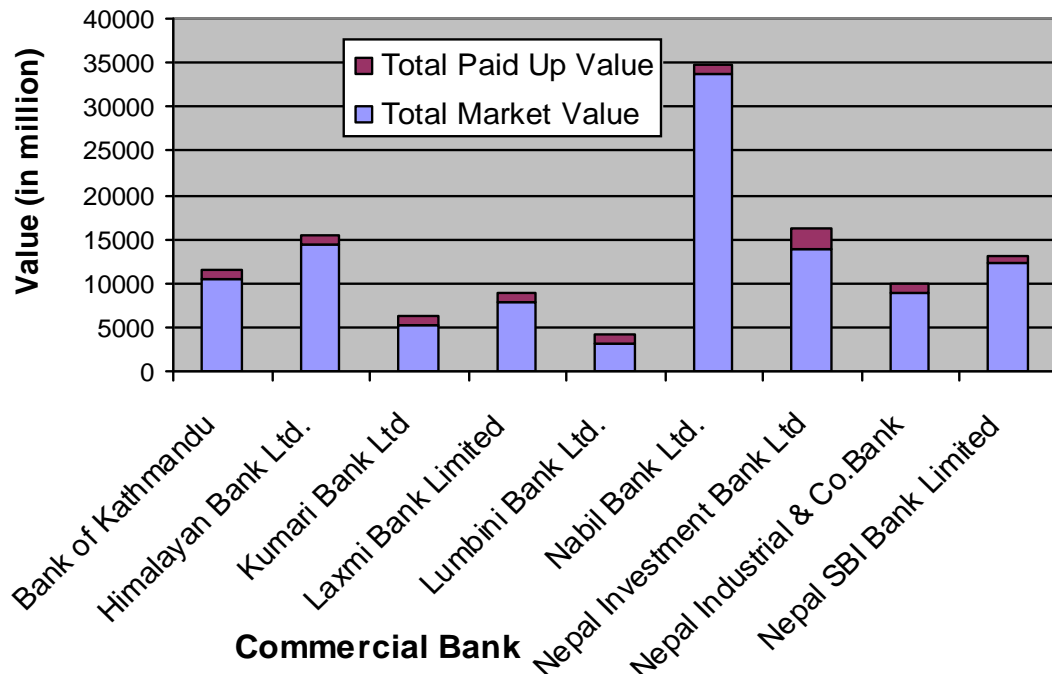


4.4 Trading Performance of Sampled Stocks

The table in appendix C gives different quantitative information about the stock market functioning during the fiscal year 2008/09 for the sampled commercial banks.

According to the appendix C, highest number of transactions was registered by Bank of Kathmandu (BOK), trading 6522 shares. And also, the highest traded amount was recorded by BOK with rs.1504.31 millions. The highest total paid-up capital is Rs.2407068900 for Nepal Investment Bank Ltd. and the lowest belongs for Bank of Kathmandu. The lowest total market value at Rs.844397900 was recorded by Bank of Kathmandu. The trading performances of sampled commercial banks are shown in the figure 4.4 below.

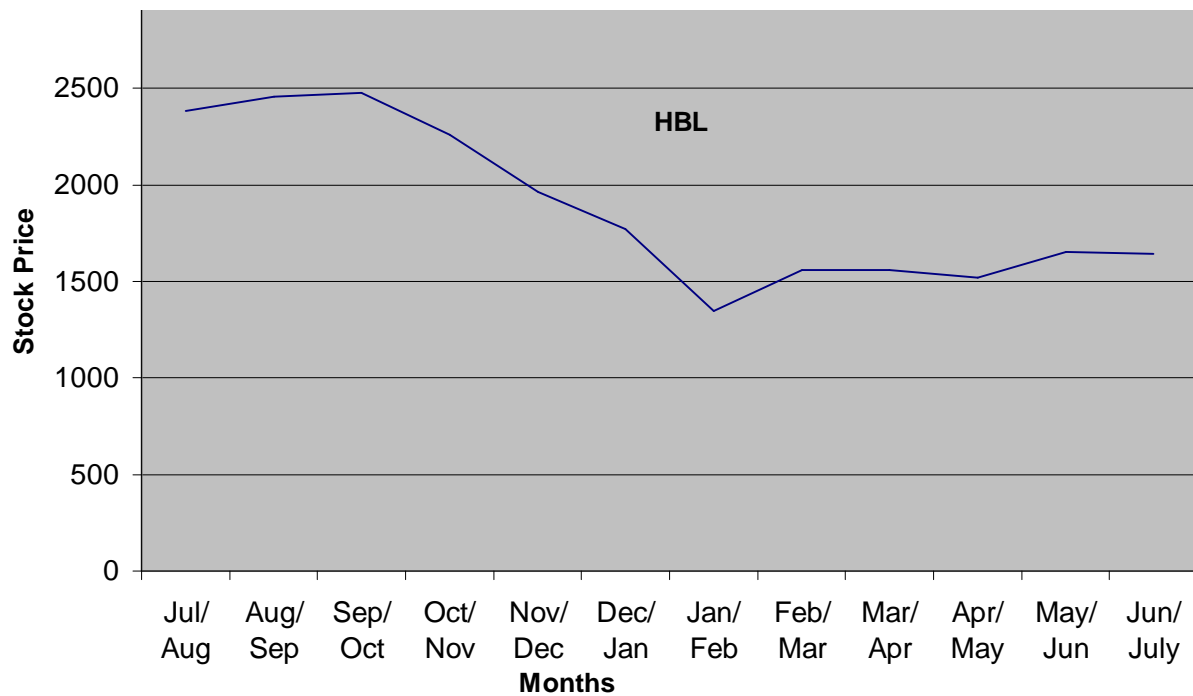
Figure 4.4
Trading Performance of Sample Stock for the Fiscal Year Year 2008/09



4.5 Stock Price Behavior of Sampled Commercial Banks

This part presents the individual graphs of sample commercial banks. A graph clearly exhibits the series of stock price behavior.

