

CHAPTER - I

INTRODUCTION

1.1 Background of the study

Investment has significant role for the well development of a country, which is the final result of the income, expenditure of the saving. Saving is impossible without earning, earning is impossible without investment and investment is completely depends upon the mobilization of savings either directly by the savers or indirectly through the financial intermediaries. Investment can be classified into two categories, real investment and financial investment. Real investment deals with investment in real assets such as land building or in fixed property whereas financial investment deals with the investment in financial assets such as securities.

Financial markets are divided into money markets and capital markets. Money markets are the markets for debt security with maturities of less than one year. Money markets basically involve the trading of short-term securities. Money markets are sometimes classified as organized and unorganized markets. The organized or formal money market is an institutional mechanism for the transaction of short-term securities and commercial banks, finance companies and other credit unions are the players in the money markets. Local merchants, indigenous bankers and relatives come under the informal sector or unorganized sector. A survey conducted by Nepal Rastra Bank in 1992 revealed that the formal sector market provides only 20 percent of the total credit demand of the rural sector. This implies that the financial markets of the country are yet to develop. Capital markets are the markets for long term debt and corporate stock. Capital Markets are also classified as primary markets and secondary markets. Primary market is created when a company goes public. The place where issued securities are traded is known as secondary market. NEPSE is the only organized second market in Nepal, where issued securities are traded.

Stock market is a mechanism through which corporate sectors collect funds to finance productive projects by issuing securities. Similarly, stock market provides the best investment opportunity to the investors. It also provides liquidity to the securities holders. One of the most valuable services performed by securities market is to maintain active

trading of securities. Therefore, it provides platform to the investors to buy and sell securities

Securities markets play a crucial role in the economy by channeling investment where it is needed and by putting it to be best use (Lieberman and Fergusson: 1998). The securities markets help to develop industrial and business enterprises. Mobilization of such resources for investment is certainly a necessary condition for investment for economy to take off, but the quality of their allocation to various investment projects is as important as a factor for growth. Securities markets help agents manage liquidity and productivity risk by eliminating premature capital liquidation, which increases corporate sector productivity. Securities market also accelerates growth indirectly by reducing liquidity risk, which encourages firm investment (Levine: 1991). Price of a security is generally determined by demand and supply forces; higher the demand, higher the price and vice versa.

1.1.1 Constituent of Capital Market in Nepal

Nepalese stock market is characterized by a low trading volume, absence of professional brokers, early stage of growth, limited movement of share price and limited information available to investors. A number of researches are available on government owned public enterprises but researches on enterprises whose stock are listed in NEPSE and traded in stock market are yet to come up in Nepal.

Nepalese Stock Market is in initial phase of development. There is only one stock exchange- Nepal Stock Exchange - till date. Securities Board of Nepal is regulating NEPSE, listed companies, brokers, merchant bankers and other security related institution

Securities Board, Nepal (SEBON)

Securities Board, Nepal was established on 26 May 1993, under the provision of the securities exchange Act, 1983. It was established with the objective of promoting and protecting the interest of investors by regulating the securities market. It also assumes the responsibility of development of securities market in the country, besides the regulatory role. Board has identified the policy development, legal and regulatory reform, standardizing disclosures, bringing enforcement to ensure compliance and promoting broad based market as a priority area to reform. The Private sector has also been participating equally in establishing a sound system of securities exchange. In private sector – investors, listed companies, financial and market intermediaries and in

government sectors Ministry of Finance, registrar of companies (Ministry of Industry, commerce and Supply), Nepal Rastra Bank, Nepal Stock Exchange, Federation of Nepalese chamber of Commerce and Industries (FNCCI), Institute of Chartered Accountants of Nepal (ICAN) and Association of Chartered Accountants have been playing vital role in promoting the capital market of the country.

The objectives of the Board are to promote and protect the interest of the investors by regulating the issuance, sale and distribution of securities and purchase, sale or exchange of securities, to supervise, look after and monitor the activities of the stock exchange and other related firms on securities business, and to render contribution to the development of capital market by making securities transactions fair, healthy, efficient and responsible.

Nepal Stock Exchange (NEPSE)

Nepal Stock Exchange was established on 1993 under securities exchange Act 1983. Nepal stock exchange was known as 'securities exchange centre earlier'. Securities exchange centre Ltd. was established in 1976 with the objective of facilitating and promoting the growth of capital markets. The major task undertaken by Nepal stock exchange are brokering, underwriting, and managing public issue, making market for government bonds and other financial services. Nepal stock exchange was a non-profit making organization at past but now it has changed into profit making organization and now operating under Securities Exchange Act-2063.

It was established with joint effort of Nepal industrial Development Corporation and Nepal Rastra Bank to mobilize the public saving for ensuring public ownership in the shares of public limited companies. In order to promote the stock exchange business, the centre made a series of studies in the beginning regarding both the public limited companies and undertaking the business of buying and selling of securities. Nepal stock exchange started its trading operation on 13 Jan 1994 through its licensed member.

The Board of Directors (BOD), which has governed NEPSE, constitutes of members representing different sectors as per Securities Act 2006. At Present, the BOD constitutes 2 Members including a chairman from Nepal Government, 2 Members from Nepal Rastra Bank, 1 from NIDC. Moreover, one member will be nominated by BOD as an expert in capital market. General Manager of NEPSE represents as a director on the BOD.

The authorized capital of exchange is Rs. 160 million and its paid-up capital is 50 million. The Government of Nepal (58.66 percent), Nepal Rasta Bank (34.60 percent), Nepal

Industrial Development Corporation (6.12 percent) and licensed members (0.62 percent) are its shareholders. At present, there are 23 brokers and 2 market makers; besides this it has licensed both dealers as primary and secondary market. In 13th April 2009 (Chaitra 11, 2065) 157 companies have listed their securities at NEPSE. These members of NEPSE are permitted to act as intermediaries in buying and selling of government bonds and listed corporate securities. NEPSE has adopted computerized trading system from 24th August, 2007. Investors can make transaction from brokerage firms. But, the security services are bounded in the capital city only and this needs to be corrected by expanding its service outside the Kathmandu Valley. Where the price is determined when bid and offer price match. NEPSE has fixed the board lot of 10 shares if the face value is Rs.100 or 100 shares if the value is Rs.10. The transactions on regular trading should be done on at least one board lot. The transactions of less than 10 shares are permitted only on odd lot trading hours.

NEPSE has adopted a T+3 settlement system. Settlement will be carried out on the basis of paper versus payment. The trading is done at "T" and at T+1; the buying brokers have to submit bank vouchers for settlement with covering letter. At T+2, the selling brokers must submit share certificate with covering letter. At T+3, NEPSE prepares billing for payment and this will be forwarded to the bank.

The rate of brokerage on equity transactions ranges from 0.7 percent to 1 percent depending on the traded amount.

Table: 1.1
Brokerage Commission for Trading Stock

Trading Amount (in Rs.)	Brokerage commission (%)
Up to 50,000	1.00
50,001 to 500, 0000	0.90
500,001 to 10,000,000	0.80
Above 10,00,0000	0.70

Source: www.nepalstock.com

1.1.2 Securities Market

Security Market can be defined as a mechanism of bringing together buyers and sellers of financial assets in order to facilitate trading. In simple sense, securities market is a place where people buy and sell financial instruments. These financial instruments may be in form of government bonds, corporate bonds or debentures, ordinary share, preference

share etc. So far securities market is concerned; it is an important constituent of capital market. It has a wide term embracing the buyers and sellers and all the agencies and institutions that assist the sale and resale of corporate securities. Although securities market is concerned in few locations, they refer more to mechanism rather than to place designed to facilitate the exchange of securities. This securities market can be defined as a mechanism for bringing together buyers and sellers of financial assets in order to facilitate trading. In order to allocate capital efficiently and maintain higher degree of liquidity in securities, the securities market should be efficient enough in pricing the shares solely by economic considerations based on publicly available information (Sharpe, Balliey, Alexander, 2003:47).

Securities Market can be classified in terms of time to maturity of securities traded i.e. Money Market and Capital Market. Short-term securities are traded in money market where long-term securities are in capital market. Stocks, bond and debenture are traded in capital markets. These securities help to finance industrial project economic development of the country.

Securities markets may be classified in terms of economic function i.e. Primary market and Secondary markets. A primary market is the market that brings surplus savings units together with deficit savings units in the process of financing productive activities. Securities are sold for the first time in primary markets and their further trading will be in secondary market. Both these markets make it possible for investor to diversify their assets holding beyond domestic investments (Johnson, 1993:82). The linkage between companies and investors has created inveigling conditions in the flow of funds both in primary and secondary market.

The existing securities are traded in secondary market, where securities are transferred from one surplus unit to another. The primary market depends in an important way on the existence of an active secondary market. Secondary market provides liquidity to investors who buy securities in the primary markets.

1.2 Statement of the Problem

Nepalese Securities Market has more than three decades of operational experience. Despite the high experience, the stock market is not efficient due to imperfect and improper supervision and monitoring of concerned authorities, non professional nature of market players and unfavorable attitude of market authority and slow transfer of funds. Existing economic imbalance, political instability, ineffective implementation of liberal

economic policy of the country have generated adverse effect in the economy. The prices of the securities especially common stock have been randomly fluctuating and declining over the past years. The policy makers are unable to make an appropriate policy for the development of the stock market. There is poor contribution of government in the development of the stock market.

Basically, stock price is determined by demand and supply forces. Both, the qualitative and quantitative factors determine the stock price. However, to specify exactly what factors are responsible to determine stock price is a controversial or an unpredictable issue. Share price is the function of the several factors. However, for some environmental changes, the stock exchanges have no effect. Though the banking sector has dominant position, most of the investors are not aware of the financial strength of the companies and they do not analyze company's financial indicators before they invest their funds through primary market- participating in IPO and secondary market-NEPSE. The market price of common stock (share) does not seem to be in accordance with the financial indicators -Net worth per share (NWPS), Earning per share (EPS) and Dividend per share (DPS). Instead, in determination of the market price of share, there has been major influence of rumors rather strength of the companies. The market price per share (MPS) of commercial banks, especially foreign joint venture Bank's has been much higher than MPS of other sectors. Moreover, the overall NEPSE is depended upon MPS of such companies.

It has been observed that the MPS of public quoted companies is above than their book value. The market value is determined by the supply and demand functions. However, in an efficient market, MPS fully reflects all the historical information publicly available. Here arises the question of efficiency of the Nepalese share market. The high movement of share prices may be the outcome of the efficient market behavior.

Many listed companies do not provide their financial statement or annual reports timely to the investors. The dubious and hazardous movement of share prices has no sound fundamental backing of analysis and relationship to past results revealed in limited calculated dividend yield, net worth and price multiples. The investors conclude that there has been a foul play using insider information. The reaction is based on the assumption of strong form of the market efficiency. The security exchange Act strictly prohibits the misuse of insider information but the regulating authorities can make no advance notice of how there is the use of inside information.

This study tries to identify the determinants of stock price and find out the degree of affection of these determinants more.

More specifically, this study is expected to answer the following research questions:

- What are the major determinants of the stock price in NEPSE?
- How political and Economical instability affect the stock price?
- How administrative powers of state affect the stock price?
- How earning and book value of the stock affect the stock price?
- How do investors make investment decision?

1.3 Objectives of the Study

The main objective of this research is to identify and analyze the determinants of stock price in Nepalese secondary market. In other words, this study is focused to identify these factors which determine the stock price. Basically, different financial indicators are taken under consideration. However, market price of stock is not only affected by financial indicators but also the rumors regarding the corporation. Even, rumors may not be true in future. Thus, this study is focused to meet the following objectives:

- To identify the major determinants of the stock price of listed companies in NEPSE.
- To identify the relationship between performance and market price of the selected companies.
- To identify whether Nepalese securities market is efficient or not.
- To identify important factors related with the secondary market in Nepal.

1.4 Significance of the Study

This study draws the attention from every corner of investors, academicians, entrepreneurs and also for interested parties. This study is helpful to financial manager to be familiar with how different factors affect the stock price, price formation process and its relationship with financial position of the company. This study is also useful to potential investors who are interested to know the effect on price trend, volume of stock traded and impact of signaling factors in NEPSE index.

1.5 Limitation of the Study

This study tries to explore the factor determining the stock price in Nepal. Both primary and secondary data are analyzed. However, this study has some limitations, which are listed as below:

- This research is based on primary as well as secondary data. The secondary data are collected from NEPSE, concerned organization and from different financial journals; therefore, the error may exist as they publish.
- Primary data is based on the answer of the respondent. So, it is subjected to be different according to loyalty of the respondents.
- Only sampled companies are analyzed during the study. But, there may be sampling error.
- This research covers past and present state of the stock market and investors in Nepal
- Only selected statistical and financial tools have been employed in this study.

1.6 Organization of the Study

This research has been organized in five chapters as below:

Chapter I: Introduction:

The first chapter is the introduction chapter. This chapter consists of general background of the study with the reference to the existing economic and political scenario of Nepal, introduction of capital market and Nepal stock exchange. Similarly, this chapter comprises of focus, significance, and objectives of the study, statement of the problems, limitation of the study and at last organization of the study has been presented.

Chapter II: Review of Literature:

Second chapter is the review of literature. This chapter reviews the relevant previous studies made on the determinants of stock price and the theories related to stock market. This chapter includes the conceptual framework on common stock, preferred stock, debenture, securities as well as security markets, stock price etc. Except that, this chapter reviews the published books journals and unpublished thesis reports separately.

Chapter III: Research Methodology:

The third chapter is the research methodology. This chapter includes the detailed framework of study such as data collection and analysis techniques.

Chapter IV: Presentation and Analysis of Data:

Fourth Chapter of this research is concerned with the presentation and analysis of data. In this chapter, the primary and secondary data collected from different sources are presented in systematic formats (like: tables, charts, figures) and analyzed using different analytical tools for instance; average, standard deviation, coefficient of variation, correlation & regression. In addition to that, the major findings of the study are drawn out.

Chapter V: Summary, Conclusion and Recommendation:

Fifth chapter involves the summary, conclusions and recommendation of the study and offers suggestions for improvement.

Bibliography and appendixes are included at the end.

CHAPTER - II

REVIEW OF LITERATURE

Review of literature means reviewing research studies or other relevant proposition in the related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted. It is an integral and mandatory process in research works. The main reason for the full review of research in the past is to develop some expertise in one's area, to see what new contribution can be made and to receive some ideas for developing a research design. There is a significant importance of review of literature:

- To identify the problem,
- To determined the methodology for research work,
- To draw the scope of studies,
- To avoid unintentional replication of previous studies and
- To interpret the significance of researcher's results in a precise manner.

This chapter is related to examine and review of some related books, articles, published and unpublished different business journals, bulletins, magazines, articles, newspapers, websites and major findings of previous studies of the relevant fields are included in precise manner.

This chapter has been divided into the following parts:

- a. Conceptual framework.
- b. Review of related studies:
 - Review of articles and journals
 - Review of thesis
- c. Research gap.

2.1 Conceptual Framework

There are numerous reasons that cause the share price fluctuations. They are economic and non-economic and other factors. The price of securities is typically very sensitive, responsive to all events, both real and imagined, that cast light into the murky future. Though all factors give rise to the observed movement of share price, it would be very hard to find a completely accepted price formation theory. Now-a-days the investment sector is getting flourished in recent years as other economic sectors. Today, most of the

developing countries are boosting their economic developments through the contribution of their investment sectors.

Before getting into the core subject matter of stock price in the market it is necessary to be familiar with the general concepts of the stock and other related matters, which are in frequent use in research on stock market. Following sub-section to this section explains the conceptual matters of the capital market.

2.1.1 Financial Terminologies

i) Securities

A firm may promise a right to share in its profits in return for an investor's funds. Nothing is pledged, and no irrevocable promises are made. The firm simply pays whatever its directors deem reasonable from time to time. However the investor is given the right to participate in the determination of who will be the members of the board of directors. The right protects the investor against serious malfeasance. The investor's property right is represented by a share of common stock, which can be sold to someone else. Who will then be able to exercise the right? The holder of common stock is said to be an owner of the corporation and can exercise over its operation through the board of directors.

In general, only a piece of paper represents the investor's right to certain prospects or property and the conditions under which he or she may exercise those rights. This piece of paper, serving as evidence of property rights, is called a security. It may be transferred to another investor with all its rights and conditions. Moreover, the security is a legal representation of the right to receive prospective future benefits under stated conditions (Sharpe, Alexander & Bailey, 2000: 2-3).

ii) Security Market

Security market exists in order to bring together buyers and sellers of securities, meaning that they are mechanisms created to facilitate the exchange of financial assets. There are many ways in which security markets can be distinguished. One way has already been mentioned primary and secondary markets. Here the key distinction is whether or not the securities are being offered for sale by the issuer. Interestingly, the primary market itself can be subdivided into seasoned new issue refers to the offering of an additional amount of an already existing security, whereas an unseasoned new issue involves the initial offering of a security to the public. Unseasoned new issues are often referred as initial public offering or IPO's.

The market exists in order to bring together the buyers and sellers of securities. Securities market can be divided into primary and secondary markets.

Primary Market

Primary market is the place where corporations and government issue new securities. All securities, whether in money or capital markets are initially issued in the primary market. The primary market for securities is the new issue market which brings together the “supply and demand” or “Sources and Uses” for new capital funds. In this market the principal sources of funds is the domestic savings of individuals and businesses; other suppliers include foreign investors and governments. The principal uses of funds are: the long term financing of the investment in housing (mortgages), the long term investment of corporations and other business, and the long term borrowing of government. The ultimate suppliers of funds flow to their ultimate users, namely, economic units which issue securities to finance a surplus of expenditures over their current incomes.

Most individual investors are unfamiliar with the new issues market and its institutions, such as underwriters and selling syndicates which serve as middleman between the corporate demanders of funds and the individual investors and financial institutions which supply the funds. To most investors the term securities market is synonymous with the stock “exchange” (Bhalla, 2001: 155).

Secondary Market

Secondary market is the market place where second-hand securities are traded in secondary market comprise stock exchange and over the counter market, popularly known as OTC market.

The purpose of a stock exchange or securities market, like any other organized market, is to enable buyers and sellers to effect their transactions more quickly and cheaply than they could otherwise. However, since a stock exchange typically deals in existing securities rather than in new issue, its economic significance (Bhalla, 2001: 156).

iii) Common Stock

Common stock represents an ownership position. The holders of common stock are the owner of the firm, have the voting power that among other things elects the board of directors, and have a right to the earnings of the firm after all expenses and obligation

have been paid; but they also run the risk of receiving nothing if earnings are insufficient to cover the obligations.

Common stockholders hope to receive a return based on two sources dividends and capital gains. Dividends are received only if the company earns sufficient money and the board of directors deems it proper to declare dividends. Capital gain arises from advancement in the market price of the common stock, which is generally associated with a growth in per share earnings because earnings often grow smoothly over time. This fact points the need for careful analysis in the selection of securities for purchase and sale, as well as, in the timing of these investment decisions, for common stock has no maturity date at which a fixed value will be realized.

When a company needs capital for expansion, it sells shares its stocks to the public. Most companies issue million numbers of shares so each share represents only a tiny piece of company. These shares are also transferable (Fisher, 2002: 2).

The common stockholders of a corporation are its residual owners; their claim to income and assets comes after creditors and preferred stockholder have been paid in full. As a result, stock holder's return on investment is less certain than the return to a lender or to a preferred stockholder is not bounded on the upside as are returns to the others (Prasanna, 1994:24).

Advantages of common stock can be described as follows:

- Common stock provides ownership of the firm.
- It provides control power
- Purchase of common stock gives the following rights to stockholders:
 - Voting right
 - Participation in general meeting
 - Right of getting information
 - Electing as a board of director
 - Participation in the profit and loss of the company
 - Transferring shares
 - Proxy representation

The disadvantages of holding common stock are as follows:

- It is more risky than other securities

- The rights may not be exercised in his or her best interest as individual investor represents very small proportion of total shares.
- On liquidation, holders of common stock are last in the priority of claims. Therefore, the portion of capital they contribute provides a cushion for creditors, if losses occur on dissolution.
- As an owner of firm, investor of common stock should bear legal responsibility, and personal liability.

iv) Preferred Stock

Preferred stocks have fixed dividend and right of acquiring principal before common stock at the time of liquidation. Preferred Stock is said to be a “Hybrid” security because it has features of both common stock and bonds. Preferred stocks are preferred with respect to assets and dividends. In the event of liquidation, preferred stockholders have a claim on available assets before the common-stockholders. Furthermore, preferred stockholders get their stated dividend before common stockholders can receive and dividends (Vane Home, 2000: 515).