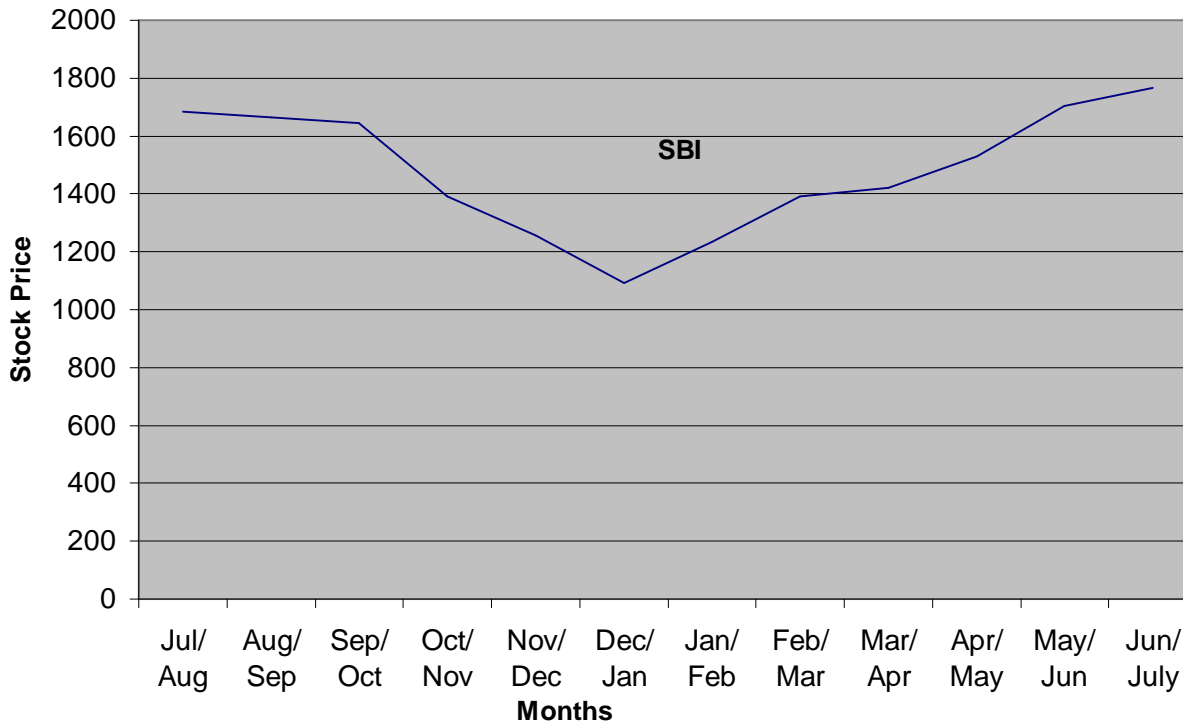
Figure 4.5
Average Monthly Behavior of HBL



(Source: Worked Out from Appendix D)

Figure 4, 5 exhibits the average monthly stock price behavior of HBL. The maximum price of HBL stock is Rs. 2459 in Aug/Sep, 2008, minimum is rs.1345 in Jan/Feb, 2009. The trend shows the sudden fall in the stock price from Rs. 2459 to Rs. 1345 in a half year, and the average price is rs.2063. This is a large variation. That's why the rising slope suddenly declines. After that, the trend line slopes upward slowly as there is increase in the stock price.

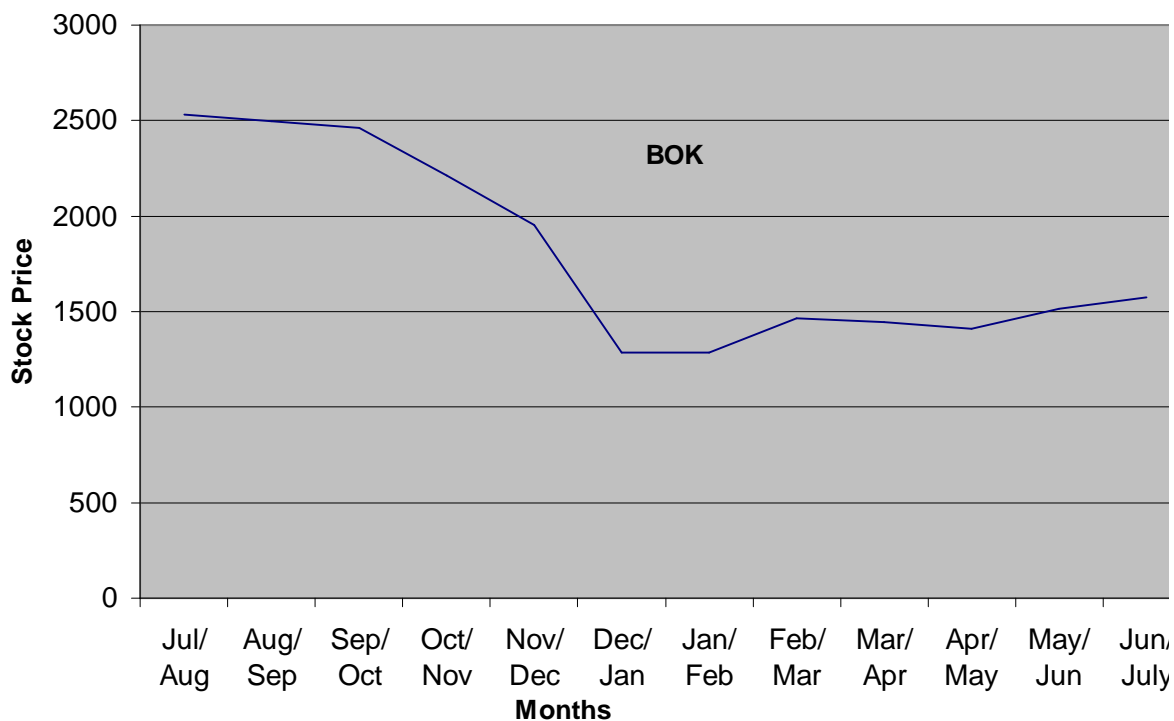
Figure 4.6
Average Monthly Behavior of SBI



(Source: Worked Out from Appendix D)

Figure 4, 6 exhibits the average monthly stock price behavior of SBI Bank. The maximum price of SBI Bank stock is Rs. 1765 in Jun/July 2009, the minimum is Rs. 1093 in Dec/Jan 2008/09 and the average price is rs.1519. It means there is a high variation in the stock prices of SBI Bank during the study period. There is an increasing pattern in the stock prices of SBI Bank.

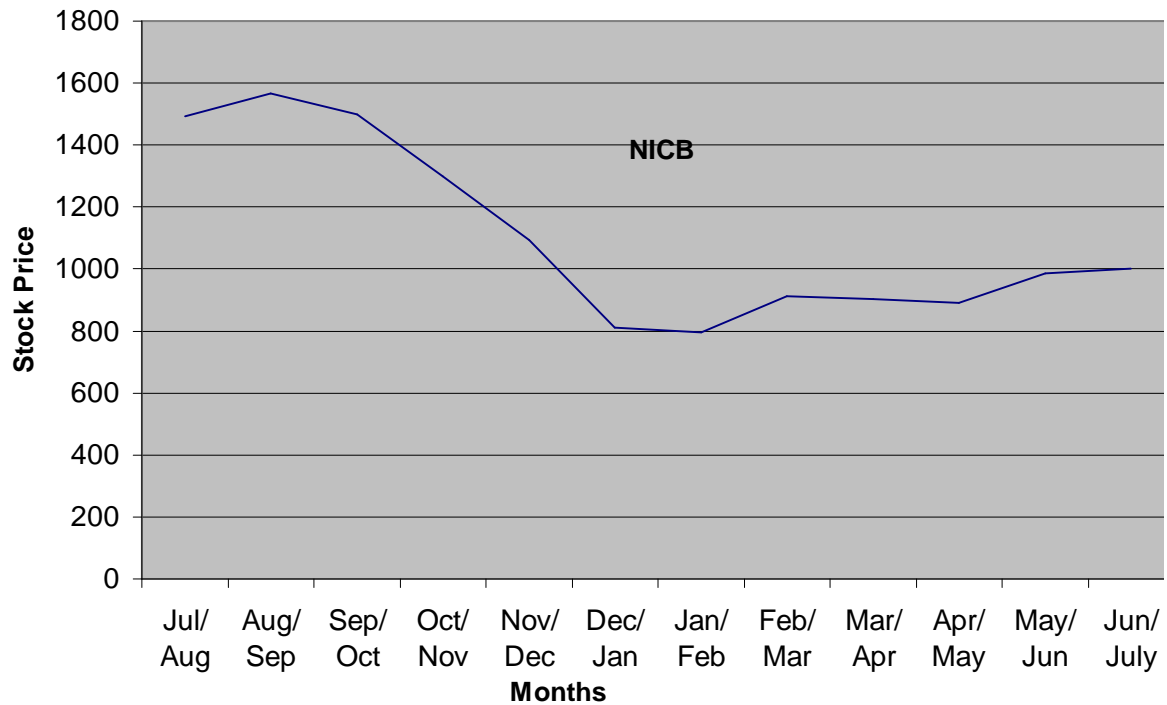
Figure 4.7
Average Monthly Behavior of BOK



(Source: Worked Out from Appendix D)

Figure 4.7 exhibits the average monthly stock price behavior of BOK. The maximum price of BOK stock is Rs.2532 in Jul/Aug 2008, the minimum is rs.1285 in Dec/Jan 2008/09 and the average price is rs.1877. The graph shows that the prices of the BOK stock are declining in slow rate and it obtains slowly strong position in the Nepalese stock market.

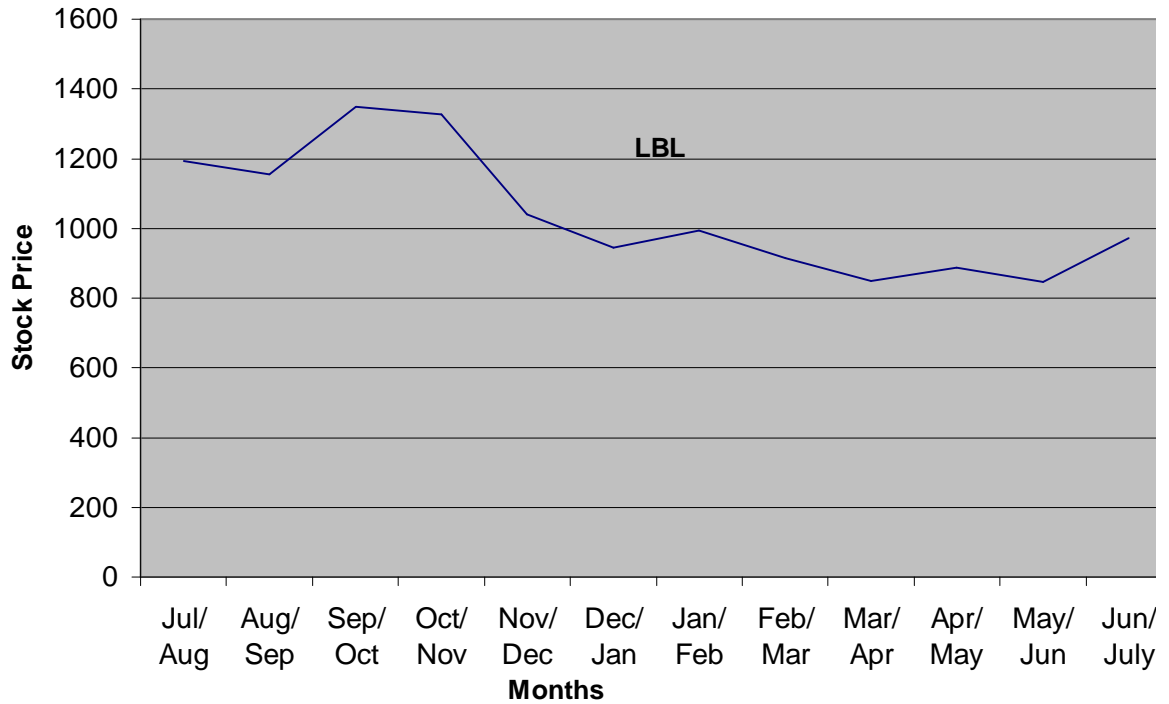
Figure 4.8
Average Monthly Behavior of NICB



(Source: Worked Out from Appendix D)

Figure 4.8 exhibits the average monthly stock price behavior of Nepal Industrial & Co. Bank (NICB Bank). The maximum price of NICB stock is Rs.1567 in Aug/Sep 2008, the minimum is Rs.797 in Jan/Feb 2008/09 and the average price is rs.1172. The stock prices of the NIC Bank declines in the month of December. After that the price has followed the increasing slope. The stock price of NIC Bank signifies the positive changes in the future.

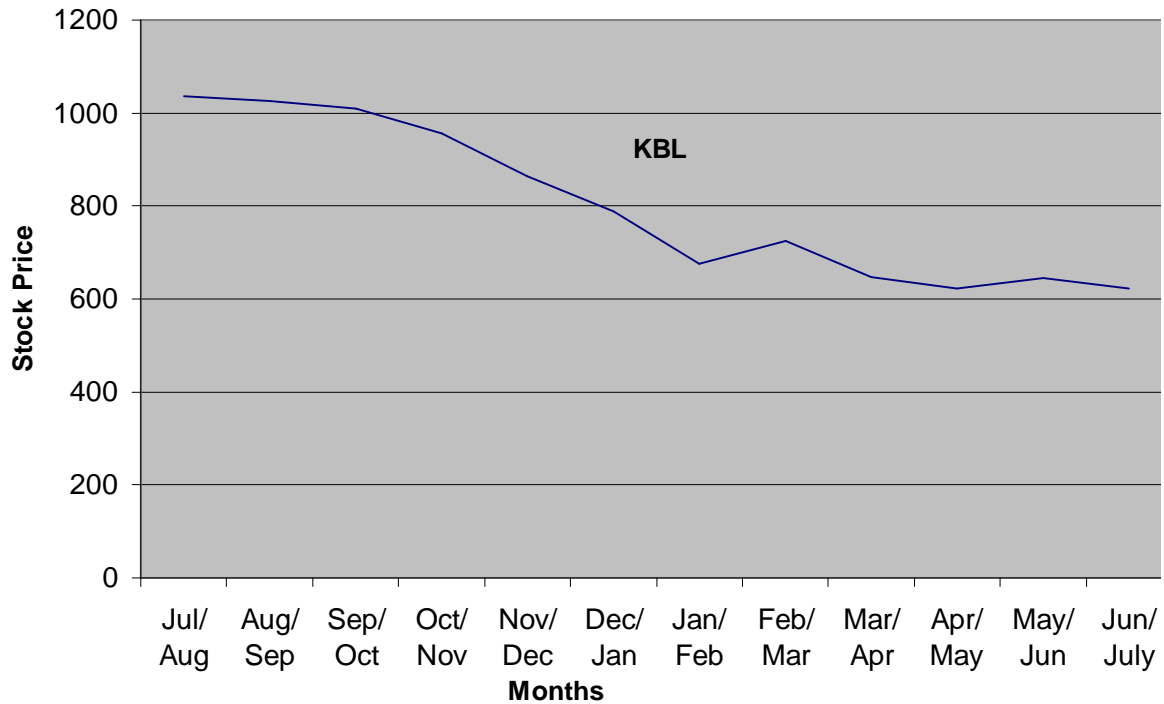
Figure 4.9
Average Monthly Behavior of Laxmi Bank (LBL)



(Source: Worked Out from Appendix D)

Figure 4.9 exhibits the average monthly stock price behavior of Laxmi Bank. The maximum price of Laxmi Bank stock is Rs.1348 in Sep/Oct 2008, the minimum is rs.847 in May/Jun 2009 and the average price is rs.1155. As shown by the graph, there is a decreasing pattern in the stock price of Laxmi Bank but with a small positive value.