Preferred stock provides the following advantages to the investor

- It provides reasonably steady income.
- Preferred stockholders have a preference over common stockholders in liquidation; numerous examples can be cited where the preference position of holders of preferred stock saved them from losses incurred by holders of common stock.
- Many corporations (for example, insurance companies) like to hold preferred stock as investment because 70 or 80 percent of the dividends received on these share is not taxable. (Weston and Copeland, 1992:969).

Preferred stock also has some disadvantages to investors:

- Although the holders of preferred stock bear a substantial portion of ownership risk, their returns are limited.
- Price fluctuations in preferred stock may be greater than those in bonds; yet, yields on bonds are sometimes higher than those on preferred stock.
- The stockholders have no legally enforceable right to dividends.
- Accrued dividend is seldom settled in cash comparable to the amount of the obligation that has been incurred.

v) Debenture

The term debenture usually applies to the unsecured bonds of a corporation. Investor looks to the earning power of the corporation because these general credit bonds are not secured by specific property. In the event of liquidation the holder becomes a general creditor. Although the bonds are unsecured, debenture holders are protected by the restrictions imposed in the indenture, particularly the negative pledge clause, which precludes the corporation from pledging its assets to other creditors (Vane Horne, 2000:513).

vi) Government Securities

Government issues various types of securities to fulfil and undertake the development works under the deficit budget and raises scattered funds from public. These securities are assumed to be less riskily as compared with external debt. Government issues securities internally and externally, the main source of internal debt is government bonds. NRB has been actively issuing various government securities in the country. It is one of the most important issuance of the government to maintain the deficit budgetary system of Nepal. The Government Securities, which are issued by NRB, are described in brief below.

Treasury Bills

It is the short-term government bond. It is issued to fulfil deficit budgetary system in Nepal. It normally matures in 91 days while some securities mature in 365 days. It is issued to collect scattered funds and to mobilize it in productive sector and conduct fiscal and monetary policies. It is issued on the basis of auction so that any individuals and institutions can invest in Treasury Bills.

Development Bonds

NRB has been issuing these bonds in the market. It is a long-term government bond. It has normally 5 years maturity period. The security holders can use it as collateral if they need money immediately. Institutional and individual investors purchase it. It has fixed and minimum interest percentage. The securities holder normally obtains 90 percent amount of total value if he keeps them on collateral. The income from these bonds is taxable.

National Saving Bonds

It is a long –term government bond. It has normally 5 years maturity period. Individuals, organization and financial institution purchase this bond expect commercial banks. In this bond, interest is paid semi-annual basis. It can be purchased as a promissory note. Principal is refunded after its maturity period. It has fixed interest rate, which can be sold

easily from one person to another in the market. It can be used as collateral as in the case of Development Bonds.

Citizen saving certificate

It is also a long-term government bond. It has normally 5 years maturity period. It has fixed interest rate which is paid semi-annual basis. It cannot be used as collateral. Individual and institutional purchase can buy this bond. It is a taxable bond.

Special Bonds

This type of bond is issued on special occasions when government falls short of funds. The government can issue special bonds to those parties to whom government has to make payment. The holder can use it as collateral.

vii) Par Value

When a corporation is first chartered, it is authorized to issue up to a stated number of shares of common stock, each of which will often carry a specified par value. Legally a corporation may be precluded from making payments to common stockholders if doing so would reduce the balance sheet value of stockholders equity below the amount represented by the par value of outstanding stock. For this reason, the par value is typically low relative to the price for which the stock is initially sold. The initial offering price of the share may vary from the par value if stocks are issued on premium or discount.

viii) Net worth per share [NWPS]/ Book value per share [BVPS]

A corporation will generate income, much of which is paid out to creditors (as interest) and to shareholders (as dividends). Any remainder is added to the amount shown as cumulative retained earnings on the corporation's books. The sum of cumulative retained earnings and other entries (such as common stock and capital contributed in excess of the par value) under shareholder's equity is the book value of the equity. The book value per share is obtained by dividing the book value of the equity by the numbers of share outstanding.

The book value of the equity reflects the historical costs of – brick and meter- the physical assets of the company. A well run company with strong management and an organization that functions effectively should have a market value greater than the historical book value of its physical assets.

Book value of equity = Cumulative retained earnings + Capital contributed in excess of par + common stock.

The accounting value of share of common stock equal to the common equity of the firm (common stock plus retained earnings) divided by the number of shares outstanding. Book value is generally considered to be relatively unimportant in determination of the value of the company, since it represents only the historical investments made in the company- investment that may have little relation to current value of price.

ix) Market price per share [MPS]

The market price of share gives the value of shares, and the value of the organization. The market price of shares is that price in which shares are traded or the amount which, is paid by the buyer to the seller to purchase the stock of company. The market price of shares varies from one company to other. Since, the common stock holders are the owner of the organization and have least priority to claim in liquidation, the share price is highly volatile and very sensible to environmental factors. An organization has two types of environment i.e. internal & external. The environment within the organization is called internal environment and is somehow in control of the organization. So the organization tries to maintain the favourable environment to maximize the share price in stock market. On the other hand, external environmental factors are not within the control of the organization, but such forces highly affect the market price of share. So, the firm tries to adjust themselves according to the changing environmental forces, and such adjustments are intended to maximize the share price of the value of the firm.

x) Earning Per Share [EPS]

Accounting earnings that represent the difference between revenues and expenses, including the expenses associated with non-equity source of funds (such as interest to debt, dividend to preference shares) is also known as total earnings available for common stock. If this portion of income is divided by number of outstanding shares, we get earning per share.

xi) Dividend Per Share [DPS]

The percentage of earnings the firm pays in cash to its shareholders is known as dividend. The dividends, of course, reduce the amount of earnings retained in the firm and affect the total amount of internal financing.

Nothing is more important than dividends to stock holders. They buy shares of the firm with the hope of sharing profits earned by firms. The sole motive of stockholders is to receive return on their investment; nothing pleases them more than knowing the firm's earnings and more profits mean more dividends coming in.

Forms of dividend

Cash dividend: Payments made in cash to stockholders are termed cash dividends. For which, a firm needs to have enough cash in its bank account. When cash dividend is declared, the cash account and reserves amount of the firm will be reduced, thus both the total assets and the net worth of the firm are reduced in case of distribution of cash dividends.

Bonus share (stock dividend): An issue of bonus share represents a distribution of shares in addition to cash dividend (known as stock dividend in USA) to the existing stockholders. This practice has the effect of increasing the number of outstanding shares of the company, which are distributed proportionate ownership of the company.

2.1.2 Theories of Stock Price Behaviour

There are two theories of price behaviour i.e. classical approach and efficient market theory approach. Classical or conventional approach includes fundamental analysis theory and technical analysis theory. Under efficient theories, there are three forms of efficient market hypothesis. Classical approach assures market as inefficient whereas the efficient market theory; investors were generally divided on to two groups, fundamentalists and technicians (Reily and Brown, 1991, p.347).

2.1.2.1 Classical approach

The classical or conventional approach includes fundamental analysis and technical analysis theory. Fundamental analysis or approach forecast stock price on the basis of earning and dividend of the company. The fundamental analysis theory holds that the market value of a share is based on certain intrinsic or fundamental factors such as the earnings, dividends, growth potential, debt equity mix etc. where as technical analysis theory talks about the stock prices on the basis of past price behaviour of the company, which suggests that by plotting the market price of shares over a period of time on a chart, that can determine certain patterns.

i) Fundamental Analysis

Fundamental analysis, this approach of security analysis, tries to identify the real or true value of financial assets. The real value of any kind of financial assets is the present value of the future cash flow given by the assets or expected by the holder. The fundamental analyst attempts to forecast the timing and size of this cash flow, and then converts them into their equivalent present value by using an appropriate discount rate. Once the real

value is calculated, it is, thereby, compared to the current market price per share to identify where the security is under-priced or over-priced.

These unusual cases of miss-pricing will be corrected in the future. The price of an over-priced security declines to meet the real value and the under-priced security's price increases to meet the real price. The person utilizes the technique is called a fundamentalist or a fundamental analyst.

Fundamental analysis approach involves the working to analyze various Factors like economic influences, industry factors, firm's financial statement and relevant company information such as product demand, earnings, dividends and management in order to calculate an intrinsic value for the firm's securities. The theory assumes that knowledge about the future of the companies is not perfect. Some stocks are under priced and other is over priced. The investor's task is to study certain fundamental factors that may enable them to select undervalued stock for purchase and sell overvalued stock. After extensive analysis, the investor derives an estimate of the 'intrinsic' value of the security, which is then compared to its market price. If the value exceeds the market price, the security should be acquired and vice versa (Reily and Brown, 1986, p.347).

Fundamental analysis theory claims that at any point of time and 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 stocks is simply the present value of all future income which the owner of share will receive (Francis, 1986, p.398). And the actual price should reflect the intrinsic value of the stock i.e. good anticipation of cash flows and capitalization rates corresponding to future time period. But in practice first, it is not known in advance what 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, fundamental attempts 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 it's future income and prospect of business opportunities. "Fundamental analysts believe in companies' earnings, their management, economic outlook, firms' competitor's, market conditions and many other factors" (Francis, 1986, p.425).

The fundamental approach is based on rational scientific analysis of data, but the market is rarely rational.

Some limitations of the fundamental analysis are as follows:

- The information and analysis may itself be incorrect.

- Many companies with the help of creative and innovative accounting and accounting cosmetics disguise the real earnings.
- The fundamentalist's estimate of intrinsic value by may be incorrect. This is not only possible but also probable that he often forecast growth, profit and other factors without grasping all the facts.
- The fundamentalist may not fully understand the economy or the industry, as there are several external factors. Therefore, fundamental analysis is a never ending process because values change over time. Ideally revision in analysis should occur whenever new information affection the future benefits to security holders becomes available.

Hence, fundamental analysis is ever-going process because values change in accordance with time. Ideally, revision in analysis should occur wherever new information affecting the future benefits to security holders becomes available.

ii) Technical Analysis

Technical analysis involves the study of stock market prices in an attempt to predict future price movements. Past prices are examined to identify recurring trends of patterns in price movements. Then more recent stock price is analyzed to identify emerging trends or patterns that are similar to past ones. This analysis is done in the belief that these trends or patterns repeat themselves. By identifying an emerging trend or pattern, the analyst hopes to predict accurately future price movement for a particular stock (Sharpe, Alexander & Balliey, 1999, p.347).

Technical analysis is based on the widely accepted premise that security prices are determined by the supply and the demand for securities. The tools of technical analysis are therefore designed to measure certain aspects of supply and demand (Francis, 1991, p.521-22). The technical analyst usually attempts to predict short term price movement and thus makes recommendation concerning the timing of purchase and sales of either specific stock or group of stock (such as industries) or stock in general. It is sometimes said that fundamental analysis is designed to answer the question 'what' and technical analyst seems to trying to forecast 'when' (Fisher and Gordon, 2000, p.844).

Technical analysis however may be useful in timing a buy or sell order that may be implied by the forecasts of return and risk. For example, the technical analysis may reveal that a drop in price is warranted. Postponement of purchase then, if the technical analysis is correct, will raise the forecast holding period return (HPR). Conversely, a sale order

might be postponed because the charts reveal a raise in the price of the security in question (Fisher and Gordon, 1995, p.510).

The basic assumptions of technical analysis are as follows:

- Market price is determined by interaction of demand and supply.
- Demand and supply is governed by numerous factors, both rational and irrational.
- Security prices tend to move in trends that persist for an appreciable length of time, despite minor fluctuations in the market.
- Changes in trend are caused by the shifts in demand and supply.
- Shifts in demand and supply, no matter why they occur, can be detected sooner or later in charts of market transactions.
- Some charts patterns tend to repeat themselves.

Thus, the technical analysts (chartist or technician) believe in the changes in the pattern or trend of security price that take place on account of changes in the demand and supply of the securities, and the crucial insights into these patterns can be obtained by keeping track of price chart.

Random Walk Theory

This theory involves study of random walk or efficient market hypothesis. In 1900 a French mathematician, Louis Bachelier wrote a scientific paper suggesting, that day-to-day security price fluctuations were random. His idea is known as the random walk theory (Cootner, 1962: 24-45). According to the theory, stock price changes have the same distribution and are independent of each other, so the past movement or trend of a stock price or market cannot be used to predict its future movement.

In short, this is the idea that stock prices take a random and unpredictable path. Followers of the random walk theory believe it's impossible to outperform the market without assuming additional risk. Critics of the theory, however, contend that stocks do maintain price trends over time - in other words, that it is possible to outperform the market by carefully selecting entry and exit points for equity investments.

Random walk theory describes whether past prices can predict future. "Random walk theory implies the future path of price level of a security is no more predictable than the path of series of cumulated random numbers. The series of price changes has no memory; that is, the past cannot be used to predict the future in any meaningful way." It means that the current size and direction of price changes is independent and unbiased outcome of

previous price changes. The random walk model in share prices actually involves two main hypotheses:

- Successive price changes are independent.
- The price changes conform to some probability distribution (Fama, 1996: 34-35).

More precisely, in algebraic term,

$$\Pr (X_t = X | X_{t-1}, X_{t-2}) = \Pr (X_t = X)$$

Where the term on the left side of equation is the conditional probability that the price change during time t will take the value X , conditional on the knowledge, the previous price changes the values X_{t-1} , X_{t-2} etc. But the term on the right of the equation is the unconditional probability that the price change during will take the value X . The expression means the conditional and marginal probability distribution of an independent random variable are identical (Gupta, 1989: 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 changes conforms to some probability distribution but its shape or form of the distribution need not be specified i.e. any distribution is consistent with the theory as long as it correctly characterizes the process generating the price changes. However shape or form of the distribution of price change knowledge is important to both investors and researchers for determining risky ness of investment in common stocks.

The random walk theory says nothing more than the successive price changes are independent. This independence implies that prices at any time will on the average reflect the intrinsic value of the security. If a stock's price deviates from its intrinsic value because, among other things, different investors evaluate the available information differently or have different insights into future prospects of the firm, professional investors and smart non professional will seize upon the short term or random deviations from the intrinsic value, and though their active buying and selling of the stock in question will force the price back to its equilibrium position (Fisher and Jordan, 1995: 553).

Advantages

- It is the simple investing theory, which a layman can understand easily.
- It is one of the oldest stock pricing theories and still finds favour with a set of investors.

Disadvantages

- The theory propounds 'buy and hold' as the best strategy. However the equity investor is looking for higher returns given the higher risk status.
- In 1978 Society of Investment Analysts Journal in which he explained that The Efficient Market Hypothesis contains a logical flaw. The American economists Grossman and Stiglitz were also exploring the issue around the same time and in 1980 published "On the Impossibility of Informationally Efficient Markets" in the American Economic Review. Their point was that markets cannot be efficient by accident. If they are efficient, then it is because of information and research. These activities have costs, but there is no incentive to pay for this research unless it can be used to make higher returns.
- In a truly efficient (frictionless and costless) market all information would be incorporated in the market price eliminating any profit opportunities. Unfortunately, such an ideal situation does not exist

Technical Analysis Tools

The Dow Theory

The Dow Theory is one of the oldest and most famous technical tools and was originated by Charles Dow, who founded the Dow Jones Company and was the editor of The Wall Street Journal around 1900. The Dow Theory is used to predict traversal and trends in the market as a whole or for individual securities. According to Charles Dow, the market is always considered as having three movements, all going at the same time. The first is the narrow movement from day to day. The second is the short-swing, running from two weeks to a month or more; the third is the main movement covering at least four years in duration.

Dow Theory practitioners refer to these components as:

1. Primary Trends

They are commonly called bear or bull markets. Delineating primary trends is the primary goal of the DOW theorists.

2. Secondary Movements

Secondary movements are sometimes, called corrections which last only a few months.

3. Tertiary Movements

These are simply the daily fluctuations. The Dow Theory asserts that daily fluctuations are essentially meaningless random wiggles. Nonetheless, the chartists should plot the asset's price against the market average each day in order to trace out the primary and secondary trends. (Francis, 1986:524)

The Dow Theory employs two indicators called Dow Jones Industrial Average (DJIA) and Dow Jones Transportation Average (DJTA). The DJIA is a key indicator of underlying trends, while the DJTA usually serves as check to confirm or reject that signal (Bodie, Kane and Marcus, 2002: 344).

Hence, the forecasting of Dow Theory is less precise. It might work only when a long, wide, upward movement is registered in the market. It is mostly unsteady as a market predictor when the market trend frequently reverses itself in the short or the intermediate term. This theory fails to explain a consistent pattern of the short price movements.

Barron's Confidence Index

The confidence index is usually, but not always, a leading indication. Like most of other technical indicators, the confidence index may sometimes issue erroneous signals and should therefore not be used without confirming evidence from other indicator (Francis, 1991: 531).

In the literal sense, the confidence index is defined as the ratio of high-grade bond yields divided by low-grade bond yields. The ratio is supposed to reveal how willing investors are to take investment risks. Barron's confidence index is constructed by using Barron's index of yields on the high-grade bonds to low-grade bonds.

Odd Lot Theory

Odd lotters try to do the right thing most of the time; that is, tend to buy the stocks as the market retreats and sell stocks as the market advances. However, technicians feel that odd lotters are inclined to do the wrong thing at critical turns in the market (Fisher & Jordan, 1995: 515).

This theory deals with the purchase and sales of securities by small investors. These investors perform transaction of less than 100 shares. Some technicians take the ratio of these odd lot purchases to odd lot sales as an indicator of the direction of the future prices. An increase in the index suggests relatively more buying, a decrease indicates relatively

more selling. During most of the market cycle, odd lots are selling the advances and buying the declines.

2.1.2.2 Efficient Market Theory

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

Efficient market theory contends that in a free and perfect competitive market, stock price always reflects all the available information and adjusts with every influx of new information instantaneously. In efficient market securities prices fully reflect available information. In efficient market, price change would only occur from new information (Fama, 1977, p.133). An initial and very important premise of an efficient market is that there are large numbers of knowledge and profit maximizing independent buyers and sellers, new information is generated randomly and investors adjust the information rapidly (Reilly, 1986, p.347). Therefore, if market is efficient, it uses all available information to set price. The measure of efficiency evolved from the notion of perfect competition, which assumes free and instantly available information rational investors with no taxes or transaction cost.

The following are the necessities for a securities market to be efficient:

- A large number of rational, Profit maximizing investors exist who actively participate in the market by analyzing, valuing, and trading stocks. These investors are price takers; that is, one participant alone cannot affect the price of a security.
- Information is free of cost and widely available to market participants at approximately the same time.

- Information is generated in a random fashion such that announcements are independent of one another.
- Investors react quickly and accurately to the new information, causing stock prices to adjust accordingly (Jones, 1988: 425).

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

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

One set of test of market efficiency examines the informational efficiency of security prices. Existing model of efficient markets imply that all relevant information regarding given stock is reflected in its current market price. This notion of market efficiency can be divided into three categories based on type of information used in making market decisions. They are explained as follows:

i) Weak Form Market Efficiency

“Weak form market efficiency hypothesizes that today’s security prices fully reflect all information contained in historical security prices. This implies that no investor can earn excess returns by developing trading rules based on historical price or return information” (Weston and Copland, 1992)

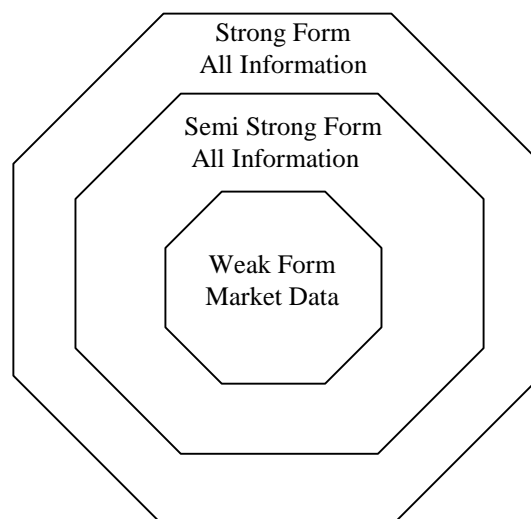
ii) Semi-strong Form Market Efficiency

It says that security prices fully reflect all publicly available information. Thus, no investors could earn excess return using publicly available resources such as corporate annual reports, NEPSE price information or published investment advisory reports. It contains all publicly available data such as earnings, dividends, stock split announcements, new products development, financing difficulties and accounting changes. A market that quickly incorporates all such information into prices is said to be semi-strong efficient. “If the semi strong hypothesis is true then only a few than what could be earned by using a naïve buy and hold strategy.” (Francis, 1986, p.608).

iii) Strong Form Market Efficiency

“The most stringent form of market efficiency is the strong form, which asserts that price fully reflect all information, public and non public” (Jones, 1988, p.29). In such kind of market, no group or investors should be able to earn, over a reasonable period of time, excess rates of return by using publicly available information in a superior manner. “An extreme version of the strong form holds that all non public information, including information that may be restricted to certain groups such as corporate insiders and specialists on the exchanges, is immediately reflected in prices. In effect, this version refers to monopolistic access to information by certain market participants.”

Chart: 2.1: Market Efficiency in Three Information Level



These three hypotheses are not mutually exclusive; they differ only in the degree of market efficiency. It is notable point that a semi-strong efficient market encompasses the weak form of the hypothesis because price and volume data are part of the larger set of all publicly available information. Strong-form efficiency encompasses the weak and semi-strong forms and represents the highest level of market efficiency. It is necessary for the weak form hypothesis to be true in order to the semi-strong and strong form hypothesis to be true.

2.1.2.3 Modigliani and Miller's (MM) Theory

A financial theory stating that the market value of a firm is determined by its earning power and the risk of its underlying assets, and is independent of the way it chooses to finance its investments or distribute dividends. Remember, a firm can choose between three methods of financing: issuing shares, borrowing or spending profits (as opposed to dispersing them to shareholders in dividends). The theorem gets much more complicated, but the basic idea is that, under certain assumptions, it makes no difference whether a firm finances itself with debt or equity.

This theorem states that, in the absence of taxes, bankruptcy costs, and [asymmetric information](#), and in an efficient market, a company's value is unaffected by how it is financed, regardless of whether the company's capital consists of equities or debt, or a combination of these, or what the dividend policy is. The theorem is also known as the [capital structure](#) irrelevance principle.

A number of principles underlie the theorem, which holds under the assumption of both taxation and no taxation. The two most important principles are that, first, if there are no taxes, increasing leverage brings no benefits in terms of value creation, and second, that where there are taxes, such benefits, by way of an interest tax shield, accrue when leverage is introduced and/or increased.

The theorem compares two companies—one unlevered (i.e. financed purely by equity) and the other levered (i.e. financed partly by equity and partly by debt)—and states that if they are identical in every other way the value of the two companies is the same.

As an illustration of why this must be true, suppose that an investor is considering buying one of either an unlevered company or a levered company. The investor could purchase the shares of the levered company, or purchase the shares of the unlevered company and borrow an equivalent sum of money to that borrowed by the levered company. In either

case, the [return on investment](#) would be identical. Thus, the price of the levered company must be the same as the price of the unlevered company minus the borrowed sum of money, which is the value of the levered company's debt. There is an implicit assumption that the investor's cost of borrowing money is the same as that of the levered company, which is not necessarily true in the presence of [asymmetric information](#) or in the absence of efficient markets. For a company that has risky debt, as the ratio of debt to equity increases the [weighted average cost of capital](#) remains constant, but there is a higher required [return on equity](#) because of the higher risk involved for equity-holders in a company with debt.

Advantages:

In practice, it's fair to say that none of the assumptions are met in the real world, but what the theorem teaches is that [capital structure](#) is important because one or more of the assumptions will be violated. By applying the theorem's equations, economists can find the determinants of optimal [capital structure](#) and see how those factors might affect optimal [capital structure](#).

Disadvantages:

Modigliani and Miller's theorem, which justifies almost unlimited [financial leverage](#), has been used to boost economic and financial activities. However, its use also resulted in increased complexity, lack of transparency, and higher risk and uncertainty in those activities. The global financial crisis of 2008, which saw a number of highly leveraged [investment banks](#) fail, has been in part attributed to excessive [leverage ratios](#).

Their study of irrelevance of dividend was based on the following critical assumptions.

- The firm operates in perfect capital market.
- There are no taxes.
- The firm has a fixed investment policy which is not subject to change.
- Risk of uncertainty does not exist.

Modigliani and miller provided the proof in support of their argument in the following manner:

Step 1:

The market price of a share in the beginning of the period is equal to the present to the present value of dividend paid at the end of the period plus the market price of the share at the end of the period.

Symbolically,

$$P_0 = \frac{D_1 + P_1}{1 + K_e}$$

Where,

P_0 = Market price at the beginning or at the zero period.

K_e = Cost of equity capital (assume constant)

D_1 = Dividend per share to be received at the end of the period.

P_1 = Market price of the share at the end of the period.

Step 2:

Assuming that the firm does not resort to any external financing the market value of the firm can be computed as follows:

$$nP_0 = n(D_1 + P_1)$$

$$nP_0 = \frac{n(D_1 + P_1)}{1 + k_e}$$

Where,

n = number of equity shares at zero period.

Step 3:

If the firm's internal sources of financing its investment opportunities fall short of the funds required and Δn is the number of new shares issued at the end of year 1 at price P_1 . Then,

Where,

n = No. of shares at the beginning.

Δn = No. of equity shares issued at the end of the period.

Step 4:

If the firm were to finance all investment proposals, the total amount of new shares issued would be given by the following equation.

$$\Delta nP_1 = I - (E - nD_1)$$

Or, $\Delta nP_1 = I - E + nD_1$

Where,

ΔnP_1 = The amount obtained from the sale of new shares to finance capital budget.

I = The total amount requirement of capital budget.

E = Earning of the firm during the period.

$E - nD_1$ = Retained Earnings.

Step 5:

By substituting the value of ΔnP_1 from equation of step 4 to equation of step 3, we find,

$$nP_0 = \frac{nD_1 + P_1(n + \Delta n) - I + E - nD_1}{1 + K_e}$$

$$nP_0 = \frac{P_1 + \Delta n) - I + E}{1 + K_e}$$

Step 6: Conclusion

There is no role of dividend in the above equation. So, Modigliani and miller concluded that dividend policy has no effect on the share price.

In this way, according to Modigliani and Miller's study, it seems that under conditions of perfect capital markets, rational investors, absence of tax discrimination between dividend income and capital appreciation, given the firm's investment policy, its dividend policy may have no influence on the market price of the shares. However, the view that dividend is irrelevant is not justified, once the assumption is modified to consider the realities of the world. In practice, every firm follows one kind of dividend policy or another. The selection of a certain dividend policy depends on the age and nature of the firm (Modigliani and Miller: 1966, 345).

2.2 Review of Journals and Articles:

This section reviews important empirical studies on determinants of stock price. Number of studies has been conducted on determinants of stock price. It is therefore, out of the scope of this study to survey and review all the empirical studies extensively and present here in detail. Therefore, some important studies and their findings are presented in chronological order.

Walter (1966) studied on dividend and stock price. According to him, the dividend policy of a firm can not be looked aside from investment policy. His argument is just the

opposite of what Modigliani and Miller said. Walter argued that dividend policy affects the stock prices, i.e., dividend is relevant with stock prices. The relationship between firm's internal rate of return and cost of capital is determining factors to retain profits or distribute dividends. AS long as the internal rate is greater than the cost of capital, the stock price will be enhanced by retention and will vary with dividend payout.

His model is based on number of assumptions as given below:

- Retained earnings constitute the exclusive source of financing. The firm does not resort to debt or equity financing.
- The firm's internal rate of return and its cost of capital are constant.
- The firm distributes its entire earnings or retains it for reinvestment immediately.
- There is no change in values of earnings per share and the dividend per share.
- The firm has perpetual life.

Considering the above assumption, Walter's model to determine the market price per share is as follows:

$$P = \frac{Div}{K} + \frac{r(EP\text{S} - DP\text{S})/k}{k}$$

Or,
$$P = \frac{DPS + r/k(EP\text{S} - DP\text{S})}{K}$$

Where,

P = Market price per share

DPS = Dividend per share

EPS = Earnings per share

r = Internal rate of return

k = Cost of capital

According to him the given firm may have three situations. They are:

$r > k$

If the firm's internal rate of return exceeds the cost of capital, the relation between dividends and stock prices is negative, i.e., more dividend leads to low stock prices. This kind of firm is referred to as growth firm. Walter argued that zero dividends would maximize the market value of shares for growth firm.

$r = k$

If the firm has $r = k$, there is no role of dividends on stock prices, i.e., dividends are indifferent from stock prices. In other words, dividend payout does not affect the value of share whether the firm retains the profit or distributes dividends, is a matter of indifference. This kind of firm is referred to as normal firm.

$r < k$

If the firm's internal rate of return (r) is less than the cost of capital (k), the relation between dividends and stock prices is positive, i.e., increase in dividend per share yield increase in stock prices. This kind of firm is referred to declining firm. He argued, cent percent dividend policy would maximize the market price of shares for declining firm.

To conclude, according to Walter, when the firm is in growth stage, then dividends are negatively correlated with stock prices. In the declining firms, dividends are positively correlated with stock prices. In the normal firm, there is no relationship between dividends and a stock price, i.e., dividend is indifferent to variation in market price of shares.

Markvicka (1987) studied the impact of dividend and retention on share price. The objectives of their study were as follows:

- To estimate a model to explain share price, dividend and retained earnings relationship.
- To test dividend, retained earnings hypothesis.
- To examine the structural changes in the estimated relations over time.

To explain the price behaviour, they used simultaneous equation model as developed by Friend and Puckett (1964). The model in its unspecified form was as follows:

1. Price Function

$$P_t = f [(D_t, R_t, (P/E)_{t-1}^1]$$

2. Dividend Supply Function

$$D_t = g [E_t, D_{t-1}, (P/E)_{t-1}^1]$$

3. Identity

$$E_t = D_t + R_t$$

Where,

P = Market price per share

D = Dividend per share

R = Retained earnings per share

E = Earnings per share

$(P/E)^1$ = Deviation from the sample average of price earning's ratio.

t = subscript for time

As per the financial theories they expected the coefficients of both dividend and retained earnings to be positive in the price equation. Similarly in the dividend supply function also they expected a positive sign for current earnings and previous dividend.

They took 18 chemicals and 13 sugar companies and estimated cross-sectional relationship for the years 1969 and 1973. The required data were collected from the official directory of Bombay Stock Exchange. They used lagged earnings price ratio instead of lagged price earnings ratio, i.e., (P/E) .

From the result of their two stage least square estimation, they found that in the case of chemical industry the estimated coefficients had the correct sign and the coefficient of determination of all the equations were very high. It implies that the stock price and dividend supply variation can be explained by their independent variables. But in case of sugar industry they found that the sign for the retained earnings is negative in both years. So, they left sugar industry for further analysis. For chemical industry, they observed that the coefficient of dividend was very high as compared to retained earnings. They also found that coefficient was significant at one percent level in both years. Where as coefficient of a retained earnings was significant at ten percent level of confidence in 1969 and at one percent level in 1973.

Finally, they conclude that the dividend hypothesis holds well in the chemical industry. Both dividend and retained earnings significantly explain the variations in share price in chemical industry. They also stressed that the impact of dividend is more pronounced than that of the retained earnings but the market has started shifting towards more weight for retained earnings.

Pradhan (1993) studied the market behaviour in Nepal and concluded that large stocks have large PE ratios; large ratios of the market value to book of equity and smaller dividends. PE ratios and dividend ratio are more variable for smaller stocks where as market value to book value of equity is more variable for the large stocks.

Large stocks also have lower liquidity, higher leverage, lower profitability, and lower assets turnover interest coverage stocks. Smaller dividends, lower profitability, lower

assets turnover, and lower interest coverage for large stock may be attributed to the fact that most of the large stocks are at their initial stage of operation. Stocks with larger market value to book value of equity, large PE ratios and lower dividends. PE ratios are more variable for stocks with large market value to book value ratios and dividends ratios are more variable for stocks with smaller market value to book value.

Stocks with large market value to book ratios have lower liquidity, higher leverage, lower earnings, lower turnover and lower interest coverage. However, liquidity and leverage are more variable for stocks with large market value to book value ratios while earnings, assets turnover and interests coverage are more variable for stocks with smaller market value to book value ratios.

Stock with large ratios large PE has large market value to book value of equity and smaller dividends ratios. However, their ratios of market value to book value of equity, and dividends are more variable for smaller stocks than for large stocks. Stocks with large PE ratios have lower liquidity, higher leverage, lower profitability, lower assets turnover, and lower interest coverage. However, liquidity, leverage, earning turnover, and interest coverage are all more variable for stocks with smaller PE ratios as compared to large ones.

Stocks paying higher dividends have higher liquidity, lower leverage, higher earnings and higher turnover and higher interest coverage. However, liquidity and leverage ratios are more variable for the stocks paying lower dividends while earnings, assets turnover and interest coverage is more variable for the stocks higher dividends.

Robert and Nardin (2004) wrote in the journal of Financial Economics, entitled “*Commonality in the Determinants of Expected Stock Returns*”, they presented with evidence that the determinants of the cross section of expected stock return were stable in their identify and influence from period to period and from country. The determinants were related to risk, liquidity, price level, growth potential and stock price history. Out of sample predications of expected returns, using moving average values for the pay-offs to these firm characteristics were strongly and consistently accurate. Two findings, however, distinguished their paper form others in the contemporary literature. First, the stock with higher expected and realized rate of return was unambiguously of lower risk than the stocks with lower returns. Second, they found that the important determinants of expected stock returns were strikingly common to the major equity markets of the world. Given the nature of the texts, it was highly unlikely that those results may be attributed to bias or

data snooping. Consequently, the result seems to reveal a major failure in the efficient market hypothesis.

Shrestha (2007) wrote an article entitled "*NRB Monetary Policy and Stock Market Impact*". According to him monetary policy directly affects stock prices. Taking an example of monetary policy announcement in 2004/05, he writes "NRB Monetary Policy had an impact on the performance of stock market as investors were lured into buying shares of commercial banks at higher market price with the expectation that banks would issues bonus shares to increase its capital base to Rs. 100 million. As a result, there had been tremendous demand for shares of commercial banks in every day transaction raising stock market index to unexpected highs."

Dangol (2008) wrote an article about "*Unanticipated Political Events and Stock Returns.*" According to him Nepalese capital market is consistent with information content hypothesis, i.e. market reflects all political events concerned with capital market. Concluding the study he writes, "The study has provided the evidence that the good-news leads to the positive average prediction error. Similarly, the bad-news drifts the negative prediction error on the post announcement period. Finally the data present important evidence on the speed of adjustment of market prices to new political information, i.e. in as many as 2 to 3 days from the announcement date. Thus the Nepalese stock market may be inferred to inefficient, but there is strong linkage between political uncertainty and common stock returns generation."

2.3 Review of Thesis:

This section reviews different unpublished thesis on determinants of stock price. There are numerous of studies has been conducted on determinants of stock price. Some important studies and their findings are presented in chronological order.

Pradhan (1993) carried out a study on "*Stock market behaviour in small capital market*"; which was based on the data collected for 117 enterprises from 1986 through 1990.

The objectives of this study were as follows:

- To assess the stock market behaviour in Nepal.

- To examine the relationship of market equity, market value to book value, price earnings, and dividends with liquidity, profitability, leverage, assets turnover and interest coverage.

The model employed was:

$$V = b_0 + b_1LIQ + b_2LEV + b_3EARN + b_4TURN + b_5COV + U_i$$

Where,

V chosen for the study were market equity (ME), market value of equity to its book value (MV/BV), price earnings ratio(P/E), dividend per share to market price per share (DPS/EPS).

- LIQ = Current ratio (CR) or Quick ratio (QR)
- LEV = Long term debt to total assets (LTD/TA) or long-term debt to total capitalization (LTD/TC).
- EARN = Return on assets, that is, earnings before tax to total assets (EBT/TA) or earning before tax to net worth (EBT/NW).
- TURN = Fixed assets turnover, that is, sales to average fixed assets (S/FA), or total assets turnover, that is sales to average total assets (S/TA).
- COV = Interest coverage ratio, that is earnings before tax to interest.
- U = Error term.

Some findings of his study, among others, were as follows:

- Higher the earnings on stocks, larger the ratio of dividends per share to market price per share.
- Dividend per share and market per share was positively correlated.
- Positive relationship between the ratio dividend per share to market price per share and interest coverage.
- Positive relationship between dividend payout and liquidity.
- Positive relationship between dividend payout and profitability.
- Positive relationship between dividend payout and turnover ratios.
- Positive relationship between dividend payout and interest coverage.
- Liquidity and leverage ratios are more variable for the stock paying lower dividends.
- Earnings, assets turnover, and interest coverage are more variable for the stock paying higher dividends.

Aryal (1995) conducted a research on “*The General Behaviour of Stock Market*” with the following main objectives.

Main objectives were:

- To examine the efficiency of the stock market of Nepal.
- To examine the serial correlation of successive daily price changes of the individual stocks.
- To determine whether the sequence of price changes are consistent with the changes of the series of random number expected under the independent Bernoulli process.
- To determine the efficiency of the stock market through the theoretical model of ‘Efficient Market Hypothesis’ in the stock market.

The major findings of the study on the basis of serial correlation and run test were:

- The price changes of the past and present can be very helpful to forecast future Price changes. Therefore, there exists the sufficient amount of opportunities for the sophisticated investors.
- When log days increases, the mean value of serial correlation of coefficient is lower, that indicates that the past price changes may have low power to predict the future price changes in the long run.
- The price changes in the present and future stock market may not be independent of the price changes in the past and present respectively.
- Nepalese Stock Market is not efficient in pricing shares.

Timilsina (1997) conducted study on ‘*Dividends and stock prices*’ taking 16 enterprises as sample from 1990 through 1994.

The objectives of this study were as follows:

- To test the relationship between dividends per share and stock prices.
- To determine the impact of dividend policy on stock prices.
- To identify whether it is possible to increase the market value of the stock changing dividend policy or payout ratio.
- To explain the price behaviour, the study used simultaneous equation model as developed by Friend and Puckett (1964).

The findings of his study were as follows:

- The relationship between dividend per share and stock prices is positive in the sample companies.

- Dividend per share affects the share prices variedly in different sectors.
- Changing the dividend policy or dividend per share might help to increase the market price of shares.
- The relationship between stock prices and retained earnings per share is not prominent.
- The relationship between stock prices and lagged earnings price ratio is negative

Paudel (2001) conducted a research on '*A study on share price movements of Joint Venture Commercial Banks in Nepal*' by using financial and statistical tools.

The major objectives of the study were:

- To examine Nepal Stock Exchange Market and to judge whether the market shares of different banking indicators.
- To examine how risky the investments in commercial banks' shares are.
- To explain the share price movements.
- To analyze the scenario why the shares of selected banks emerge as blue-chips to the potential investors and to make a conclusion on the basis of financial ratios analysis.

The main findings of the study were:

- The market share and the growth rates of different banking indicators used are not captured by the market shares of these banks.
- The market value per share does not accommodate all the available historical information.
- The beta coefficient, which measures the riskiness of individual security in relative terms, suggests that none of the shares of eight sampled banks are risky. Therefore, even a risk averter can go for making an investment in shares of these banks.