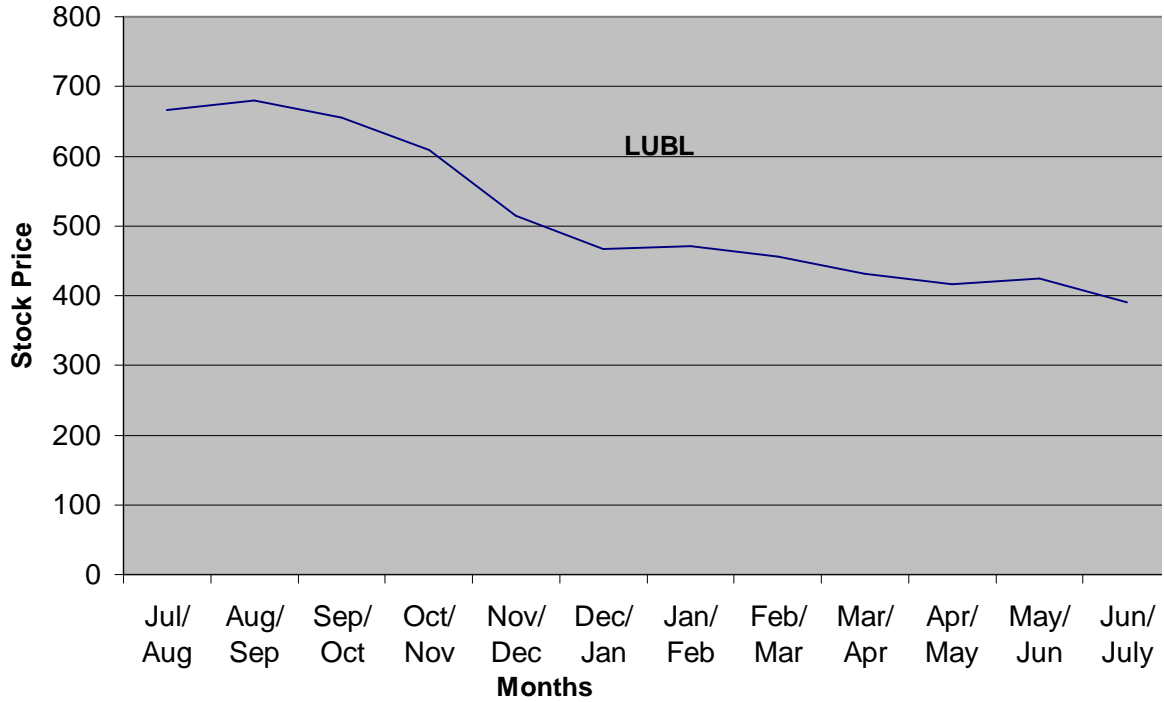
Figure 4.10
Average Monthly Behavior of Kumari Bank (KBL)



(Source: Worked Out from Appendix D)

Figure 4.10 exhibits the average monthly stock price behavior of Kumari Bank. The maximum price of KBL stock is Rs. 1037 in Jul/Aug 2008, the minimum is Rs.622 in Apr/May 2009 and the average price is rs.853. There are lots of fluctuations in the stock prices of the Kumari Bank. And, there is an decreasing pattern.

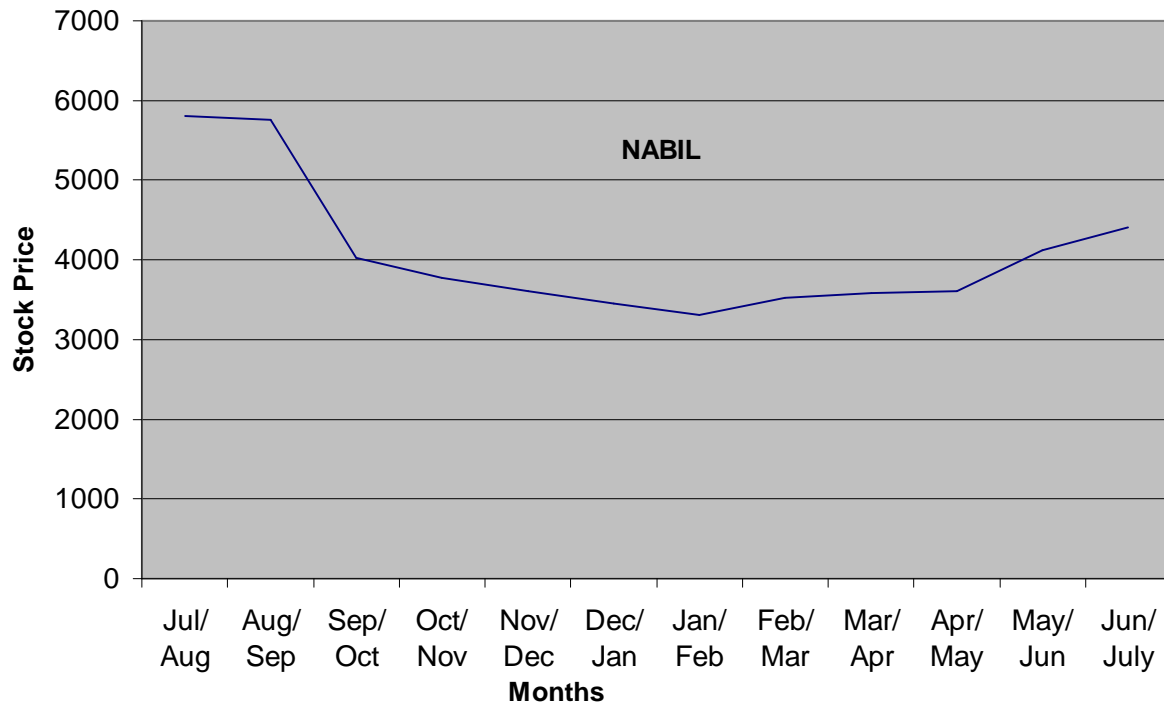
Figure 4.11
Average Monthly Behavior of Lumbini Bank (LUBL)



(Source: Worked Out from Appendix D)

Figure 4.11 exhibits the average monthly stock price behavior of Lumbini Bank. The maximum price of LUBL stock is Rs. 680 in Aug/Sep 2008, the minimum is rs.391 in Jun/Jul 2009 and the average price is rs.565. The stock price series of Lumbini Bank Slopes downward during the study period despite of some upward slopes. This signifies that the stock of Lumbini Bank is very weak in the Nepalese stock market through out the study period.

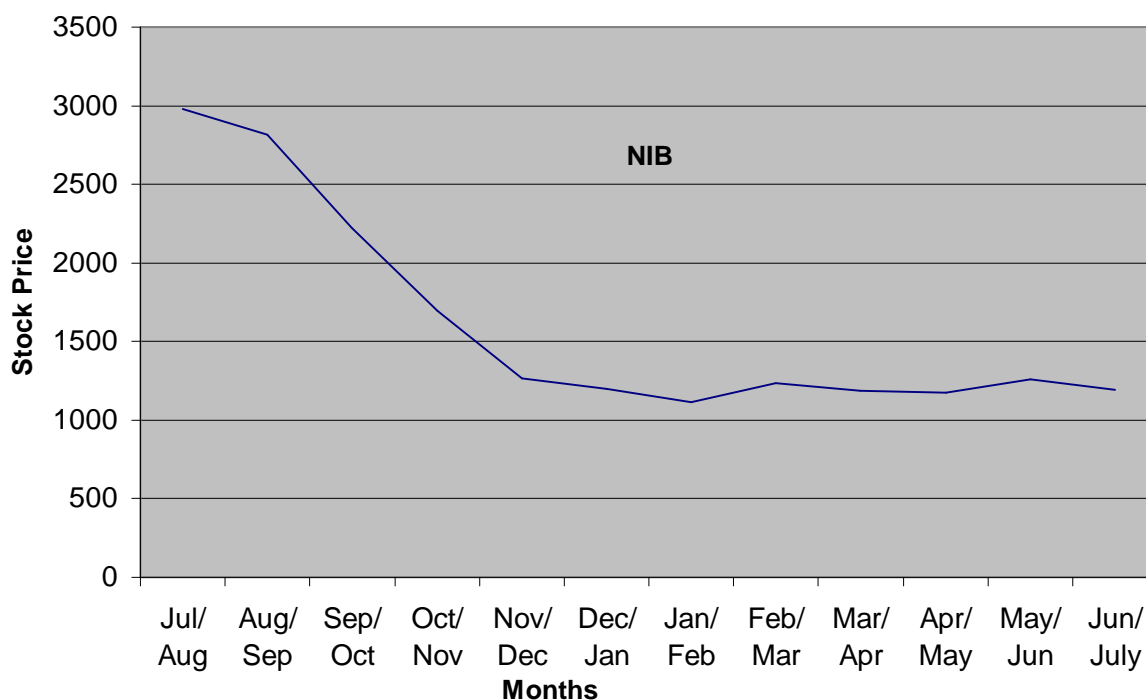
Figure 4.12
Average Monthly Behavior of Nabil Bank (NABIL)



(Source: Worked Out from Appendix D)

Figure 4.12 exhibits the average monthly stock price behavior of Nabil Bank. The maximum price of NABIL stock is Rs.5811 in Jul/Aug 2008, the minimum is Rs.3306 in Jan/Feb 2009 and the average price is Rs.4114. The stock price series of Nabil Bank Slopes slightly downward during the study period and slowly becomes an upward slope. This signifies that the stock of Lumbini Bank is very strong in the Nepalese stock market through out the study period.

Figure 4.13
Average Monthly Behavior of Nepal Investment Bank (NIB)



(Source: Worked Out from Appendix D)

Figure 4.13 exhibits the average monthly stock price behavior of NIB. The maximum price of NIB stock is Rs.2978 in Jul/Aug 2008, the minimum is Rs.1115 in Jan/Feb 2009 and the average price is Rs.1822. The stock price series of Nabil Bank Slopes slightly downward during the study period and slowly becomes a constant and stable slope. This signifies that the stock of NIB is very stable in the Nepalese stock market through out the study period.

4.6 Serial Correlation Analysis

One of the basic tests of the market efficiency is the test of serial correlation. Serial correlation measures the correlation coefficient among a series of stock prices with lagging numbers in the same time series data. Serial correlation for any series of data ranges from +1 to -1. Serial correlation of +1 represents perfect positive correlation and a value of -1 represents perfect negative correlation. This value can be useful for security analysis.

Serial correlation coefficients for 9 sampled stocks are computed to determine if there exists any significant correlation on successive changes in log price for different lags. The price change is said to be independent when each of coefficient are not significantly departed from zero. If the coefficients are significantly departed from zero, it would imply that successive price changes are dependent. The larger the size of the coefficient i.e. more departed from zero, the greater the dependence in the series of price changes. Large coefficient implies that the changes in the past and present prices have significant influence on the changes in the future prices. If the coefficients are found to be zero, it can be concluded that the market is efficient in pricing shares. It signifies that the independence of the successive changes in prices. Thus it supports RWH. If the coefficients are significantly departed from zero, it will indicate that the successive price changes are dependent. This will reject the null hypothesis.

The statistical software called SPSS computed the serial correlation coefficients and their Standard Errors (S.E.) of daily price changes in natural log prices for 1 to 10 lag days for 9 stocks by using equation (iv) and (v) respectively mentioned in the research methodology chapter and they are reported in appendix E and appendix F respectively. These coefficients help us to find out if there is any degree of independence or dependence between the successive price changes for last 10 days in predicting tomorrow's price changes.

Table 4.4

Distribution of Signs of Coefficients

Lag Days	Number of +sign	Number of –sign	Total
1	0	7	7
2	3	4	7
3	3	4	7
4	2	5	7
5	6	1	7
6	3	4	7
7	4	3	7
8	3	4	7
9	4	3	7
10	4	3	7
Total	32	38	10

(Source: NEPSE, Annual Trading Report 2008/09)

According to table 4.4, the first column contains the lag days of the computed coefficients while the second and third column exhibits the number of positive and negative coefficient. In lag day 1, there is fully dominance of negative signs. In lag day 2, 3, 6 and 8, 4 stocks out of 7 are of negative signs and remaining are the positive ones. Similarly, in the lag day 4, there are 5 coefficients with negative values. But in the lag days 5, 7, 9 and 10, there is the predominance of positive values. In aggregate, there are 32 coefficients of positive values and 38 coefficients of negative values. Coefficients have shown sometimes successive positive signs and sometimes successive negative signs.

Some of the computed serial correlation coefficients are close to zero. In aggregate, there are 37 coefficients of positive values and 33 coefficients of negative values. As a whole, negative sign has dominated the computed correlation coefficients. It means that the serial correlation coefficients are significantly departed from zero. Therefore, the conclusion can be drawn that the successive price changes are dependent, the stock market is inefficient in pricing the shares and past price changes of the most of the stocks provide important information in predicting tomorrow's price changes.

However, agreement in the sign among the coefficients for the different securities is not necessarily evidence for consistent patterns of dependence. King (1966) has shown that the price changes for different securities are related (although not all to the same extent) to the behaviors of a "market" component common to all securities. (Fama & Frederic: 1965:73)

We cannot conclude anything from the series of price changes so it is therefore, desirable to measure the degree of dependence, so the correlation obtained is compared to the standard error of computation. However study shows that larger the observation will be the S.E. and smaller the observation smaller will be the S.E. Statistical significance testing of the serial correlation is adapted to measure the degree of dependence of the price changes. The significance testing requires the standard error of the estimated coefficients under the assumption that the price change has a finite variance.