Khadka (2002) also carried out the research on '*A study on share price behaviour in Nepal*'. This study is focused on the analysis of the relation of MPS with different financial indicators and the level of risk associated with the common stock investment of the sample companies comprising commercial banks and finance companies. The general public investors do invest their scarce saving funds in the common stock of the public companies through primary or secondary market, with the expectation of good returns in

the future. The determination of MPS of any public companies should be in accordance with their financial performance. There is not a single financial indicator that has dominant role to determine MPS. The same financial indicator that has significant role in the fixation of MPS for one company is not significant for another company. The degree of interrelationship of MPS with different financial indicators varies from one company to another. There is no uniformity in the relationship of MPS with various financial indicators of the sampled companies.

Neupane (2004), made a research entitled “*Determinants of Stock Price in NEPSE*” and tried to explore the factors that have significant influence on the stock price in NEPSE. She concluded her study by quoting:

- Nepalese investors have not adequate education about the capital market. They do not have good knowledge and information to analyze the scenario and to forecast share price. Perhaps due to this reason stock price in NEPSE rather shows irrational behaviour.
- In NEPSE, DPS, BPS & EPS individually do not have constituent relationship [with the market price of the share among the listed companies. The pricing behaviour varies from one company to another. But EPS, BPS & DPS, jointly have significant effect in market price of the share. So, there may be other major factors affecting the share price significantly. NEPSE is in its primary stage, adopting open out cry system for stock trading and stockbrokers lack professionalism to create investing opportunities in NEPSE.
- Commercial banking sector has dominated the overall performance of NEPSE. Manufacturing & processing, trading and hotel sectors have weak performance. So, financial intermediaries are strong but their ultimate investment is suffering.
- Companies’ performances (earning, dividend, book value, risk etc) information disclosed, timely AGM, political stability, national economy, demand & supply situation, strikes, demonstrations, ceasefire and peace talks (and their outbreak) are the major factors affecting the share price in NEPSE, according to the respondent of survey. Interest rate, retention ratio, cost of equity, tax rate, gold price, value of US \$, global economy, market liquidity, season, day of the week, size of the firm, change in the management do not significantly affect the price of the share in NEPSE.

- There is deficiency of proper laws and policies regarding the capital market. Shareholders are feeling unsecured to invest in security markets due to poor regulatory mechanism to protect shareholders interests. The implementation of existing laws is weak.
- Listed companies do not provide sufficient information (financial as well as non financial) to their shareholders and they are not able to act according to the shareholders' interests. The performance of most of the listed companies is not transparent.
- Despite of unfavourable investment environment NEPSE is in increasing trend. Nepalese investors have a huge amount of scattered fund remained unproductive, which can be used in the industrial development through capital market to accelerate the economic growth of the nation.

With the existing Maoist problem, industrial development and capital market development is impossible. So, the peaceful solution of the Maoist problem is preliminary condition for capital market and economic development in Nepal.

Shrestha (2007) conducted a research on "*A Study on Share Price Behaviour in Nepalese Security Market*" to find out the Share price behaviour in Nepalese Security Market.

Research methodology:

- Samples covered the periods 1999/00 to 2005/6.
- Used secondary data only.
- Statistical tools such as trend analysis, correlation analysis were used.

Major findings were:

- During the period of 1999/00 to 2005/06, the Nepse Index has experienced both bullish and bearish trends.
- The monthly trends of Nepse Index showed that price trends during the observed period were in fluctuating trend which was not better for Nepalese Security Market.
- It was found that there was significant difference between Nepse Index before and after NRB and Nepse discouraged margin lending.

Ojha (2007) conducted a research on '*Determinants of Stock Price in Nepal*' to find out the major determinants of Stock price fluctuation in Nepal.

Research methodology:

- Samples covered the periods 1999/00 to 2005/6.

- Used secondary as well as primary data.
- Statistical tools such as correlation analysis, regression analysis, coefficient of determinants, test statistic were used.

Major findings were:

- The trend of volume of stock traded was in fluctuating manner.
- Signalling factors played major role while determining stock price.
- Investor's awareness on stock market was weak.
- Dividend and earning played the important role to fluctuate the share price.

2.4 Research Gap

Various studies conducted on this topic in the context of Nepal but, it has now become necessary to find out whether their findings are still valid or the ground has been changed. There are many changes in stock market inside and outside Nepal after 1990. Like other countries, Nepal has also followed a policy of liberalization, privatization and globalization. Many more companies have also come up after 1990. Considering all these facts, it is necessary to carry out a fresh research to fulfil the gap between past studies and present condition. Thus, this study tries to meet the following gaps:

- There is a need to conduct a survey of general investor in order to find general perception toward stock pricing. All the previous researchers have included opinion of company executives only but this study is also based on general investors and different level of concerned authorities.
- The earlier studies on "Determinants of Stock Price in Nepal" have become older and need to be updated and validated because of the rapid changes taking place in financial market of Nepal.
- In the last couple of year, Nepalese security market has drawn interest of significant number of new investors, new companies with IPO and new investment companies. In broader sense, Nepalese market has grown up. So, the study in this context is very necessary to reflect the significant drift of stock market assumptions.
- Hypothesis testing of each questionnaire is one of the significant aspects of this study which has not found in past research work. This is necessary to understand the difference between perceived assumptions with empirical one.

CHAPTER - III RESEARCH METHODOLOGY

3.1 Research Design

To make any type of research a well-set research design is necessary to fulfill the objectives of the study. Current research applies both descriptive and analytical techniques to determine the determinants of stock price. It is analytical in the sense that it uses different analytical tools to analyze the investor's preferences toward factor affecting stock price similarly it is descriptive in the sense that it clarifies different aspects of investor's preferences. As per the nature of the research primary as well as secondary data have been extensively used.

3.2 Population and Sample

All the listed companies in Nepal Stock Exchange are the population for the study and collection of items or element from population for research is sampling. This study intends to identify the determinants of stock price of listed companies in Nepal. So, the population of the study is all the listed companies in Nepal up to July 15th 2011 are 157. Out of 157 listed companies, NEPSE classified 78 companies consisting of 14 commercial bank, 15 development bank, 37 finance companies, 10 insurance companies, 1 hydropower company and 1 manufacturing and processing company under group "A" and rest under "B", as per the provision of "Security listing Bye-Laws, "1996". In this study, nine sample organizations representing the private commercial bank are taken into account among listed companies which fall in category "A".

Table 3.1
Listed Companies by the end of the Fiscal Year 2010/11

S.N.	Sectors	Number of Listed companies	Company Percent
1	Commercial Bank	18	11.45
2	Development Bank	29	18.47
3	Finance Company	62	39.49
4	Insurance Company	17	10.83
5	Hotel	4	2.55
6	Mfg. and Processing Co.	18	11.47
7	Trading Company	4	2.55
8	Hydropower	3	1.91
9	Others	2	1.28
Total		157	100

Source: www.nepalstock.com

3.3 Nature and Source of Data and Collection Procedure

This study based on both primary and secondary data. The primary data and information are collected through questionnaire survey. Direct interview and mail questionnaire method of data collection are employed to collect primary data whereas secondary data are based on various published and unpublished sources like annual report of sampled companies, journals, magazines, web sites etc.

3.4 Analysis Tools

Data obtained from various sources have no meaning unless they will be arranged and presented in a systematic way. The data has been collected from primary sources (questionnaires) and different secondary sources in raw forms, which are verified, simplified, classified and tabulated form for the purpose of analysis. Different statistical tools and technique are used while analyzing the data.

3.4.1 Statistical Tools

Statistical tools are the mathematical techniques used to facilitate the analysis and interpretation of the collected data. It is an essential tool to measure the relationship of two or more variables. “Statistical analysis is one particular language, which describes the data and makes possible to talk about the relations and the difference of the variables.” (Gupta S.P., 1997:21). The main statistical tools which will be used to analyze the data are as follows:

3.4.1.1 Arithmetic Mean

Arithmetic mean is the average return 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 $X_1, X_2, X_3, \dots, X_n$ denote return of given 'n' number of respondents and \bar{X} is the arithmetic mean of the given observation. It is calculated by,

$$\bar{X} = \frac{X_1 + X_2 + X_3 + \dots + X_n}{n} \quad \text{or,} \quad \bar{X} = \frac{\sum_{t=1}^n X_t}{n}$$

Where,

\bar{X} = Arithmetic mean

$X_1 + X_2 + X_3 + \dots + X_n$ = Set of observations

X = Sum of all the values of the variable X

n = Number of observations

3.4.1.2 Standard Deviation

The standard deviation (\dagger) measures the absolute dispersion. The greater the standard deviation, the greater will be the magnitude of the deviations of the values from their mean. A small standard deviation means a high degree of uniformity of the observations as well as homogeneity of a series and vice versa.

Mathematically:

$$\dagger = \sqrt{\frac{1}{n} \sum (X - \bar{X})^2}$$

3.4.1.3 Coefficient of Variation

The standard deviation is absolute measures of dispersion; where as the coefficient of variation (CV) is a relative measure. To compare the variability between two or more series, CV is more appropriate statistical tool.

Mathematically,

$$CV = \frac{\dagger}{\bar{X}} \times 100$$

3.4.1.4 Correlation Coefficient

When the relationship is of quantitative nature, the appropriate statistical tool for discovering and measuring the relationship and expressing it in a brief formula is known as correlation. If the values of the variables are directly proportional then the correlation is said to be positive. On the other hand, if the values of the variables are inversely proportional, the correlation is said to be negative, but the correlation is said to be negative, but the correlation coefficient always remains within the limit of + 1 to - 1. By Karl Pearson, the simple correlation coefficient (between two variables, say X and Y) is given by:

$$r_{xy} = \frac{Cov(x, y)}{\dagger_x \dagger_y}$$

Where,

r_{xy} = is the correlation coefficient between two variables x and y

'r' lies between +1 to -1

When $r = +1$, there is perfect positive correlation

When $r = -1$, there is perfect negative correlation

When $r = 0$, there is no correlation

When r lies between 0.7 to 0.999 9 (or -0.7 to -0.999), there is high degree of positive or negative correlation

When r lies between 0.5 and 0.699, there is moderate degree of correlation

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

3.4.1.5 Simple Regression

Regression and correlation analysis are the techniques of studying how the variations in one series are related to the variations in another series. Measurement of the degree of relationship between two or more variables is called correlation analysis and using the relationship between a known variable and an unknown variable to estimate the known one is termed as regression analysis. Thus, correlation measures the degree of relationship between the variables while regression analysis shows how the variables are related. Thus, regression and correlation analysis determines the nature and the strength of relationship between variables.

The equation of regression line where the dependant variables Y is determined by the independent variable X is given by:

$$Y = a + b x$$

$$a = y - \text{intercept}$$

Where, $a = \text{constant}$

$b = \text{slope of the regression line (i.e. it measures the change in } Y \text{ per unit } X) \text{ or regression coefficient of } Y \text{ on } X.$

3.4.1.6 Multiple Regression

Assuming that all variables are closely related, we can estimate the unknown value of one variable from the given or known values of the other variables. Multiple regression analysis is a logical extension of the simple linear regression analysis. In multiple regression analysis, instead of single independent variable, two or more independent variables are used to estimate the unknown values of dependant variables.

The multiple regression equation describes the average relationship between dependant variable and two or more independent variables and this relationship is very much useful for estimating (or predicting) the dependant variable. Thus, the multiple regression equation of X_1 on X_2 , X_3 and X_4 is an equation for estimating a dependant variable X , from three independent variables X_2 , X_3 and X_4 . The multiple regression equation of dependant variables X_1 on three independent variables X_2 , X_3 and X_4 is given by:

$$X_1 = a + b_1x_2 + b_2x_3 + b_3x_4$$

Where,

$a = x_1$ – intercept = the value of x_1 when three independent variables x_2 , x_3 and x_4 are zero.

b_1 = the partial regression coefficient of x_1 on x_2 when x_3 and x_4 are held constant

b_2 = the partial regression coefficient of x_1 on x_3 , when x_2 and x_4 are held constant

b_3 = the partial regression coefficient of x_1 on x_4 , when x_2 and x_3 are held constant

3.4.1.7 Coefficient of Determination

The coefficient of determination gives the percentage variation in the dependant variable that is accounted for by the dependant variable/s. In other words, the coefficient of determination gives the ratio of expected variance to the total variance. The coefficient of determination is given by the square of the correlation coefficient, i.e. r^2

$$\text{So the coefficient of determination } (r^2) = \frac{\text{Expected variance}}{\text{Total variance}}$$

3.4.1.8 Test of Hypothesis

A quantitative statement about population parameter is called a hypothesis. In other words, it is an assumption that is made about the population parameter and then its validity is tested. It may or may not be found valid in verification. The act of verification involves testing the validity of such assumptions which, when undertaken on the basis of sample evidence, is called statistical hypothesis or testing of hypothesis. The main goal of testing hypothesis is to test the characteristics of hypothesized population parameter based on sample information whether the difference between the population parameter and sample statistics is significant or not. The act of verification involves testing the

validity of such assumption which, when undertaken on the basis of sample evidence, is called statistical hypothesis or the testing of hypothesis.

For the test of hypothesis t-test is made in this study.

i) T – test

T–test is applied for the test of small sample. If the sample size is less than 30 i.e. called small sample and t-test is used.

$$r = \frac{r}{\sqrt{1-r^2}} X\sqrt{(n-2)}$$

The following formula is used to test an observed sample correlation coefficient:

Where, r= simple correlation coefficient

n= number of observations

ii) Chi-square Test

Chi-square, symbolically written as χ^2 , is a statistical measure used in the context of sampling analysis for comparing a variance to a theoretical variance. As a non-parametric test, it can be used to determine if categorical data shows dependency or the two classifications are independent. It can also be used to make comparisons between theoretical populations and actual data when categories are used. Thus, the chi-square test is applicable in large number of problems. In fact, chi-square test is used to test the goodness of fit, the significance of association between two attributes, and the homogeneity or the significance of population variance. In this study chi-square test is utilized to test the significance of association between two attributes. Chi-square is calculated utilizing the formula below:

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

$$\text{Where, } E = \frac{\sum O}{N}$$

χ^2 = Value of Chi Square

O = Observed Frequency,

E = Expected Frequency,

N = Number of Alternatives

3.4.1.9 Multiple Bar-diagrams and Graphs

Diagrams and graphs are visual aids which give a bird's eye view of a set of numerical data which show the information in a way that enables us to make comparison between two or more than two sets of data. Diagrams are in different types. Out of these various

types of diagram one of the most important form of diagrammatic presentation of data is multiple bar diagram which is used in cases where multiple characteristics of the same set of data have to be presented and analyze.

3.4.1.10 Pie- diagram

A pie- diagram is a widely use, it is generally used for diagrammatic presentation of the values differing widely in magnitude. In this method all the given data are converted into 360 degree as the angel of a circle is 360 degree.

3.4.1.11 Percentage

Percentage is one of the most useful tools for the comparison of two quantities or variables. Simply, the word percentage means per hundred. In other words, the fraction with 100 as its denominator is known as a percentage and the numerator of this fraction is known as rate of percent.

3.4.2 Financial Tools

Except the statistical tools, some financial tools are also used in this research work. The major financial tools used in this research are:

3.4.2.1 Earning per share

The earnings per share [EPS] is the share of a stock on the earning of the company.

Mathematically,

$$\text{EPS} = \frac{\text{Total Earnings of Company}}{\text{No. of Shares Outs tan ding}}$$

3.4.2.2 Dividend per Share

The dividend per share [DPS] is the amount paid as dividend to the holder of one share of the stock.

Mathematically:

$$\text{DPS} = \frac{\text{Total Dividend paid}}{\text{No. of Outs tan ding Shares}}$$

Where,

Total Dividend = Cash Dividend + percent of Stock Dividend x Next Year MPS

3.4.2.3 Market Price per Share

The MPS is amount in which a share of the stock is traded in the market.

Mathematically,

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

3.4.2.4 Book Value per Share

The BVPS represents the real net worth per share. It is simply the ratio of net worth (share capital plus retained earnings i.e. ownership capital) and the number of existing shares.

Mathematically,

$$\text{BVPS} = \frac{\text{Net worth}}{\text{Number of shares outstanding}}$$

CHAPTER – IV DATA PRESENTATION AND ANALYSIS

This chapter is the backbone of the research. This chapter presents the analysis of primary and secondary data that are collected by using different techniques. It is related to the presentation and analysis of data collected from various sources. This chapter also related to a number of closely related operations, which are performed with the purpose of summarizing the collected data and organizing these in such manner that they answer the research questions. The chapter includes main three parts. The first part deals with the presentation and analysis of secondary data while the second part deals with analysis of primary data which mainly focuses on identifying important factors related with secondary market in Nepal and the last part deals with the major findings of the study.

4.1 Presentation and Analysis of Secondary Data

The sources of data, which are collected from secondary sources and are also secondary nature, are called secondary data. Thus, this chapter relates to analysis and interpretation of secondary data.

Relationship between EPS, DPS and BVPS to MPS

To analyze the relationship of EPS, DPS and BVPS to MPS, it is assumed that the market price of share is influenced with the changes in EPS, DPS and BVPS. So, MPS is the dependant variable; whereas BVPS, EPS and DPS are independent variables. Here in this section, relationship of EPS, DPS and BVPS with MPS is determined separately to each of the sampled listed companies. The correlation analysis is performed to determine the relationship of EPS, DPS and BVPS with MPS. To determine the effect of DPS, EPS and BVPS on MPS, simple correlation as well as their coefficient of determination are calculated. To determine the magnitude of the effects of the independent variables to the dependant variable, simple and multiple regression analysis are made and the magnitude is identified after determining the regression equations. In addition to that, multiple correlation coefficient, coefficient of determination (MPS being dependant variable and DPS, BVPS and EPS being independent variables), Standard errors of estimate are analyzed during the correlation and regression analysis.

Among the listed companies, 9 listed private commercial banks are taken for the study that fall in-group 'A'. Summary of the financial data of the sample listed companies of the study are presented with seven years data (from fiscal year 2004/05 to 2010/11 i.e.

2061/62 to 2067/68) including Market Price of Share [MPS], Dividend Per Share [DPS], Book Value Per Share [BVPS], Earning Per Share [EPS] and Market Capitalization [MC] in the Table 4.1 below and analysis is presented on their respective topic.

Table 4.1

MPS, DPS, BVPS, EPS AND MARKET CAPITALIZATION

1. STANDERD CHARTERED BANK LTD.

YEAR	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
MPS	1575	1640	1745	2345	3775	5900	6830
DPS	100	274	110	120	507.50	3030	3495
BVPS	363.86	403.15	399.25	422.38	468.22	512.12	401.52
EPS	141.13	149.3	143.55	143.14	175.84	167.37	131.92
MC	5347.89	5568.60	6537.47	8785.32	14142.68	24382.03	42399.55

2. BANK OF KATHMANDU LTD.

YEAR	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
MPS	254	198	295	430	850	1375	2350
DPS	10	5	10	15	273	20	942.11
BVPS	171.83	192.52	218.38	213.6	230.67	164.68	222.51
EPS	2	17.72	27.5	30.1	43.67	43.5	59.94
MC	1177.50	917.89	1367.56	1993.40	3940.44	8293.19	14173.82

3. HIMALAYAN BANK LTD.

YEAR	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
MPS	1000	836	840	920	1100	1740	1980
DPS	125	199.28	20	185.58	85	450	421
BVPS	220.02	247.81	246.93	239.59	228.72	264.74	247.95
EPS	60.26	49.45	49.05	47.91	59.24	60.66	62.74
MC	3900	3586.44	4504.50	5920.20	8494.20	14108.09	20067.55

4. NABIL BANK LTD.

YEAR	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
MPS	700	740	1000	1505	2240	5050	5275
DPS	30	50	65	70	85	2120	2170
BVPS	233	267	301	337	381	418	354
EPS	55.25	84.66	92.61	105.49	129.21	137.08	108.31
MC	3441.58	3638.24	4916.54	7399.40	11013.06	24828.55	36356.14

5. EVEREST BANK LTD.

YEAR	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
MPS	405	445	680	870	1379	2430	3132
DPS	81	20	20	174	25	739	959.60
BVPS	241.63	150.1	171.52	219.87	217.67	292.75	321.77
EPS	32.91	29.9	45.6	54.2	62.8	78.42	91.82
MC	1050.24	1401.75	2142.00	2740.50	5212.62	9185.40	15390.65

6. NEPAL SBI BANK LTD.

YEAR	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
MPS	401	255	307	335	612	1176	1511
DPS	0	8	0	0	5	424.19	0
BPVS	131.88	134.05	146.8	159.54	151.78	178.04	160.57
EPS	9.61	11.47	14.26	13.29	18.27	39.35	28.33
MC	1703.82	1084.15	1310.51	1446.75	3918.24	7618.11	13214.12

7. NEPAL INVESTMENT BANK LTD.

YEAR	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
MPS	760	795	940	800	1260	1729	2450
DPS	30	20	15	12.5	466.80	437.25	824.09
BVPS	307.94	216.24	246.89	200.8	239.67	234.37	223.17
EPS	33.59	39.56	51.7	39.5	59.35	62.57	57.87
MC	1291.88	2347.58	2775.75	4701.91	7441.38	13855.39	29495.93

8. NIC BANK LTD.

YEAR	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
MPS	245	220	218	366	496	950	1284
DPS	0	0	0	83.20	50.13	191.05	257.85
BVPS	105.24	110.43	124.09	136.84	116.13	139.17	138.09
EPS	1.36	5.19	13.65	22.75	16.1	24.01	25.75
MC	1224.73	1099.90	1089.91	1830.00	3273.60	6270.00	12119.38

9. KUMARI BANK LTD.

YEAR	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
MPS	-	-	-	369	443	830	1005
DPS	0	0	0	0	89.65	167.05	10.58
BVPS	103.89	112	114	141	149	137	128
EPS	0.38	3.26	9.74	17.58	16.59	22.7	16.35
MC	-	-	-	1845.00	2768.75	6225.00	10753.50

Source: Annual reports of the listed companies, NEPSE and SEBON

Where,

MPS = Market price per share

DPS = Dividend per share (i.e. including bonus share)

BVPS = Book value per share

EPS = Earning per share

4.1.1 Correlation and Regression Analysis of SCB

Table 4.1.1 summarizes the financial performances of SCB over last 7 years and Table 4.1.2 shows the relationship (correlation) of EPS, DPS and BVPS to MPS along with the significance of such relationship.

Table 4.1.1
Summary of the Financial Performance of SCB

Year	MPS (a)	% Change	DPS (b)	% Change	BPVS (c)	% Change	EPS (d)	% Change
2004/05	1,575	0	100	0	363.86	0	141.13	0
2005/06	1640	4.13	274	174.00	403.15	10.80	149.30	5.79
2006/07	1745	6.40	110	-59.85	399.25	-0.97	143.55	-3.85
2007/08	2345	34.38	120	9.09	422.38	5.79	143.14	-0.29
2008/09	3775	60.98	507.5	322.92	468.22	10.85	175.84	22.84
2009/10	5900	56.29	3030	497.04	512.12	9.38	167.37	-4.82
2010/11	6830	15.76	3495	15.35	401.52	-21.60	131.92	-21.18
Total	23810		7636.5		2970.5		1052.25	
Mean	3401.43		1090.93		424.36		150.32	
SD	2015.50		1385.34		46.12		14.46	
CV	59.25		126.99		10.87		9.62	

Table 4.1.2
Relationship of BVPS, EPS and DPS with MPS of SCB

Variables	r	r ²	t-cal	t-table	Remarks
r _{ab}	0.9603	0.9221	7.6956	2.571	Significance
r _{ac}	0.5362	0.2875	1.4203	2.571	Not Significance
r _{ad}	0.1296	0.0168	0.2922	2.571	Not Significance

Source: Appendix II

Where,

T-table value is at 5 percent level of significance (n-2 = 7-2 = 5 degree of freedom)

r_{ab} = correlation coefficient of 'a' and 'b'

r^2	=	coefficient of (simple) determination
SD	=	standard deviation
CV	=	coefficient of variation
Mean	=	arithmetic mean
n	=	number of years

Table 4.1.1 shows Mean, SD and CV of MPS, DPS, BVPS and EPS of SCB. CV of MPS of SCB is 59.25 percent, which shows moderate level of flexibility. DPS of SCB has grater CV (126.99) comparing with other values. Similarly, BVPS and EPS have lower CV. If we compare these values with Sample benchmark, average MPS of SCB is greater (3401.43) than sample mean MPS (1327.16). Similarly, Standard deviation of MPS is also grater (2015.50) than sample standard deviation (949.24). SCB has lower Coefficient of Variation (59.25) than sample CV (73.93) of MPS. Having greater MPS is not significance because it depends on secondary market. But, higher standard deviation and moderate CV shows high volatility. MPS of SCB are not consistent; they are highly fluctuating over the period.

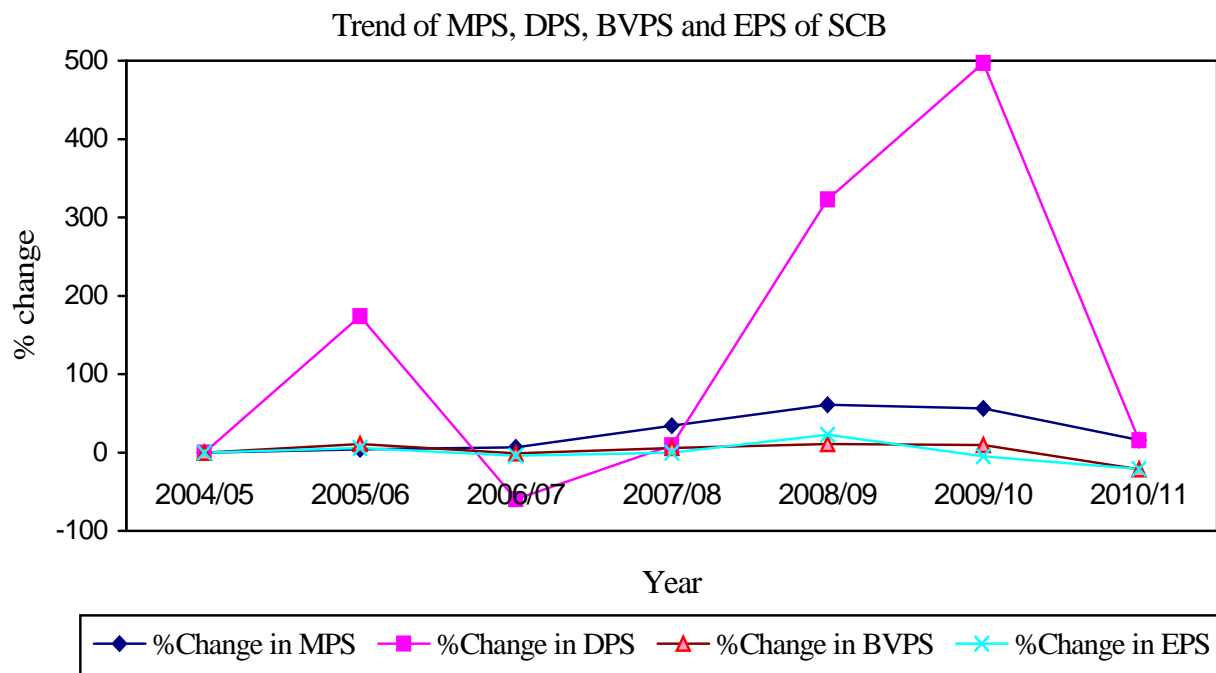
Mean DPS of SCB is higher (1090.93) than sample average (319.02), coefficient of variation is higher (126.99) than sample average (115.31) and standard deviation is higher (1385.34) than sample SD (353.71). Higher DPS shows SCB is one of the good rewarding banks in the industry, but higher CV shows inconsistent dividend payment. Average BVPS of SCB over the years is higher (424.36) than sample average (228.31); standard deviation is lesser (46.12) than sample SD (96.06). High BVPS shows that the bank is healthiest bank of the industry. Similarly, Coefficient of variation is lesser (10.87) than sample CV (42.03). It proves that SCB is one of the strong bank of the industry.

Mean EPS of SCB is greater (150.38) than sample average (55.73), standard deviation (14.43) is lesser than sample average (43.67) and CV is also lesser (9.6) than sample average (80.61).

While talking about relationship between different variables of SCB, DPS is significantly correlated with MPS i.e. ($r_{ab} = 0.9603$) and BVPS has high degree of positive correlation with MPS. Similarly EPS has very low degree of positive correlation with MPS i.e. (0.1295). The coefficient of simple determination shows that 92.21 percent changes in the MPS is explained by DPS and remaining 7.79 percent is unexplained or it is explained by

market related factors, while taking MPS and BVPS 28.75 percent change in MPS is due to BVPS and remaining unexplained and only 1.68 percent of the change in the MPS is explained by EPS and remaining 98.32 percent is explained by other variables. The degree of correlation between MPS and DPS is significant but with other variables is insignificant in case of SCB at 95 percent level of confidence. The linear relationship of DPS, EPS, BVPS and MPS of SCB is presented in the Figure 4.1.

Figure 4.1



From the simple regression analysis, the regression equations are found (MPS being dependant variable) as:

MPS on DPS

$$\text{MPS} = 1877.30 + 1.40 \text{ DPS}$$

The regression constant 1877.30 implies that when DPS is zero, MPS is 1877.30. The coefficient for DPS 1.40 implies that when DPS increases by Rs.1, MPS increases by RS.1.40 and vice versa. The analysis shows that simple correlation coefficient is 0.9603 with 665.41 standard error of estimate.

MPS on BVPS

$$\text{MPS} = -6540.72 + 23.43 \text{ BVPS}$$

The regression constant -6540.72 implies that when BVPS is zero, MPS is -6540.72, but it does not give a real picture because the mathematical value of MPS is negative but in real world none of the stock has negative value. The constant for BVPS 23.43 implies that when BVPS increases by Rs.1, MPS increases by RS. 23.43 and vice versa. The analysis shows that simple correlation coefficient is 0.5362 with 2013.039 standard error of estimate.

MPS on EPS

$$\text{MPS} = 686.63 + 18.06 \text{ EPS}$$

The regression constant 686.63 implies that when EPS is zero, MPS is 686.63. The constant for EPS 18.06 implies that when EPS increases by Rs.1, MPS also increases by Rs.18.06 and vice versa. The analysis shows that simple correlation coefficient is 0.1296 with 2364.677 standard error of estimate.

The multiple regression analysis of SCB gives the multiple regression equation (MPS being dependant variable and DPS, BVPS and EPS being independent variables) as

MPS on DPS, BVPS and EPS

$$\text{MPS} = -1203.62 + 1.40 \text{ DPS} + 0.045 \text{ BVPS} + 20.346 \text{ EPS}$$

Where,

-1203.62 = Dependant variable – intercept (MPS – intercept), Multiple regression constant

1.40 = Partial regression coefficient of dependant variable (MPS) on DPS when BVPS and EPS are held constant

0.045 = Partial regression coefficient of dependant variable (MPS) on BVPS when DPS and EPS are held constant

20.346 = Partial regression coefficient of dependant variable (MPS) on EPS when DPS and BVPS are held constant

Values obtained from equation shows that the multiple regression constant (a) is -1203.62 which suggest that when DPS, BVPS and EPS are zero, MPS would be -1203.62 but it does not give a real picture because the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for DPS is 1.40

implies that when DPS increases by Rs. 1, MPS increases by Rs. 1.40, the coefficient for BVPS is 0.045, implies that when BVPS increases by Rs. 1, MPS will increase by Rs 0.045 and the coefficient for EPS is 20.346, implies that when EPS increases by RS. 1, MPS increases by Rs. 20.346 and vice versa, when remaining variables constant. The analysis shows that the multiple correlation coefficient 0.971 and coefficient of multiple determinations 0.944 with 730.578 standard error of estimate.

4.1.2 Correlation and Regression Analysis of NABIL

Table 4.1.3 summarizes the financial performances of NABIL over last 7 years and Table 4.1.4 shows the relationship (correlation) of EPS, DPS and BVPS to MPS along with the significance of such relationship.

Table 4.1.3
Summary of the Financial Performance of NABIL

Year	MPS (a)	% Change	DPS (b)	% Change	BPVS (c)	% Change	EPS (d)	% Change
2004/05	700	0	30	0	233	0	55.25	0
2005/06	740	5.71	50	66.67	267	14.59	84.66	53.23
2006/07	1000	35.14	65	30.00	301	12.73	92.61	9.39
2007/08	1505	50.50	70	7.69	337	11.96	105.49	13.91
2008/09	2240	48.84	85	21.43	381	13.06	129.21	22.49
2009/10	5050	125.45	2120	2394.12	418	9.71	137.08	6.09
2010/11	5275	4.46	2170	2.36	354	-15.31	108.31	-20.99
Total	16510		4590		2291		712.61	
Mean	2358.57		655.71		327.29		101.8	
SD	1840.35		942.13		59.93		25.63	
CV	78.03		143.68		18.31		25.17	

Table 4.1.4
Relationship of BVPS, EPS and DPS with MPS of NABIL

Variables	r	r ²	t-cal	t-table	Remarks
r _{ab}	0.9678	0.9365	8.5906	2.571	Significance
r _{ac}	0.7734	0.5982	2.7282	2.571	Significance
r _{ad}	0.6815	0.4644	2.0821	2.571	Not Significance

Source: Appendix II

Where,

T-table value is at 5 percent level of significance ($n-2 = 7-2 = 5$ degree of freedom)

r_{ab} = correlation coefficient of 'a' and 'b'

r^2 = coefficient of (simple) determination

SD = standard deviation

CV = coefficient of variation

Mean = arithmetic mean

n = number of years

Table 4.1.3 shows Mean, SD and CV of MPS, DPS, BVPS and EPS of NABIL bank ltd. CV of MPS and DPS of NABIL has 78.03 and 143.68 percent, which means it has high flexibility. Similarly, BVPS and EPS have moderate level CV. If we compare these values with Sample benchmark, average MPS of NABIL is greater (2358.57) than sample mean MPS (1327.16). Similarly, Standard deviation of MPS is also greater (1840.35) than sample standard deviation (949.24) and Coefficient of Variation is greater (78.03) than sample CV (73.93). Having greater MPS has not any significance because it depends on secondary market. But, higher standard deviation and CV tells us about high volatility. In other word, we can say that MPS of NABIL are not consistent; they are highly fluctuating over the period.

Average DPS is higher (655.71) than sample average (319.02), coefficient of variation is higher (143.68) than sample average (115.31) and standard deviation is higher (942.13) than sample SD (353.71). Average BVPS of NABIL is higher (327.29) than sample average (228.31), standard deviation is lesser (59.93) than sample average SD (96.06) and Coefficient of variation (18.31) is lesser than sample CV (42.03). It proves that NABIL' BVPS is satisfactory and high BVPS shows that the bank is healthiest bank of the industry. Finally, for EPS, NABIL mean EPS is greater (101.80) than sample average (55.73), standard deviation (25.63) is lesser than sample average (43.67) and CV is also lesser (25.17) than sample average (80.61). Thus, EPS has very good performance. Thus, in overall, NABIL has good performance in the last seven years. The linear relationship of DPS, BVPS and EPS to MPS of NABIL are presented in Figure 4.2

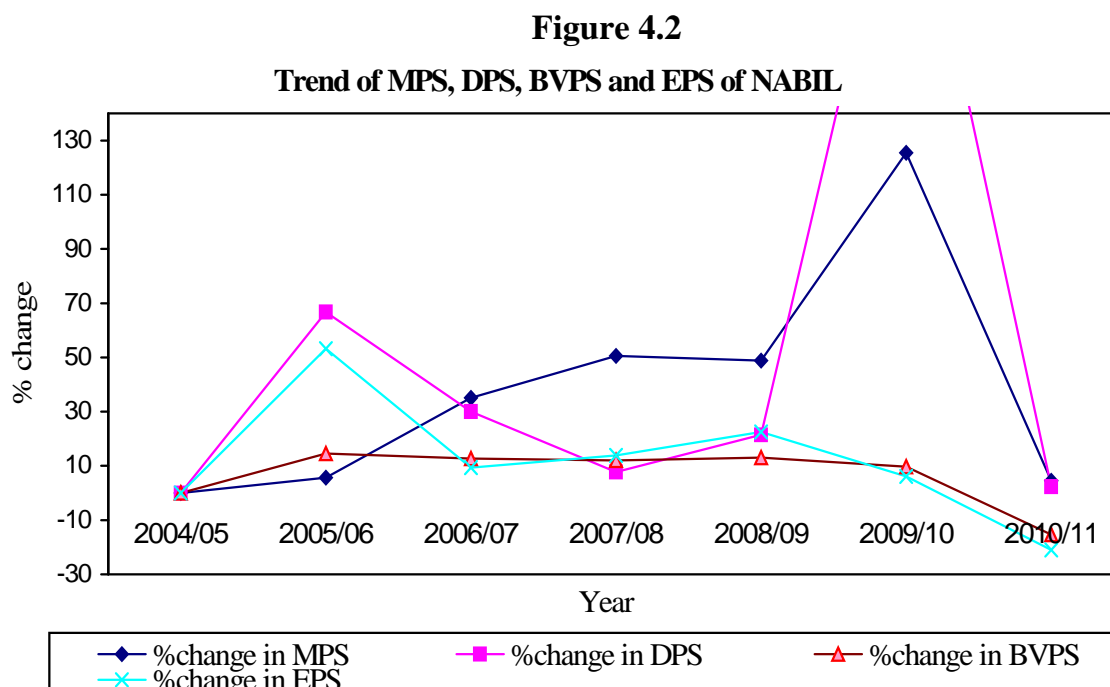


Figure 4.2 displays the growth trend of MPS, DPS, BVPS and EPS. It shows that all indicators have fluctuating growth rate. MPS has high growth rate of 125.45 percent in 2009/10 and lowest 4.46 percent in 2010/11. DPS, BVPS and EPS all have different trend of growth rate. Actually, they don't have any specific trend. DPS have highest growth rate of 2394.12 percent in 2009/10 and 2.36 percent growth in 2010/11. Growth track of BVPS is similar to DPS, initially it has increasing growth rate but just for one year, then it starts declining. BVPS has quite consistent growth track, it hovers between 9 to 14 percent till 2009/10 then decreases by 15.31 percent in 2010/11.

BVPS is less volatile comparing to all indicators with 18.31 percent CV. DPS is highly fluctuating with 143.68 percent CV. MPS is second most volatile value among these four. EPS has high degree of positive correlation with MPS and DPS is significantly correlated with MPS. Similarly BVPS is also significantly correlated with MPS. The coefficient of simple determination shows that 93.65 percent changes in MPS is explained by DPS and remaining 6.35 percent is unexplained, while comparing MPS with BVPS, 59.82 percent of changes in the MPS is explained by BVPS and 40.18 percent is unexplained. Similarly 46.44 percent of the changes in MPS are explained by EPS and remaining 53.56 percent is unexplained. Even though, the MPS is affected by DPS, BVPS and EPS, the degree of correlation is only insignificant with EPS at 95 percent level of confidence.

From the simple regression analysis, the regression equations are found (MPS being dependant variable) as:

MPS on DPS

$$\text{MPS} = 1119.01 + 1.89 \text{ DPS}$$

The regression constant 1119.01 implies that when DPS is zero, MPS is Rs 1189.01. The constant for DPS 1.89 implies that when DPS increases by RS.1, MPS increases by RS.1.89 and vice versa. The simple correlation coefficient is 0.968 with 238.70 standard error of estimate.

MPS on BVPS

$$\text{MPS} = -5415.17 + 23.75 \text{ BVPS}$$

The regression constant -5415.17 implies that when BVPS is zero, MPS is Rs -5415.17. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for BVPS 23.75 implies that when BVPS increases by RS.1, MPS will increase by RS. 23.75 and vice versa. The simple correlation coefficient is 0.773 with 466.002 standard error of estimate.

MPS on EPS

$$\text{MPS} = -2623.39 + 48.94 \text{ EPS}$$

The regression constant -2623.39 implies that when EPS is zero, MPS is -2623.39. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for EPS 48.94 implies that when EPS increases by RS.1, MPS increases by Rs 48.94 and vice versa. The simple correlation coefficient is 0.682 with 327.99 standard error of estimate.