Table 4.5

Series Having Significant Values of First to Tenth Order Serial Correlation Coefficient

Lag Days	Series* Having Coefficient less than 2 times of its S.E.	Series* Having Coefficient 2 or more than 2 but less than 3 times of its S.E.	Series* Having Coefficient equal to 3 or more than 3 times of its S.E.	Series
1	0	0	1,2,3,4,5,6,7,8 and 9	9
2	1,2,3,4,6,7 and 9	5	0	9
3	1,2,3,5,6,7 and 8	4	0	9
4	1,2,3,4,5,6 and 7	0	0	9
5	1,2,3,4,5,6 and 8	0	0	9
6	1,2,4,5,6 and 7	3	0	9
7	1,2,4,6 and 7	3,5	0	9
8	1,2,3,4,5,6 and 7	0	0	9
9	1,2,3,4,5,8 and 9	0	0	9
10	1,2,3,4,5,6 and 7	0	0	9
Total	58	5	7	9

*For names of different price series, see Appendix E

(Source: Worked out from Appendix E and Appendix F)

The first column of table 4.5 exhibits the lag periods. The second column shows the number of series having the coefficient less than or equal to two times of its S.E. Similarly, the third column shows the series having coefficient greater than two but less than three times of its S.E. Fourth column shows the number of series having coefficient equal to three or greater than the three times of its S.E. respectively

As shown by the table 4.5, out of 70 computed serial correlation coefficients, only 5 coefficients are under the category of greater than two times but less than the three times of its S.E. Similarly, 7 coefficients are equal to three or greater than three times of its S.E. However, the large number of coefficients fall in the category of less than or equal to two time of S.E. these coefficients are significantly deviated from zero and not statistically significant.

According to appendix E, the average serial correlation coefficients for the lag 1 to 10 are -0.459, -0.024, -0.016, -0.049, 0.022, -0.017, -0.027, 0.03 and 0.006 respectively. The average serial correlation coefficients are also departed from the standard zero. Most of them are dominated by negative sign as well.

4.7 Volatility of Daily Stock Prices

This part presents the average prices (μ), Standard Deviation (SD) and coefficient of Variation (CV) which are calculated by using the equations (x), (xi) and (xii) respectively mentioned in the research methodology chapter. In addition to it, statistical software called SPSS has also been used for calculation. Based on the analysis of absolute variation (SD) and relative variation (CV), volatility of the daily price is determined. Table 4.8 presents the computation of stock volatility based on daily prices.

Table 4.6

Computation of Stock Volatility Based on Daily Prices

S. No.	Sampled Banks	No of Observation	Max. Price	Min. Price	Avg. Price	SD	CV
1	HBL	183	1181	900	1037.62	67.29	6.00
2	SBI	189	680	300	454.60	103.30	23.00
3	BOK	194	881	430	620.59	151.93	24.00
4	NIC	184	580	366	438.92	49.58	11.00
5	LAXMI	155	404	276	330.43	29.12	9.00
6	KUMARI	176	476	315	386.09	42.15	11.00
7	LUMBINI	182	182	202	174.84	9.57	5.00
8	NABIL	185	871	456	422.07	12.5	8.00
9	NIB	187	750	550	321.05	10.7	9/00

(Source: Worked out from Appendix D)

According to the table 4.8, the highest value of SD is of BOK i.e. 151.93, which indicates that the most volatile stock among other seven stocks is BOK. Similarly, the computed SD of Lumbini Bank is 9.57, which conveys that its stock is the least volatile. The stocks of SBI, HBL, NIC, Kumari Bank and Laxmi Bank are consecutively volatile. Only measuring the absolute variation is not sufficient to conclude the variation in the stocks, if the alternatives need relative measure. Therefore, it is essential to analyze the relative variation. The computed values of CV are 24% and 5% of BOK and Lumbini Bank partly supported the result of SD. However, both the computed CV of NIC and Kumari Bank are 11%. They reveal that absolute measurement is not always true to measure the exact variation. Thus, the result of relative variation volatile nest to the stocks of BOK and SBI Bank.

4.9 Result of Hypothesis Testing

Finally, it can be inferred that the successive price changes are dependent and price changes of the most of the stocks are likely to be of much help in predicting tomorrow's price changes. Thus the null hypothesis of the study has been rejected.

This leads one to conclude that the successive price changes are not random in the Nepalese stock market or the price changes in the present and future stock market will not be independent from the price changes of past and present respectively. So, the null hypothesis is not accepted.

From the analysis, it is clear that there exists significance difference between the actual and expected number. So the successive price changes are not random in the Nepalese stock market or the price changes in the present and future stock market will not be independent from the price changes of past and present respectively. So, the null hypothesis is not accepted.

4.10 Major Findings of the Study

Based on the analysis of data and their interpretation, the major findings of the study in relation to the objectives set could be summarized as follows:

- ⊕ There are 149 companies listed in NEPSE till FY 2008/09. The listing rate of companies in the NEPSE is on increasing trend.
- ⊕ The peak index point of commercial bank is 1081.05 in the month of Jul/Aug 2008. The least value of index is 617.46 in the month of Jan/Feb 2009. The calculation has shown that the commercial banking index has higher variation than the NEPSE index. It means that the commercial banking sector is highly sensitive in the Nepalese stock Market. As shown by the calculations, correlation between these two indexes series is

perfectly correlated, which means that, both the indices move together throughout the study period.

- ⊕ Among the various groups of industries, commercial bank group dominates other industries in terms of both trading volume and traded amount. The total traded amounts of commercial banks are rs.12406.45 million, which covers almost of total annual trading amount over the FY 2008/09. This implies that the stocks of commercial banks are blue-chip stocks.
- ⊕ According to the trading performance of the sampled commercial banks, highest number of transaction has been secured by BOK. Which are 801620 shares? Likewise, highest traded amount among the sampled commercial banks belong to BOK. NIB has dominated on total paid-up capital and NABIL dominated on total market value.
- ⊕ The series of LBL stock prices has exhibited the graph with most volatile behavior. Similarly, the graphs of HBL, SBI, NICB, BOK, Kumari Bank & NABIL & NIB have displayed the moderate volatile behavior. However, the only graph of the Lumbini Bank has indicated the downward slope of the trend line. This implies that the stock prices of Lumbini Bank are deteriorating day by day.
- ⊕ Most of the serial coefficients are significantly deviated from zero and statistically insignificant. It implies that the successive price changes are dependent. Thus, the Nepalese stock market is inefficient in pricing shares.
- ⊕ According to the computed values of SD and CV, the stock of BOK is the most volatile. Similarly, the stock of HBL and SBI are highly volatile. NIC, Laxmi Bank and Kumari Bank stocks have represented the moderate volatility. The least volatile stock is of Lumbini Bank. All the computer values have also supported the graphical presentation as well.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

In this chapter findings and conclusions emanated from the study are presented. The first section of this chapter provides summary of the study. The second section includes the major conclusions drawn from the study. And finally, the third section of this chapter proposes the recommendations.

5.1 Summary

The Nepalese capital market has its beginning with the establishment of the Securities Exchange Center in 1976. It was the first institution established for the purpose of developing the security market for the government securities. The main function of SEC was to assist in the development of a capital market by performing the role of a broker, underwriter, and share issuer and to sell government bonds. After the inception of the SEC, the shares of various manufacturing, trading and banking companies were listed.

The securities market serves as a reliable guide to the performance of companies and thereby promoting efficiency in Nepal, the major constituent of the security market is the commercial bank sector. Therefore, this study is focused on the research work relating to this sector. This study has examined the stock market efficiency and the stock price behavior of the listed commercial banks.

This study is mainly focused on developing the model to test the weak form of EMH or RWH in the stock prices of Nepal. Null hypothesis i.e. the successive price changes are independent was postulated to conduct the study.

Before analyzing the results of tests, the overview of the Nepalese stock market was sketched. The recent position and performance of stock market in Nepal was analyzed. The Nepalese stock market has not developed remarkably in the economy because of various market imperfections like limited number of buyers and sellers, stringent government policies, negligible development of corporate sector etc. Few years back, stock market has experienced high volatility in prices and turnover volumes. However, the prospect of the securities market in Nepal seems good.

Literature review has covered the related studies. Conceptual review covered the concepts of security analysis, theories and approaches relating to the security market. Further, both foreign and Nepalese journals and articles and previous master degree dissertations has been reviewed. To accomplish the stated objectives, this study employed the descriptive and analytical research design. Seven commercial banks were selected as sample among the fourteen listed commercial banks which are taken as population. This study is mainly based on the secondary data. The required data obtained were from various sources like the annual trading report of NEPSE 2008/09, annual reports of sample commercial banks, various reports and research studies, various articles and publications, daily newspapers etc.

In this study, descriptive statistical tools like Mean (\bar{u}), Standard Deviation (SD) and Coefficient of Variation (CV) were used to analyze the volatility of the daily prices. Whereas, other statistical tools like serial correlation and runs test were also employed to measure the independence and randomness in daily stock prices respectively. Further, this study used SPSS software to work out average, SD, CV for serial correlation analysis and Minitab software for run test analysis respectively. At the same time, Microsoft Excel application has been frequently used for computations of data and drawings of graphs.

In case of serial correlation analysis, the coefficients are significantly deviated from zero and statistically insignificant. The successive price changes were found to be dependent and the stock market is inefficient in pricing the shares.

5.2 Conclusions

The examination of deviation between commercial bank index and NEPSE index shows that the commercial bank index has higher variation than the NEPSE index. It means that the commercial banking sector is highly sensitive in the Nepalese stock market. As shown by the calculations, correlation between these two indexes series is perfectly correlated, which means that, both the indices move together throughout the study period.

Among the various groups of industries, commercial bank group dominates other industries in terms of volume and traded amount on the whole respectively. This implies that the commercial bank stocks are more favored by the public and they are the blue-chip stocks.

According to the trading performance of the sampled commercial banks, higher number of transaction has been secured by Bank of Kathmandu. Likewise, highest traded amount among the sampled commercial banks belong to BOK. NIB has dominated on total paid-up capital and NABIL dominated on total market value.

Graphical variation among the sampled commercial bank is observed. The series of LBL stock prices exhibited in the graph showed the most volatile behavior. Similarly, the graphs of HBL, SBI, BOK, NICB, Kumari Bank, NABIL & NIB have displayed the moderate volatile behavior. However, the graph of the Lumbini Bank only has indicated the downward slope of the trend line. This implies that the stock prices of Lumbini Bank are in decreasing trend.

Most of the serial coefficients are significantly deviated from zero and statistically insignificant. It implies that the successive price changes are dependent. Thus, the Nepalese stock market is inefficient in pricing shares.

Volatility of stock prices has been observed through the computation of average prices, SD and CV. According to the computed values of BOK, SBI & HBL are highly volatile. NICB, Laxmi Bank and Kumari Bank stocks have represented the moderate volatility. The least volatile stock is of Lumbini Bank. All the computed values have supported the graphical presentation and conclusions.

From the study of series of price changes, the price changes in the future market will be dependent in the price changes of the previous days. The information of the past price changes of the stock is helpful in predicting the future price changes. Due to the non-random behavior of the stock prices, the Nepalese stock market cannot be termed as efficient market because all the historical information has highly affected the current security prices.

5.3 Recommendations

The computed SD and CV have decided that index of the commercial sector fluctuates more than the NEPSE index. They have perfectly positive correlation. The series of commercial banks shows there is a dominance of its position in stock market. Hence, there should be clear pattern of index series. For this, the concerned authorities of the stock market should monitor the weakness of stock market.

Observation of the volatility indicates that most of the sampled stocks have large variation in their share prices. They cannot perform well. Hence, the concerned authorities of the sampled banks are advised to monitor the causes of variation. Investors should be well equipped, self aware and informative regarding the behavior of stock price.

This research study is concerned with nine commercial banks only. The analysis is based on the secondary data. Therefore, the future researchers are advised to study all the listed sectors. They should also cover the primary data as well. It is also suggested that the future study should attempt to apply the Filter Technique to obtain the better empirical results.

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Appendix - A
Name List of the Commercial Banks in Nepal

S.No.	Name of the Commercial Bank	NEPSE Code
1	Nabil Bank Ltd.	NABIL #
2	Nepal Investment Bank Ltd.	NIB #
3	Standard Chartered Bank Ltd.	SCB
4	Himalayan Bank Ltd.	HBL #
5	Nepal SBI Bank Limited	SBI #
6	Nepal Bangladesh Bank Ltd.	NBB
7	Everest Bank Ltd	EBL
8	Bank of Kathmandu	BOK #
9	Nepal Industrial & Co. Bank	NICB #
10	Machhachapuchhre Bank Ltd	MBL
11	Laxmi Bank Limited	LBL #
12	Kumari Bank Ltd	KBL #
13	Lumbini Bank Ltd.	LUBL #
14	Nepal Credit & Com. Bank	NCCB
15	Siddhartha Bank Limited	SBL
16	NMB Bank Ltd.	NMBF
17	DCBL Bank Ltd.	DCBL
18	Global Bank Limited	GBL
19	KIST Bank Limited	KMBF
20	Citizens Bank International Ltd.	CZBIL
21	Bank of Asia Nepal Ltd	BOAN

(Source: www.nepalstock.com , Listed Commercial Bank till 25th Jun 2010)

Sample for the study

1 to 21, all are assumed to be population for the study.

Note:-Those Banks having all the data available in NEPSE are only mentioned here.

Appendix - B
Computation of Average Index, SD, CV and Correlation Coefficient

S.No.	Title	Commercial Bank	NEPSE
1	No. Of Observation	228	228
2	Max. Index	449.79	388.49
3	Min. Index	306.52	287.90
4	Average Index	357.40	324.69
5	SD	44.22	32.39
6	CV (%)	12.37	9.98
7	Correlation Coefficient =1 Perfectly Correlated		

(Source: www.nepalstock.com, Annual Report 2008/09)

Appendix - C
Trading Performance of Sampled Stocks (For Fiscal Year 2008/09)

Name of the company	Traded Share	Traded	Number		Paid	Total Paid	Market
	Quantity	Amount	Of	Closing	Up	up value	Capitalization
	(in '000)	Rs. In million	Trades	Price	Value	Rs. in million	Rs. in million
Bank of Kathmandu	801.62	1504.31	6522	1750	100	844.397900	10554.97
Himalayan Bank Ltd.	163.99	338.37	1562	1760	100	1216.215000	14270.26
Kumari Bank Ltd	497.07	424.17	3703	700	100	1078.272000	5250.00
Laxmi Bank Limited	333.59	385.15	2303	1062	100	1098.086100	7773.84
Lumbini Bank Ltd.	496.21	280.50	2721	435	100	999.500000	3262.50
Nabil Bank Ltd.	177.61	730.65	2041	4899	100	965.747000	33675.38
Nepal Investment Bank Ltd	498.59	908.60	4138	1388	100	2407.068900	13916.56
Nepal Industrial & Co.Bank	510.94	598.87	3847	1126	100	1140.480000	8917.92
Nepal SBI Bank Limited	330.99	502.71	2595	1900	100	873.479100	12308.26