The multiple regression analysis of NABIL gives the multiple regression equation (MPS being dependant variable and DPS, BVPS and EPS being independent variables) as:

MPS on DPS, BVPS and EPS

$$\text{MPS} = -3063.39 + 1.24 \text{ DPS} + 7.497 \text{ BVPS} + 39.304 \text{ EPS}$$

Where,

-3063.39 = Dependant variable – intercept (MPS – intercept), Multiple regression constant

1.24 = Partial regression coefficient of dependant variable (MPS) on DPS when BVPS and EPS are held constant

7.497 = Partial regression coefficient of dependant variable (MPS) on BVPS when DPS and EPS are held constant

39.304 = Partial regression coefficient of dependant variable (MPS) on EPS when
DPS and BVPS are held constant

The equation implies that the multiple regression constant (a) is -3063.39 which suggest that when DPS, BVPS and EPS are zero, MPS would be -3063.39 but in the real world none of the stock has negative value. The constant for DPS is 1.24 implies that when DPS increases by RS. 1, MPS increases by RS. 1.24, the constant for BVPS is 7.497, implies that when BVPS increases by RS. 1, MPS will increases by Rs 7.497 and the constant for EPS is 39.304, implies that when EPS increases by RS. 1, MPS increases by Rs. 39.304 and vice versa, remaining intervening variables constant. The analysis shows that the multiple correlation coefficient 0.959 and coefficient of multiple determinations 0.920 with 185.08 standard error of estimate.

4.1.3 Correlation and Regression Analysis of BOK

Table 4.1.5 summarizes the financial performances of BOK over last 7 years and Table 4.1.6 shows the relationship (correlation) of EPS, DPS and BVPS to MPS along with the significance of such relationship.

Table 4.1.5
Summary of the Financial Performance of BOK

Year	MPS (a)	% Change	DPS (b)	% Change	BPVS (c)	% Change	EPS (d)	% Change
2004/05	254	0	10	0	171.83	0	2	0
2005/06	198	-22.05	5	-50.00	192.52	12.04	17.72	786.00
2006/07	295	48.99	10	100.00	218.38	13.43	27.5	55.19
2007/08	430	45.76	15	50.00	213.6	-2.19	30.1	9.45
2008/09	850	97.67	273	1720.00	230.67	7.99	43.67	45.08
2009/10	1375	61.76	20	-92.67	164.68	-28.61	43.5	-0.39
2010/11	2350	70.91	942.11	4610.55	222.51	35.12	59.94	37.79
Total	5752		1275.11		1414.19		224.43	
Mean	821.71		182.16		202.03		32.06	
SD	735.31		323.08		24.02		17.63	
CV	89.48		177.36		11.89		55.00	

Table 4.1.6
Relationship of BVPS, EPS and DPS with MPS of BOK

Variables	r	r ²	t-cal	t-table	Remarks
r _{ab}	0.8651	0.7484	3.8569	2.571	Significance
r _{ac}	0.1729	0.0299	0.3926	2.571	Not Significance
r _{ad}	0.8642	0.7469	3.8414	2.571	Significance

Source: Appendix II

Where,

T-table value is at 95 percent level of confidence ($n-2 = 7-2 = 5$ degree of freedom)

r_{ab} = correlation coefficient of 'a' and 'b'

r² = coefficient of (simple) determination

SD = standard deviation

CV = coefficient of variation

Mean = arithmetic mean

n = number of years

Figure 4.3

Trend of MPS, DPS, BVPS and EPS of BOK

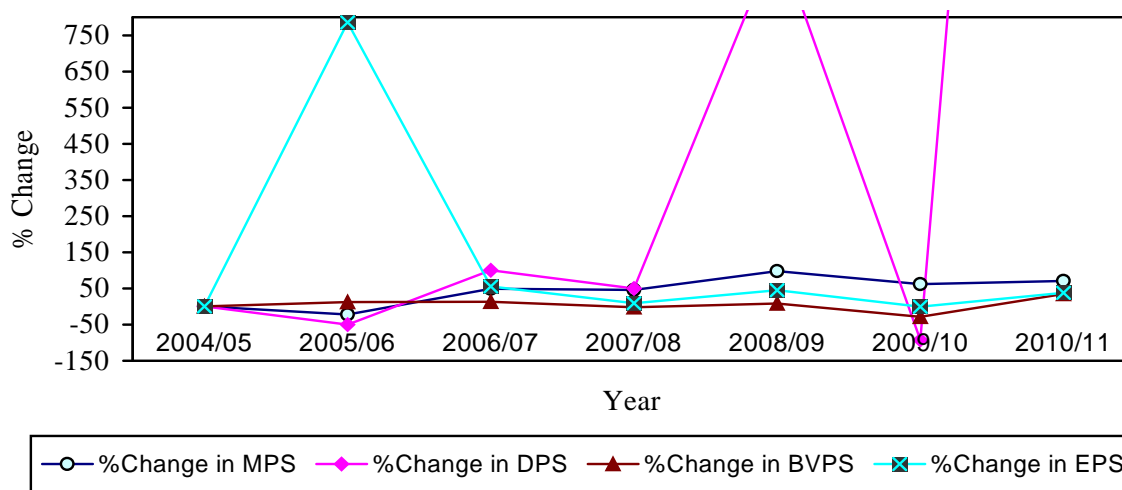


Table 4.1.5 shows Mean, SD and CV of MPS, DPS, BVPS and EPS of BOK. It also reflects trend of these parameters. According to the Table, CV of MPS of BOK is 89.48 percent and DPS is 177.36 percent, which means it has high level of flexibility. Similarly,

BVPS has lower CV in comparing with other variables. If we compare these values with sample average, MPS of BOK is lower (821.71) than sample mean MPS (1327.16). Similarly, Standard deviation of MPS is also lower (735.31) than sample standard deviation (949.24). MPS of BOK has greater Coefficient of Variation (89.48) than sample CV (73.93) of MPS. MPS of BOK is not consistent over the period. This result shows that MPS of BOK is below sample average making it less attractive to potential buyers.

Mean DPS of BOK is lower (182.16) than sample average (319.02), coefficient of variation is higher (177.36) than sample average (115.31) and standard deviation is lesser (323.08) than sample SD (353.71). Lower DPS means the bank was not able to provide expected return to the investor. Average BVPS of BOK over the period is lesser (202.03) than sample average (228.31), standard deviation is lesser (24.019) than sample SD (96.06). Similarly, Coefficient of variation is lesser (11.89) than sample CV (42.03). Less BVPS shows financial strength of the bank is not accordance with sample average. However, lower SD and CV than sample average are justifying financial stability of the bank.

Mean EPS of BOK is lower (32.061) than sample average (55.73), standard deviation (17.63) is lower than sample SD (43.67) and CV is also lower (55.00) than sample CV (80.61). Lower EPS than sample average shows the bank is not able to use its funds effectively. However, lower SD and CV show its consistent earnings over the period.

Talking about relationship between different variables of BOK, MPS and DPS have significant correlation ($r = 0.8651$) and BVPS has lower degree of positive correlation with MPS. Similarly EPS has very high degree of positive correlation with MPS (0.8642). The coefficient of simple determination shows that 74.84 percent changes in the MPS is explained by DPS and remaining 25.16 percent is unexplained or it is explained by market related factors. While taking MPS and BVPS, only 2.99 percent changes in MPS is due to BVPS and remaining is unexplained. Similarly 74.69 percent of the change in MPS is explained by EPS and remaining is explained by other factors. The degree of correlation between MPS with BVPS is insignificant but with DPS and EPS is significant in case of BOK at 95 percent level of confidence.

From the simple regression analysis, the regression equations are found (MPS being dependant variable) as:

MPS on DPS

$$\text{MPS} = 463.05 + 1.97 \text{ DPS}$$

The regression constant 463.05 implies that when DPS is zero, MPS is Rs 463.05. The regression coefficient for DPS 1.97 implies that when DPS increases by RS.1, MPS increases by Rs.1.97 and vice versa. The simple correlation coefficient is 0.865 with 436.38 standard error of estimate.

MPS on BVPS

$$\text{MPS} = -247.70 + 5.29 \text{ BVPS}$$

The regression constant -247.70 implies that when BVPS is zero, MPS is Rs -247.70. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for BVPS 5.29 implies that when BVPS increases by RS.1, MPS will increase by Rs. 5.29 and vice versa. The simple correlation coefficient is 0.173 with 856.93 standard error of estimate.

MPS on EPS

$$\text{MPS} = -333.67 + 36.04 \text{ EPS}$$

The regression constant -333.67 implies that when EPS is zero, MPS is -333.67. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for EPS 36.04 implies that when EPS increases by RS.1, MPS increases by Rs. 36.04 and vice versa. The simple correlation coefficient is 0.864 with 437.69 standard error of estimate.

The multiple regression analysis of BOK gives the multiple regression equation (MPS being dependant variable and DPS, BVPS and EPS being independent variables) as:

MPS on DPS, BVPS and EPS

$$\text{MPS} = 2359.36 + 1.42 \text{ DPS} - 12.93 \text{ BVPS} + 25.48 \text{ EPS}$$

Where,

2359.36 = Dependant variable – intercept (MPS – intercept), Multiple regression constant

1.42 = Partial regression coefficient of dependant variable (MPS) on DPS when BVPS and EPS are held constant

-12.93 = Partial regression coefficient of dependant variable (MPS) on BVPS when DPS and EPS are held constant

25.48 = Partial regression coefficient of dependant variable (MPS) on EPS when DPS and BVPS are held constant

The equation implies that the multiple regression constant (a) is 2359.36 which suggest that when DPS, BVPS and EPS are zero, MPS would be 2359.36. The regression coefficient for DPS is 1.42 implies that when DPS increases by RS. 1, MPS increases by RS. 1.42, the coefficient for BVPS is -12.93, implies that when BVPS increases by RS. 1, MPS will decrease by Rs 12.93 and the coefficient for EPS is 22.48, implies that when EPS increases by Rs. 1, MPS will increase by Rs. 22.48 and vice versa, remaining intervening variables constant. The analysis shows that the multiple correlation coefficient 0.997 and coefficient of multiple determinations 0.994 with 90.236 standard error of estimate.

4.1.4 Correlation and Regression Analysis of NIB

Table 4.1.7 summarizes the financial performances of NIB over last 7 years and Table 4.1.8 shows the relationship (correlation) of EPS, DPS and BVPS to MPS along with the significance of such relationship.

Table 4.1.7
Summary of the Financial Performance of NIB

Year	MPS (a)	% Change	DPS (b)	% Change	BPVS (c)	% Change	EPS (d)	% Change
2004/05	760	0	30	0	307.95	0	33.59	0
2005/06	795	4.61	20	-33.33	216.24	-29.78	39.56	17.77
2006/07	940	18.24	15	-25.00	246.89	14.17	51.7	30.69
2007/08	800	-14.89	12.5	-16.67	200.8	-18.67	39.5	-23.60
2008/09	1260	57.50	466.8	3634.40	239.67	19.36	59.35	50.25
2009/10	1729	37.22	437.25	-6.33	234.37	-2.21	62.57	5.43
2010/11	2450	41.70	824.09	88.47	223.17	-4.78	57.87	-7.51
Total	8734		1805.64		1669.09		344.14	
Mean	1247.71		257.95		238.44		49.16	
SD	587.39		298.60		31.77		10.65	
CV	47.08		115.76		13.32		21.66	

Table 4.1.8
Relationship of BVPS, EPS and DPS with MPS

Variables	r	r ²	t-cal	t-table	Remarks
r _{ab}	0.9554	0.9129	7.2382	2.571	Significance
r _{ac}	-0.2289	0.0524	-0.5259	2.571	Not Significance
r _{ad}	0.7430	0.5520	2.4823	2.571	Not Significance

Source: Appendix II

Where,

T-table value is at 5 percent level of significance ($n-2 = 7-2 = 5$ degree of freedom)

r_{ab} = correlation coefficient of 'a' and 'b'

r² = coefficient of (simple) determination

SD = standard deviation

CV = coefficient of variation

Mean = arithmetic mean

n = number of years

Figure 4.4

Trend of MPS, DPS, BVPS and EPS of NIB

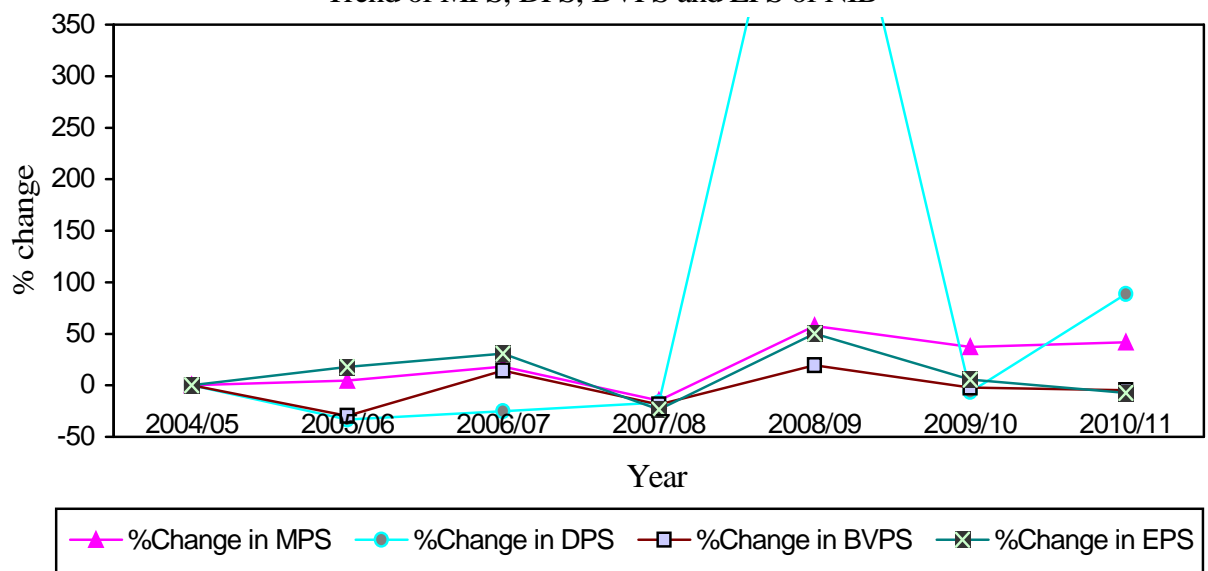


Table 4.1.7 shows Mean, SD and CV of MPS, DPS, BVPS and EPS of NIB. It also shows trend of these variables. According to the Table, CV of MPS of NIB is 47.08 percent, which means it has moderate level of volatility but DPS has greater CV (115.76 percent) in comparing with other variables. Similarly, EPS and BVPS have lower CV in

comparing with other variables i.e. MPS, DPS and BVPS. If we compare these values with Sample average, MPS of NIB is lower (1247.71) than sample mean MPS (1327.16). Similarly, Standard deviation of MPS is also lower (578.39) than sample standard deviation (949.24). MPS of NIB has lesser Coefficient of Variation (47.08) than sample CV (73.93). It has been in increasing trend over the period except one year i.e. 2004/05. This result shows MPS of NIB is lesser than sample average, which makes it quite attractive for low scale investors with low risk exposure.

Mean DPS is lesser (257.95) than sample average (319.02), standard deviation is lesser (298.60) than sample SD (353.71) and coefficient of variation is slightly higher (115.76) than sample CV (115.31). Lower DPS says that NIB is not able to provide expected return to the investors. However, lower SD and CV show its consistency. Average BVPS of NIB over the period is higher (238.44) than sample average (228.31), standard deviation is lesser (31.77) than sample SD (96.07). Similarly, Coefficient of variation is lesser (13.32) than sample CV (42.03). These all facts explain financial stability and strength of the bank.

Mean EPS of NIB is lower (49.16) than sample average (55.73), standard deviation (10.65) is lower than sample SD (43.67) and CV is also lower (21.65) than sample CV (80.61). NIB has lower earning capacity, but not so low and lower level of standard deviation (10.65) and CV assures investors for satisfactory earning and consistency in stock price.

MPS and DPS have very high degree of positive correlation ($r_{ab} = 0.9554$) and BVPS has lower degree of negative correlation with MPS. Similarly MPS has higher degree of positive correlation with EPS (0.7430). The coefficient of simple determination shows that 91.29 percent changes in the MPS is explained by DPS and remaining 8.71 percent is unexplained or it is explained by market related factors. While taking BVPS, only 5.24 percent change in MPS is due to BVPS and remaining is unexplained. Similarly 55.20 percent of change in the MPS is explained by EPS and 44.80 percentage changes in MPS are unexplained. The degree of correlation is only significant with DPS in the case of NIB at 95 percent level of confidence.

From the simple regression analysis, the regression equations are found (MPS being dependant variable) as:

MPS on DPS

$$\text{MPS} = 762.89 + 1.88 \text{ DPS}$$

The regression constant 762.89 implies that when DPS is zero, MPS is Rs 762.89. The regression coefficient for DPS 1.88 implies that when DPS increases by RS.1, MPS increases by Rs.1.88 and vice versa. The simple correlation coefficient is 0.955 with 205.143 standard error of estimate.

MPS on BVPS

$$\text{MPS} = 2257.04 - 4.23 \text{ BVPS}$$

The regression constant 2257.04 implies that when BVPS is zero, MPS is Rs 2257.04. The regression coefficient for BVPS -4.23 implies that when BVPS increases by RS.1, MPS will decrease by Rs. 4.23 and vice versa. The simple correlation coefficient is -0.229 with 676.558 standard error of estimate.

MPS on EPS

$$\text{MPS} = -767.04 + 40.98 \text{ EPS}$$

The regression constant -767.04 implies that when EPS is zero, MPS is -767.04. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for EPS 40.98 implies that when EPS increases by RS.1, MPS increases by Rs. 40.98 and vice versa. The simple correlation coefficient is 0.743 with 465.174 standard error of estimate.

The multiple regression analysis of NIB gives the multiple regression equation (MPS being dependant variable and DPS, BVPS and EPS being independent variables) as:

MPS on DPS, BVPS and EPS

$$\text{MPS} = 960.44 + 1.84 \text{ DPS} - 0.91 \text{ BVPS} + 0.60 \text{ EPS}$$

Where,

960.44 = Dependant variable – intercept (MPS – intercept), Multiple regression constant.

1.84 = Partial regression coefficient of dependant variable (MPS) on DPS when BVPS and EPS are held constant

-0.91 = Partial regression coefficient of dependant variable (MPS) on BVPS when DPS and EPS are held constant

0.60 = Partial regression coefficient of dependant variable (MPS) on EPS when DPS and BVPS are held constant

The equation implies that the multiple regression constant (a) is 960.44 which suggest that when DPS, BVPS and EPS are zero, MPS would be 960.44. The regression coefficient for DPS is 1.84 implies that when DPS increases by RS. 1, MPS increases by RS. 1.84, the coefficient for BVPS is -0.91, implies that when BVPS increases by RS. 1, MPS will decrease by Rs 0.91 and the coefficient for EPS is 0.60, implies that when EPS increases by Rs. 1, MPS will increase by Rs. 0.60 and vice versa, remaining intervening variables constant. The analysis shows that the multiple correlation coefficient 0.957 and coefficient of multiple determinations 0.916 with 260.935 standard error of estimate.

4.1.5 Correlation and Regression Analysis of HBL

Table 4.1.9 summarizes the financial performances of HBL over last 7 years and Table 4.1.10 shows the relationship (correlation) of EPS, DPS and BVPS to MPS along with the significance of such relationship.

Table 4.1.9
Summary of the Financial Performance of HBL

Year	MPS (a)	% Change	DPS (b)	% Change	BPVS (c)	% Change	EPS (d)	% Change
2004/05	1000	0	125	0	220.02	0	60.26	0
2005/06	836	-16.40	199.28	59.42	247.81	12.63	49.45	-17.94
2006/07	840	0.48	20	-89.96	246.93	-0.36	49.05	-0.81
2007/08	920	9.52	185.58	827.90	239.59	-2.97	47.91	-2.32
2008/09	1100	19.57	85	-54.20	228.72	-4.54	59.24	23.65
2009/10	1740	58.18	450	429.41	264.74	15.75	60.66	2.40
2010/11	1980	13.79	421	-6.44	247.95	-6.34	62.74	3.43
Total	8416		1485.86		1695.76		389.31	
Mean	1202.29		212.27		242.25		55.616	
SD	429.362		152.01		13.498		5.9929	
CV	35.71		71.61		5.57		10.78	

Table 4.1.10
Relationship of BVPS, EPS and DPS with MPS of HBL

Variables	r	r ²	t-cal	t-table	Remarks
r _{ab}	0.8816	0.7773	4.1770	2.571	Significance
r _{ac}	0.4788	0.2293	1.2196	2.571	Not Significance
r _{ad}	0.7637	0.5832	2.6450	2.571	Significance

Source: Appendix II

Where,

T-table value is at 5 percent level of significance (n-2 = 7-2 = 5 degree of freedom)

- r_{ab} = correlation coefficient of 'a' and 'b'
r² = coefficient of (simple) determination
SD = standard deviation
CV = coefficient of variation
Mean = arithmetic mean
n = number of years

Figure 4.5

Trend of MPS, EPS, DPS and BVPS of HBL

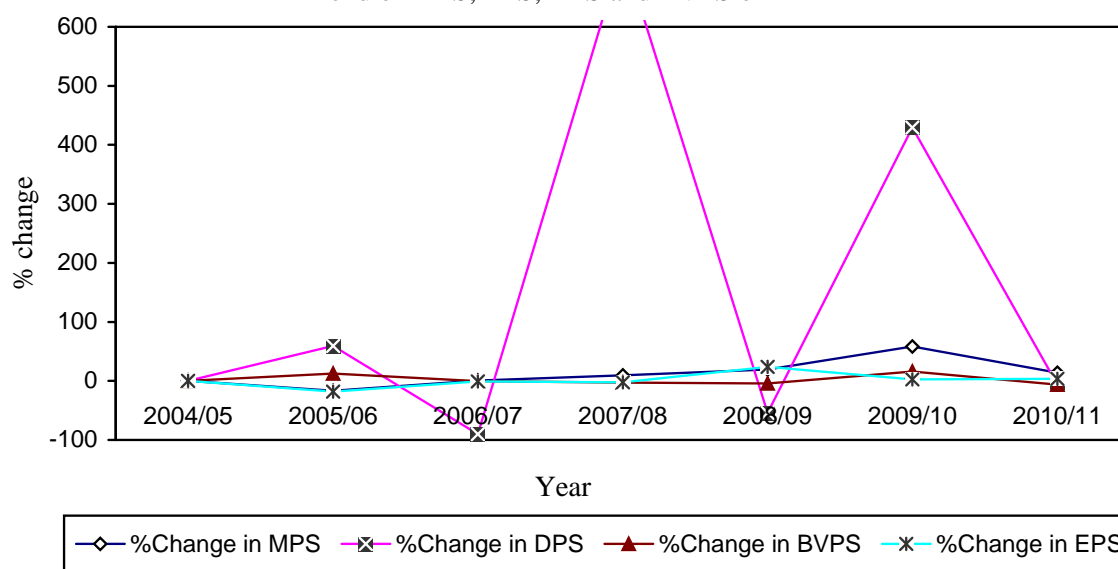


Table 4.1.9 shows Mean, SD and CV of MPS, DPS, BVPS and EPS of Himalayan Bank Limited (HBL). It also shows trend of these variables. According to the Table, CV of MPS is 35.71 percent and DPS is 71.61 percent that indicates MPS is less volatile in comparison with DPS. Similarly, EPS and BVPS have 5.57 and 10.78 percent CV

respectively; these values are signifying its consistency over the period. If we compare these values with Sample average, MPS of HBL is lower (1202.29) than sample mean MPS (1327.16). Similarly, Standard deviation of MPS is also lower (429.36) than sample standard deviation (949.24). MPS of HBL has lower Coefficient of Variation (35.71) than sample CV (73.93) of MPS. MPS of HBL is more consistent over the seven years period in comparison with sample benchmark. This result show MPS of HBL is lesser than sample average, with less attractive to potential investors. However, lower SD and CV show its consistency in the MPS over the period.

Mean DPS of HBL is lesser (212.27) than sample average (319.02), coefficient of variation is lesser (71.61) than sample CV (115.31) and standard deviation is lesser (152.01) than sample SD (353.71). These all Figure shows HBL has lower DPS than sample average, which shows that it is not able to provide expected returns to the investors. However, lower SD and CV shows consistency in DPS over the period. Average BVPS of HBL over the period is higher (242.25) than sample average (228.31), standard deviation is lesser (13.50) than sample SD (96.07). Similarly, Coefficient of variation is lesser (5.57) than sample CV (42.03). These all Figure explain financial stability and strength of the bank in long term.

Mean EPS of HBL is little lower (55.62) than sample average (55.73), standard deviation (5.99) is lower than sample average (43.67) and CV is also lower (10.78) than sample average (80.61). It shows that HBS has lower earning capacity, but, lesser SD and CV assure investors for consistent earnings.

Talking about the relationship between different variables of HBL, DPS and EPS are significantly correlated with MPS. Similarly, BVPS has low degree of positive correlation with MPS (0.4788). The coefficient of simple determination shows that 77.73 percent changes in the MPS is explained by DPS and remaining 22.27 percent is unexplained or it is explained by market related factors. While taking BVPS, 22.93 percent change in MPS is due to BVPS and remaining is explained by other factors. Similarly 58.32 percent of the change in the MPS is explained by EPS and remaining is unexplained. The degree of correlation between MPS with DPS and EPS is significant but with BVPS is insignificant in case of HBL at 95 percent level of confidence.

From the simple regression analysis, the regression equations are found (MPS being dependant variable) as:

MPS on DPS

$$\text{MPS} = 673.70 + 2.49 \text{ DPS}$$

The regression constant 673.70 implies that when DPS is zero, MPS is Rs 673.70. The regression coefficient for DPS 2.49 implies that when DPS increases by RS.1, MPS increases by Rs.2.49 and vice versa. The simple correlation coefficient is 0.883 with 238.701 standard error of estimate.

MPS on BVPS

$$\text{MPS} = -2487.42 + 15.23 \text{ BVPS}$$

The regression constant -2487.42 implies that when BVPS is zero, MPS is Rs -2487.42. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for BVPS 15.23 implies that when BVPS increases by RS.1, MPS will increase by Rs. 15.23 and vice versa. The simple correlation coefficient is 0.479 with 446.002 standard error of estimate.

MPS on EPS

$$\text{MPS} = -1840.59 + 54.71 \text{ EPS}$$

The regression constant -1840.59 implies that when EPS is zero, MPS is -1840.59. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for EPS 54.71 implies that when EPS increases by RS.1, MPS increases by Rs. 54.71 and vice versa. The simple correlation coefficient is 0.764 with 327.988 standard error of estimate.

The multiple regression analysis of HBL gives the multiple regression equation (MPS being dependant variable and DPS, BVPS and EPS being independent variables) as:

MPS on DPS, BVPS and EPS

$$\text{MPS} = -3063.39 + 1.24 \text{ DPS} + 7.497 \text{ BVPS} + 39.304 \text{ EPS}$$

Where,

-3063.39 = Dependant variable – intercept (MPS – intercept), Multiple regression constant.

1.24 = Partial regression coefficient of dependant variable (MPS) on DPS when BVPS and EPS are held constant

7.497 = Partial regression coefficient of dependant variable (MPS) on BVPS when DPS and EPS are held constant

39.304 = Partial regression coefficient of dependant variable (MPS) on EPS when
DPS and BVPS are held constant

The equation implies that the multiple regression constant (a) is -3063.39 which suggest that when DPS, BVPS and EPS are zero, MPS would be -3063.39. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for DPS is 1.24 implies that when DPS increases by Rs. 1, MPS increases by RS. 1.24, the coefficient for BVPS is 7.497, implies that when BVPS increases by Rs. 1, MPS will increase by Rs 7.497 and the coefficient for EPS is 39.304, implies that when EPS increases by Rs. 1, MPS will increase by Rs. 39.304 and vice versa, remaining intervening variables constant. The analysis shows that the multiple correlation coefficient 0.959 and coefficient of multiple determinations 0.92 with 185.08 standard error of estimate.

4.1.6 Correlation and Regression Analysis of NIC

Table 4.1.11 summarizes the financial performances of NIC over last 7 years and Table 4.1.12 shows the relationship (correlation) of EPS, DPS and BVPS to MPS along with the significance of such relationship.

Table 4.1.11
Summary of the Financial Performance of NIC

Year	MPS (a)	% Change	DPS (b)	% Change	BPVS (c)	% Change	EPS (d)	% Change
2004/05	245	0	0	0	105.24	0	1.36	0
2005/06	220	-10.20	0	-	110.44	4.94	5.19	281.62
2006/07	218	-0.91	0	-	124.11	12.38	13.65	163.01
2007/08	366	67.89	83.2	-	136.84	10.26	22.75	66.67
2008/09	496	35.52	50.13	-39.75	116.13	-15.13	16.1	-29.23
2009/10	950	91.53	191.05	281.11	139.17	19.84	24.01	49.13
2010/11	1284	35.16	257.85	34.96	138.09	-0.78	25.75	7.25
Total	3779		582.23		870.02		108.81	
Mean	539.86		83.18		124.29		15.54	
SD	386.74		95.61		13.04		8.78	
CV	71.64		114.95		10.49		56.51	

Table 4.1.12
Relationship of BVPS, EPS and DPS with MPS

Variables	r	r²	t-cal	t-table	Remarks
r _{ab}	0.9796	0.9597	10.9099	2.571	Significance
r _{ac}	0.6982	0.4875	2.1810	2.571	Not Significance
r _{ad}	0.7525	0.5663	2.5550	2.571	Not Significance

Source: Appendix II

Where,

T-table value is at 5 percent level of significance (n-2 = 7-2 = 5 degree of freedom)

r_{ab} = correlation coefficient of 'a' and 'b'

r² = coefficient of (simple) determination

SD = standard deviation

CV = coefficient of variation

Mean = arithmetic mean

n = number of years

Table 4.1.11 depicts the value of Mean, SD and CV of MPS, DPS, BVPS and EPS of NIC Bank Limited (NIC). According to the Table, CV of MPS is 71.64 percent and DPS is 114.95 percent that indicates MPS and DPS are highly volatile and CV of BVPS 10.49, which indicates less volatility than other variables. Similarly, CV of EPS is 56.51 percent that indicates moderate level of volatility. If we compare these values with Sample average, average MPS of NIC is lower (539.86) than sample mean MPS (1327.16). Standard deviation of MPS is also lower (386.74) than sample standard deviation (949.24). Similarly, MPS of NIC has lower Coefficient of Variation (71.64) than sample CV (73.93) of MPS. Lower SD of MPS says share price of the bank is less volatile than sample average. Similarly, the CV of MPS is quite lower than Sample average that indicates per unit volatility of share price is lower than sample average. These all Figure shows MPS of NIB is lesser than sample average, which makes it quite attractive for low scale investors with low risk exposure.

Mean DPS of NIC is lesser (83.18) than sample average (319.02). Lower DPS than Sample average says that NIC is not able to provide expected return to the investors. Similarly, Coefficient of variation is lesser (114.95) than sample average (115.31) and

standard deviation is lesser (95.61) than sample SD (353.71). Lower CV says dividend payments made by the bank are less varying than sample average.

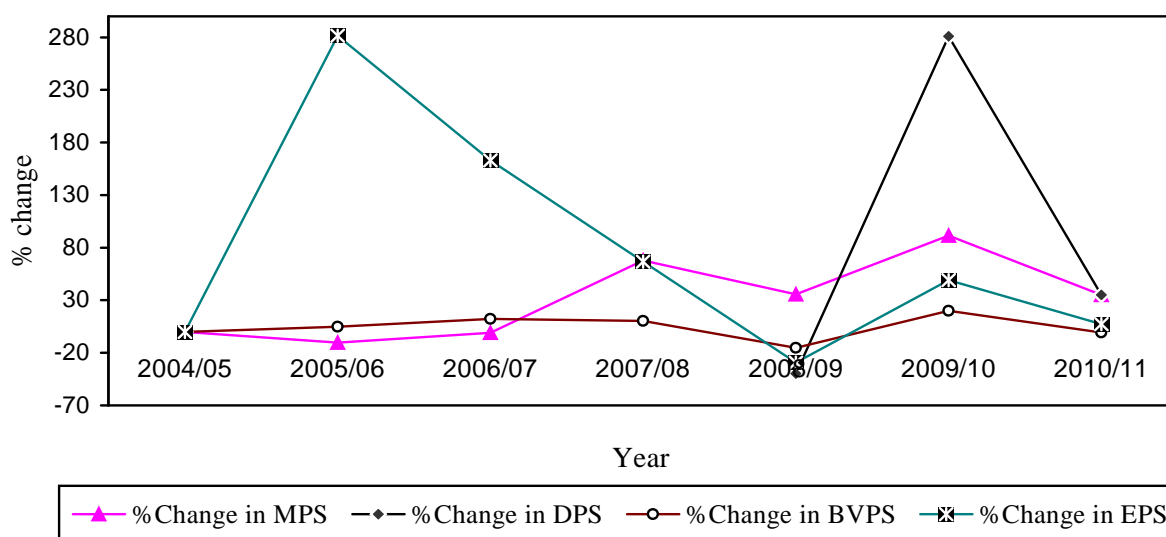
Average BVPS of NIC over the period is lower (124.29) than sample average (228.31), standard deviation is lesser (13.4) than sample SD (96.07). Similarly, Coefficient of variation is lesser (10.49) than sample CV (42.03). Less BVPS shows financial strength of the bank is not accordance with sample average. However, lower SD and CV than sample average are justifying financial stability of the bank.

Mean EPS of NIC is lower (15.54) than sample average (55.73), standard deviation (8.78) is lower than sample SD (43.67) and CV is also lower (56.51) than sample CV (80.61). Lower EPS than sample average shows that the bank is not able to use its funds effectively but lower SD and CV shows its consistency in earnings.

Talking about the relationship between different variables of NIC, there is high degree of positive correlation between MPS and BVPS but MPS has very high degree of positive correlation with DPS and EPS respectively. The coefficient of simple determination shows that 95.97 percent changes in the MPS is explained by DPS and remaining is unexplained or it is explained by market related factors, where as 48.75 percent change in MPS is due to BVPS and remaining 51.25 percent is by market related factors. Similarly 56.63 percent of the change in the MPS is explained by EPS and rest 43.37 percent is unexplained. The degree of correlation between MPS and DPS is only significant in case of NIC at 95 percent level of confidence. The Figure 4.6 shows the trend of above mentioned variables.

Figure 4.6

Trend of MPS, EPS, DPS and BVPS of NIC



From the simple regression analysis, the regression equations are found (MPS being dependant variable) as:

MPS on DPS

$$\text{MPS} = 210.28 + 3.96 \text{ DPS}$$

The regression constant 210.28 implies that when DPS is zero, MPS is Rs 210.28. The regression coefficient for DPS 3.96 implies that when DPS increases by RS.1, MPS increases by Rs.3.96 and vice versa. The simple correlation coefficient is 0.980 with 91.877 standard error of estimate.

MPS on BVPS

$$\text{MPS} = -2033.50 + 20.70 \text{ BVPS}$$

The regression constant -2033.50 implies that when BVPS is zero, MPS is Rs -2033.50. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for BVPS 20.70 implies that when BVPS increases by RS.1, MPS will increase by Rs. 20.70 and vice versa. The simple correlation coefficient is 0.698 with 327.57 standard error of estimate.

MPS on EPS

$$\text{MPS} = 24.83 + 33.13 \text{ EPS}$$

The regression constant 24.83 implies that when EPS is zero, MPS is 24.83. The regression coefficient for EPS 33.13 implies that when EPS increases by RS.1, MPS increases by Rs. 33.13 and vice versa. The simple correlation coefficient is 0.753 with 301.36 standard error of estimate.

The multiple regression analysis of NIC gives the multiple regression equation (MPS being dependant variable and DPS, BVPS and EPS being independent variables) as:

MPS on DPS, BVPS and EPS

$$\text{MPS} = 1576.35 + 4.68 \text{ DPS} - 12.56 \text{ BVPS} + 8.70 \text{ EPS}$$

Where,

1576.35 = Dependant variable – intercept (MPS – intercept), Multiple regression constant

4.68 = Partial regression coefficient of dependant variable (MPS) on DPS when BVPS and EPS are held constant

-12.56 = Partial regression coefficient of dependant variable (MPS) on BVPS when DPS and EPS are held constant

8.70 = Partial regression coefficient of dependant variable (MPS) on EPS when
DPS and BVPS are held constant

The equation implies that the multiple regression constant (a) is 1576.35 which suggest that when DPS, BVPS and EPS are zero, MPS would be 1576.35. The regression coefficient for DPS is 4.68 implies that when DPS increases by RS. 1, MPS increases by RS. 4.68, the coefficient for BVPS is -12.56, implies that when BVPS increases by RS. 1, MPS will decrease by Rs 12.56 and the coefficient for EPS is 8.70, implies that when EPS increases by Rs. 1, MPS will increase by Rs. 8.70 and vice versa, remaining intervening variables constant. The analysis shows that the multiple correlation coefficient 0.993 and coefficient of multiple determinations 0.987 with 68.458 standard error of estimate.

4.1.7 Correlation and Regression Analysis of EBL

Table 4.1.13 summarizes the financial performances of Everest Bank Limited over last 7 years and Table 4.1.14 shows the relationship (correlation) of EPS, DPS and BVPS to MPS along with the significance of such relationship.