(Source: www.nepalstock.com, for 2008/09)

Appendix - D
(Monthly Average Stock Price of the sampled Commercial Banks for 2008/09)

NAME	Jul/ Aug	Aug/ Sep	Sep/ Oct	Oct/ Nov	Nov/ Dec	Dec/ Jan	Jan/ Feb	Feb/ Mar	Mar/ Apr	Apr/ May	May/ Jun	Jun/ July
<i>BOK</i>	2532	2496	2460	2214	1954	1285	1287	1463	1444	1409	1517	1573
<i>HBL</i>	2385	2459	2476	2260	1963	1770	1345	1561	1558	1519	1653	1641
<i>KBL</i>	1037	1026	1010	956	864	789	676	725	648	622	646	622
<i>LBL</i>	1193	1156	1348	1327	1040	944	994	914	850	887	847	972
<i>LUBL</i>	666	680	655	609	515	467	471	456	432	416	425	391
<i>NABIL</i>	5811	5755	4029	3774	3610	3451	3306	3526	3585	3611	4120	4413
<i>NIB</i>	2978	2813	2225	1696	1268	1196	1115	1237	1187	1174	1261	1192
<i>NICB</i>	1493	1567	1498	1298	1095	810	797	912	903	892	986	1002
<i>SBI</i>	1683	1663	1646	1393	1257	1093	1232	1392	1422	1531	1705	1765

Appendix – E
Serial Correlation Coefficient of Daily Closing Price Changes of Each Individual Security for the Lag k=1, 2, 3, 10. (Natural Log Transformed Data)

S N	Stocks of Comp.	Lag Days									
		1	2	3	4	5	6	7	8	9	10
1	HBL	-0.371	-0.100	0.002	-0.101	0.041	0.0561	-0.030	-0.027	-0.006	0.027
2	SBI	-0.539	0.064	-0.015	0.019	0.016	-0.047	0.075	-0.120	0.067	0.047
3	BOK	-0.507	0.073	-0.147	0.077	0.070	-0.076	0.043	-0.077	0.058	0.050
4	NICB	-0.517	0.073	-0.147	0.077	0.070	-0.076	0.043	-0.077	0.058	0.050
5	LBL	-0.329	-0.204	-0.002	-0.039	0.106	0.096	-0.197	0.003	0.016	0.140
6	KBL	-0.5444	0.051	0.042	-0.089	0.013	-0.001	0.092	-0.114	0.118	-0.046
7	LBL	-0.410	-0.036	-0.071	-0.076	0.092	-0.022	0.041	0.033	-0.019	-0.094
8	NABIL	-0.080	-0.080	0.080	0.079	-0.079	0.079	-0.078	-0.078	-0.078	0.078
9	NIB	-0.072	-0.071	-0.071	-0.071	0.071	0.071	-0.070	-0.070	0.070	-0.070
Average		-0.459	-0.024	-0.016	-0.047	0.049	0.022	-0.017	-0.027	0.03	0.006

Appendix-F
Standard Error of Sample Commercial Banks from Lag 1 to lag 10

S.No.	Stocks of the Respective Companies	Lag Days									
		1	2	3	4	5	6	7	8	9	10
1	HBL	0.074	0.074	0.073	0.073	0.073	0.073	0.072	0.072	0.072	0.072
2	SBI	0.073	0.072	0.072	0.072	0.072	0.072	0.071	0.071	0.071	0.071
3	BOK	0.072	0.071	0.071	0.071	0.071	0.071	0.070	0.070	0.070	0.070
4	NICB	0.074	0.073	0.073	0.073	0.073	0.072	0.072	0.072	0.072	0.072
5	LBL	0.080	0.080	0.080	0.079	0.079	0.079	0.078	0.078	0.078	0.078
6	KBL	0.075	0.075	0.075	0.075	0.074	0.074	0.074	0.073	0.073	0.073
7	LBL	0.074	0.073	0.074	0.073	0.073	0.073	0.072	0.072	0.072	0.072
8	NABIL	0.080	0.080	0.080	0.079	0.079	0.079	0.078	0.078	0.078	0.078
9	NIB	0.072	0.071	0.071	0.071	0.071	0.071	0.070	0.070	0.070	0.070

(Worked Out from Appendix D)

Appendix-G
List of TOP Ten Companies on Various Bases (Apr/May 2010)

On the Basis of Traded Amount			
SN		Name of the Companies	Amount Traded
			Rs. in million
	1	Standard Chartered Bank Ltd.	52.09
	2	Bank of Kathmandu	43.00
	3	Nabil Bank Ltd.	35.87
	4	Siddhartha Development Bank Limited	26.66
	5	Fewa Finance Co. Ltd.	22.06
	6	Everest Bank Ltd	19.53
	7	Chilime Hydro power Co.	18.24
	8	Vibor Bikas Bank Limited	15.07
	9	Nepal Doorsanchar Company Limited	13.32
	10	Bank of Asia Nepal Limited	12.12
On the Basis of Number of Shares Traded			
SN		Name of the Companies	No Of Share
			(Traded in '000)
	1	Siddhartha Development Bank Limited	218.19
	2	National Hydro Power Co.	107.14
	3	Fewa Finance Co. Ltd.	94.68
	4	Vibor Bikas Bank Limited	62.03
	5	Nepal Shree Lanka Merchant Bank	61.10
	6	Bank of Kathmandu	61.02
	7	KIST Bank Limited	46.15
	8	Nepal Bangladesh Bank Ltd.	40.73
	9	Bank of Asia Nepal Limited	40.06
	10	Nepal Doorsanchar Company Limited	29.85

Appendix-G (Continued.....)

On the Basis of Number of Transactions

SN	Name of the Companies	No of Transactions
1	Vibor Bikas Bank Limited	1199
2	Public Development Bank Limited	881
3	Siddhartha Insurance Limited	743
4	Bank of Asia Nepal Limited	543
5	Prime Commercial Bank Limited	507
6	Bank of Kathmandu	479
7	Sunrise Bank Limited	463
8	Crystal Finance Limited	359
9	Everest Bank Ltd	341
10	Citizens Bank International Limited	281

On the Basis of Market Capitalization

SN	Name of the Companies	Capitalization
		Rs. In Million
1	Nepal Doorsanchar Company Limited	71100.00
2	Standard Chartered Bank Ltd.	27213.42
3	Nabil Bank Ltd.	21246.43
4	Nepal Investment Bank Ltd.	17330.90
5	Himalayan Bank Ltd.	12235.12
6	Everest Bank Ltd	8572.96
7	Bank of Kathmandu	6772.07
8	Nepal SBI Bank Limited	6725.79
9	Chilime Hydro power Co.	6573.70
10	Nepal Industrial And Co.Bank	6249.83