Table 4.1.13
Summary of the Financial Performance of EBL

Year	MPS (a)	% Change	DPS (b)	% Change	BPVS (c)	% Change	EPS (d)	% Change
2004/05	405	0	81	0	241.63	0	32.91	0
2005/06	445	9.88	20	-75.31	150.1	-37.88	29.9	-9.15
2006/07	680	52.81	20	0.00	171.52	14.27	45.6	52.51
2007/08	870	27.94	174	770.00	219.87	28.19	54.2	18.86
2008/09	1379	58.51	25	-85.63	217.67	-1.00	62.8	15.87
2009/10	2430	76.21	739	2856.00	292.75	34.49	78.42	24.87
2010/11	3132	28.89	959.6	29.85	321.77	9.91	91.82	17.09
Total	9341		2018.6		1615.31		395.65	
Mean	1334.43		288.37		230.76		56.52	
SD	980.70		363.14		56.76		21.23	
CV	73.49		125.93		24.60		37.57	

Table 4.1.14
Relationship of BVPS, EPS and DPS with MPS of KBL

Variables	r	r ²	t-cal	t-table	Remarks
r _{ab}	0.9421	0.8876	6.2850	2.571	Significance
r _{ac}	0.8634	0.7454	3.8261	2.571	Significance
r _{ad}	0.9713	0.9433	9.1238	2.571	Significance

Source: Appendix II

Where,

T-table value is at 5 percent level of significance (n-2 = 7-2 = 5 degree of freedom)

r_{ab} = correlation coefficient of 'a' and 'b'

r² = coefficient of (simple) determination

SD = standard deviation

CV = coefficient of variation

Mean = arithmetic mean

n = number of years

Figure 4.7

Trend of MPS, EPS, DPS and BVPS of EBL

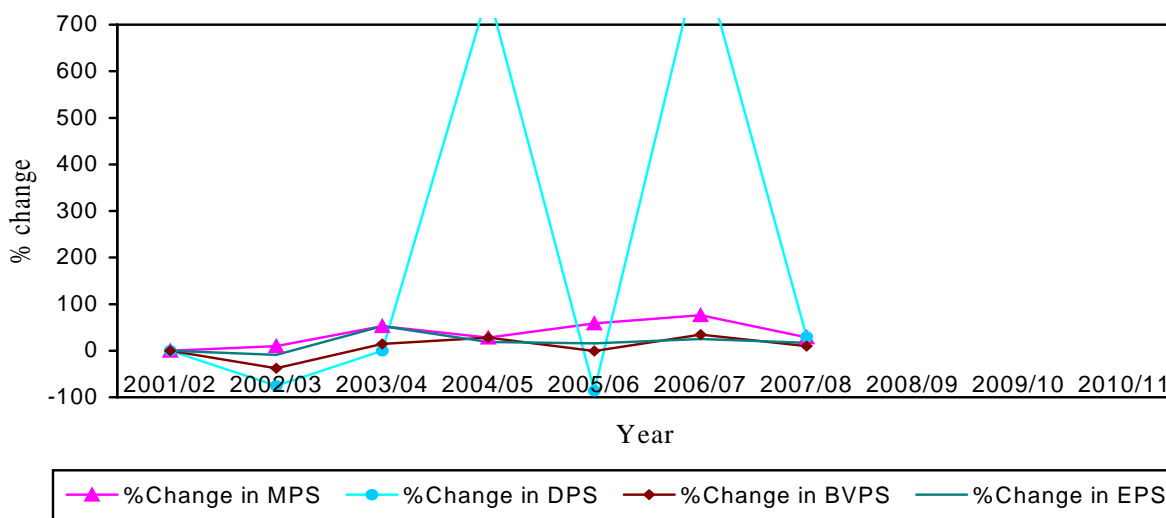


Table 4.1.13 shows the value of Mean, SD and CV of MPS, DPS, BVPS and EPS of Everest Bank Limited (EBL). It also displays trend of these values. According to the Table, CV of MPS and DPS are 73.49 and 125.93 percent, which indicates MPS and DPS of this bank are highly volatile in the market and CV of BVPS and EPS are 24.60 and

37.57 percent; that indicates they are less volatile than MPS and DPS. If we compare these values with Sample benchmark, average MPS of EBL is higher (1334.43) than sample mean MPS (1327.16). Similarly, Standard deviation of MPS is also higher (980.70) than sample standard deviation (949.24). MPS of EBL has little bit lower Coefficient of Variation (73.49) than sample CV (73.93) of MPS. Mean MPS of EBL is higher than sample average that shows its attractiveness for high scale investors. Having higher SD of MPS is not so good which says -share price is more volatile than sample average. Similarly, the CV of MPS is quite lower than Sample average that indicates per unit volatility of share price is lower than sample average.

Mean DPS of EBL is lesser (288.37) than sample average (319.02). Lower DPS than Sample average says that the bank is not able to provide expected returns to the investors, which makes shares of the bank less attractive for potential investor. Similarly, Coefficient of variation is higher (125.93) than sample average (115.31) and standard deviation is higher (363.14) than sample SD (353.71). Higher CV says dividend payments made by the bank are not stable over seven years. Average BVPS of EBL over the period is slightly higher (230.76) than sample average (228.31), standard deviation is lesser (56.76) than sample SD (96.07). Similarly, Coefficient of variation is lesser (24.60) than sample CV (42.03). Higher BVPS shows financial strength of the bank and lower SD and CV are justifying financial stability of the bank. Mean EPS of EBL is slightly higher (56.52) than sample average (55.73), standard deviation (21.23) is lower than sample SD(43.67) and CV is also lower (37.57) than sample CV (80.61). Higher EPS than sample average explains efficient utilization of the available funds and lower SD and CV shows consistency in earnings.

Talking about the relationship between different variables of the bank, there is very high degree of positive correlation between MPS and other variables i.e. DPS, BVPS and EPS. The coefficient of simple determination shows that 88.76 percent changes in the MPS is explained by DPS and remaining 11.24 percent is unexplained or it is explained by macro economics factors, where as 74.54 percent change in MPS is due to BVPS and remaining is unexplained. Similarly 94.33 percent of the change in the MPS is explained by EPS and remaining 5.67 percent is unexplained or it is explained by market related factors. The degree of correlation between MPS with DPS, BVPS and EPS is significant in case of EBL at 95 percent level of confidence.

From the simple regression analysis, the regression equations are found (MPS being dependant variable) as:

MPS on DPS

$$\text{MPS} = 600.71 + 2.54 \text{ DPS}$$

The regression constant 600.71 implies that when DPS is zero, MPS is Rs 600.71. The regression coefficient for DPS 2.54 implies that when DPS increases by RS.1, MPS increases by Rs.2.54 and vice versa. The simple correlation coefficient is 0.942 with 388.955 standard error of estimate.

MPS on BVPS

$$\text{MPS} = -2108.08 + 14.92 \text{ BVPS}$$

The regression constant -2108.08 implies that when BVPS is zero, MPS is Rs -2108.08. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for BVPS 14.92 implies that when BVPS increases by RS.1, MPS will increase by Rs. 14.92 and vice versa. The simple correlation coefficient is 0.863 with 585.498 standard error of estimate.

MPS on EPS

$$\text{MPS} = -1200.99 + 44.86 \text{ EPS}$$

The regression constant -1200.99 implies that when EPS is zero, MPS is -1200.99. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for EPS 44.86 implies that when EPS increases by RS.1, MPS increases by Rs. 44.86 and vice versa. The simple correlation coefficient is 0.971 with 276.188 standard error of estimate.

The multiple regression analysis of EBL gives the multiple regression equation (MPS being dependant variable and DPS, BVPS and EPS being independent variables) as:

MPS on DPS, BVPS and EPS

$$\text{MPS} = -404.80 + 1.20 \text{ DPS} - 1.23 \text{ BVPS} + 29.66 \text{ EPS}$$

Where,

-404.80 = Dependant variable – intercept (MPS – intercept), Multiple regression constant

1.20 = Partial regression coefficient of dependant variable (MPS) on DPS when BVPS and EPS are held constant

-1.23 = Partial regression coefficient of dependant variable (MPS) on BVPS when DPS and EPS are held constant

29.66 = Partial regression coefficient of dependant variable (MPS) on EPS when
DPS and BVPS are held constant

The equation implies that the multiple regression constant (a) is -404.80 which suggest that when DPS, BVPS and EPS are zero, MPS would be -404.86. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for DPS is 1.20 implies that when DPS increases by RS. 1, MPS increases by RS. 1.20, the coefficient for BVPS is -1.23, implies that when BVPS increases by RS. 1, MPS will decrease by Rs 1.23 and the coefficient for EPS is 29.66, implies that when EPS increases by Rs. 1, MPS will increase by Rs. 29.66 and vice versa, remaining intervening variables constant. The analysis shows that the multiple correlation coefficient 0.991 and coefficient of multiple determination 0.981 with 204.727 standard error of estimate.

4.1.8 Correlation and Regression Analysis of KBL

Table 4.1.15 summarizes the financial performances of Everest Bank Limited over last 7 years and Table 4.1.16 shows the relationship (correlation) of EPS, DPS and BVPS to MPS along with the significance of such relationship.

Table 4.1.15
Summary of the Financial Performance of KBL

Year	MPS (a)	% Change	DPS (b)	% Change	BPVS (c)	% Change	EPS (d)	% Change
2004/05	0	0	0	0	103.89	0	0.38	0
2005/06	0	-	0	-	112	7.81	3.26	757.89
2006/07	0	-	0	-	114	1.79	9.74	198.77
2007/08	369	-	0	-	141	23.68	17.58	80.49
2008/09	443	20.05	89.65	-	149	5.67	16.59	-5.63
2009/10	830	87.36	167.05	86.34	137	-8.05	22.7	36.83
2010/11	1005	21.08	10.58	-93.67	128	-6.57	16.35	-27.97
Total	2647		267.28		884.89		86.6	
Mean	378.14		38.18		126.41		12.37	
SD	383.66		60.77		15.61		7.57	
CV	101.46		159.15		12.35		61.19	

Table 4.1.16
Relationship of BVPS, EPS and DPS with MPS of KBL

Variables	r	r ²	t-cal	t-table	Remarks
r _{ab}	0.5388	0.2903	1.4300	2.571	Not Significance
r _{ac}	0.6146	0.3777	1.7420	2.571	Not Significance
r _{ad}	0.8048	0.6476	3.0316	2.571	Significance

Source: Appendix II

Where,

T-table value is at 5 percent level of significance (n-2 = 7-2 = 5 degree of freedom)

r_{ab} = correlation coefficient of 'a' and 'b'

r² = coefficient of (simple) determination

SD = standard deviation

CV = coefficient of variation

Mean = arithmetic mean

n = number of years

Figure 4.8

Trend of MPS, EPS, DPS and BVPS of KBL

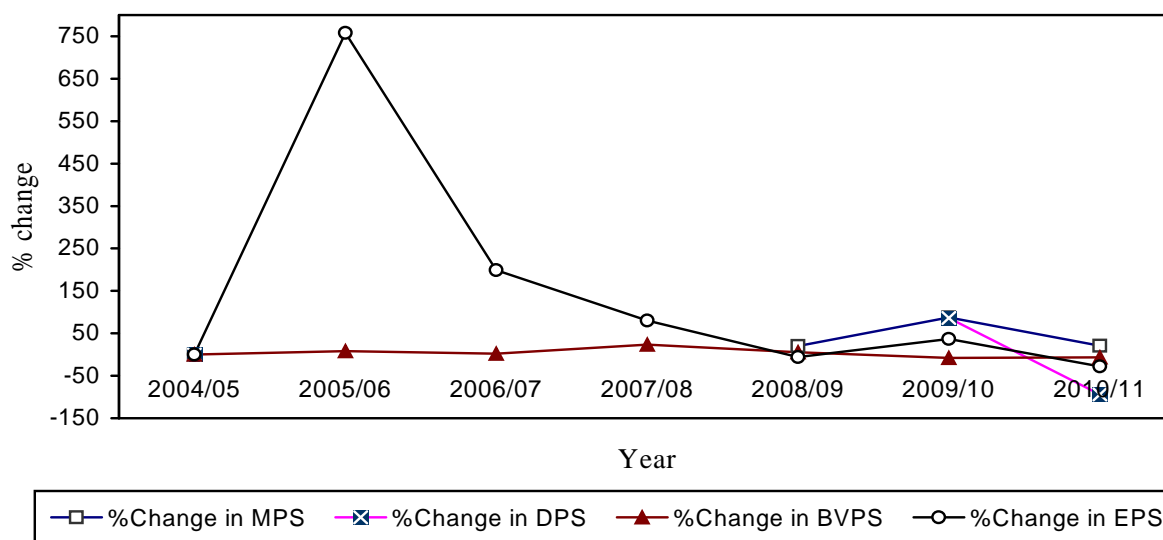


Table 4.1.15 shows the value of Mean, SD and CV of MPS, DPS, BVPS and EPS of Kumari Bank Limited (KBL). It also displays trend of these values over the period. According to the Table, CV of MPS and DPS are 101.46 and 159.15 percent, which indicates MPS and DPS of this bank are highly volatile in the market and CV of BVPS

and EPS are 12.35 and 61.19 percent; that indicates they are less volatile than MPS and DPS. If we compare these values with Sample average, average MPS of KBL is lower (378.14) than sample mean MPS (1327.16). Similarly, Standard deviation of MPS is also lower (383.66) than sample standard deviation (949.24). MPS of KBL has higher Coefficient of Variation (101.46) than sample CV (73.93) of MPS. These Figures show MPS of KBL lesser than sample average. Similarly, it has higher SD and CV than sample average, which makes share of the bank less attractive and risky for potential investors. Higher SD and CV indicate high volatility in share price.

Mean DPS of KBL is lesser (38.18) than sample average (319.02). Lower DPS than Sample average shows KBL is not able to provide expected return to the investors, which makes shares of the bank less attractive for potential investors. Similarly, Coefficient of variation is higher (159.15) than sample average (115.31) and standard deviation (60.77) is lower than sample SD (353.71). Higher CV says dividend payments made by the bank are not stable over seven years. Average BVPS of KBL over the period is lower (126.41) than sample average (228.31) and standard deviation is lesser (15.61) than sample SD (96.06). Similarly, Coefficient of variation is lesser (12.35) than sample CV (42.03). Less BVPS shows financial strength of the bank is not accordance with sample average. However, lower SD and CV than sample average are justifying financial stability of the bank. Mean EPS of KBL is lower (12.37) than sample average (55.73), standard deviation (7.57) is lower than sample SD (43.67) and CV is also lower (61.19) than sample CV (80.61). Lower DPS than sample average shows KBL is not able to use its funds effectively, but, lower SD and CV shows its consistency.

Talking about the relationship between different variables of the bank, there is significant correlation between MPS and EPS but with other variables i.e. BVPS and EPS, there is high degree of positive correlation. The coefficient of simple determination shows that 29.03 percent changes in the MPS is explained by DPS and remaining 70.97 percent is unexplained or it is explained by market related factors. While taking BVPS, 37.77 percent change in MPS is due to BVPS and remaining is unexplained. Similarly 64.76 percent of the change in MPS is explained by EPS and rest is unexplained. The degree of correlation between MPS with DPS, BVPS is not significant but with EPS is significant in case of KBL at 95 percent level of confidence.

From the simple regression analysis, the regression equations are found (MPS being dependant variable) as:

MPS on DPS

$$\text{MPS} = 248.26 + 3.40 \text{ DPS}$$

The regression constant 248.26 implies that when DPS is zero, MPS is Rs 248.26. The regression coefficient for DPS 3.40 implies that when DPS increases by RS.1, MPS increases by Rs.3.40 and vice versa. The simple correlation coefficient is 0.539 with 382.437 standard error of estimate.

MPS on BVPS

$$\text{MPS} = -1530.74 + 15.10 \text{ BVPS}$$

The regression constant -1530.74 implies that when BVPS is zero, MPS is Rs -1530.74. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for BVPS 15.10 implies that when BVPS increases by RS.1, MPS will increase by Rs. 15.10 and vice versa. The simple correlation coefficient is 0.615 with 358.116 standard error of estimate.

MPS on EPS

$$\text{MPS} = -126.43 + 40.79 \text{ EPS}$$

The regression constant -126.43 implies that when EPS is zero, MPS is -126.43. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for EPS 40.79 implies that when EPS increases by RS.1, MPS increases by Rs. 40.79 and vice versa. The simple correlation coefficient is 0.753 with 301.36 standard error of estimate.

The multiple regression analysis of KBL gives the multiple regression equation (MPS being dependant variable and DPS, BVPS and EPS being independent variables) as:

MPS on DPS, BVPS and EPS

$$\text{MPS} = 795.257 + 0.0007 \text{ DPS} - 8.847 \text{ BVPS} + 56.682 \text{ EPS}$$

Where,

795.257 = Dependant variable – intercept (MPS – intercept), Multiple regression constant

0.0007 = Partial regression coefficient of dependant variable (MPS) on DPS when BVPS and EPS are held constant

-8.847 = Partial regression coefficient of dependant variable (MPS) on BVPS when DPS and EPS are held constant

56.682 = Partial regression coefficient of dependant variable (MPS) on EPS when DPS and BVPS are held constant

The equation implies that the multiple regression constant (a) is 795.257 which suggest that when DPS, BVPS and EPS are zero, MPS would be 795.257. The regression coefficient for DPS is 0.0007 implies that when DPS increases by RS. 1, MPS increases by RS. 0.0007, the coefficient for BVPS is -8.847, implies that when BVPS increases by RS. 1, MPS will decrease by Rs 8.847 and the coefficient for EPS is 56.682, implies that when EPS increases by Rs. 1, MPS will increase by Rs. 56.682 and vice versa, remaining intervening variables constant. The analysis shows that the multiple correlation coefficient 0.824 and coefficient of multiple determinations 0.679 with 332.115 standard error of estimate.

4.1.9 Correlation and Regression Analysis of SBI

Table 4.1.17 summarizes the financial performances of Nepal SBI Bank Limited over last 7 years and Table 4.1.18 shows the relationship (correlation) of EPS, DPS and BVPS to MPS along with the significance of such relationship.

Table 4.1.17
Summary of the Financial Performance of SBI

Year	MPS (a)	% Change	DPS (b)	% Change	BPVS (c)	% Change	EPS (d)	% Change
2004/05	401	0	0	0	131.88	0	9.61	0
2005/06	255	-36.41	8	-	134.03	1.63	11.47	19.35
2006/07	307	20.39	0	-100.00	146.8	9.53	14.26	24.32
2007/08	335	9.12	0	-	159.54	8.68	13.29	-6.80
2008/09	612	82.69	5	-	151.78	-4.86	18.27	37.47
2009/10	1176	92.16	424.19	8383.80	178.04	17.30	39.35	115.38
2010/11	1511	28.49	0	-100.00	160.57	-9.81	28.33	-28.01
Total	4597		437.19		1062.64		134.58	
Mean	656.71		62.46		151.81		19.23	
SD	455.76		147.71		14.94		10.01	
CV	69.40		236.50		9.84		52.06	

Table 4.1.18
Relationship of BVPS, EPS and DPS with MPS

Variables	r	r ²	t-cal	t-table	Remarks
r _{ab}	0.4602	0.2117	1.1589	2.571	Not Significance
r _{ac}	0.6841	0.4679	2.0970	2.571	Not Significance
r _{ad}	0.8609	0.7412	3.7839	2.571	Significance

Source: Appendix II

Where,

T-table value is at 5 percent level of significance (n-2 = 7-2 = 5 degree of freedom)

r_{ab} = correlation coefficient of 'a' and 'b'

r² = coefficient of (simple) determination

SD = standard deviation

CV = coefficient of variation

Mean = arithmetic mean

n = number of years

Figure 4.9

Trend of MPS, EPS, DPS and BVPS of SBI

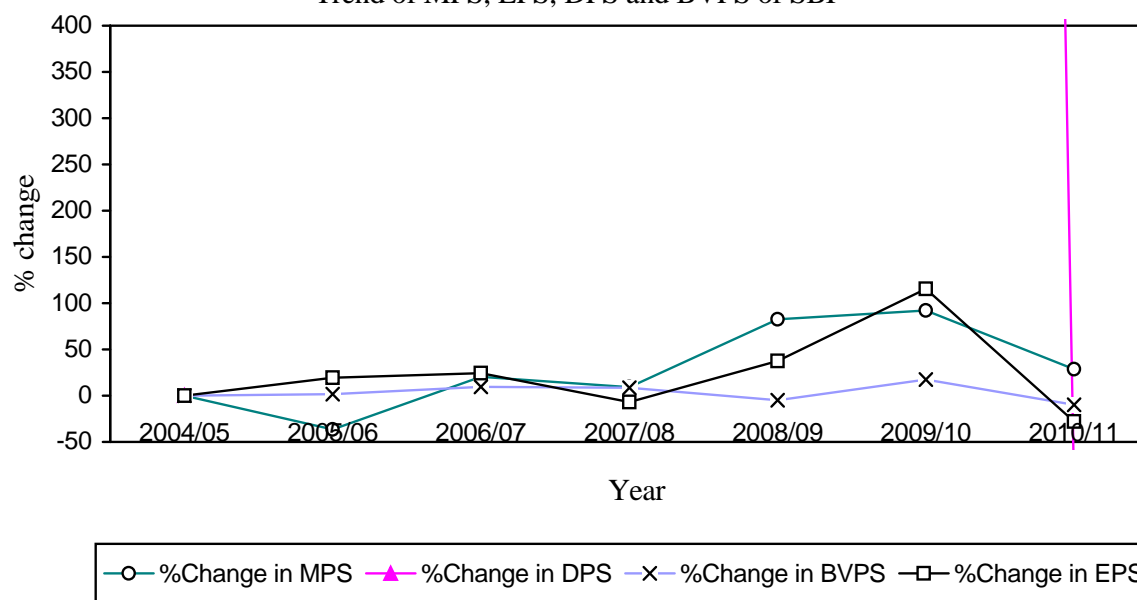


Table 4.1.17 reflects the value of Mean, SD and CV of MPS, DPS, BVPS and EPS of Nepal SBI Bank Limited (SBI). Similarly, Figure 4.9 shows trend of above mentioned variables. According to the Table, CV of MPS and EPS are 69.40 and 52.06 percent

respectively that indicates MPS and EPS of this bank is highly volatile in the market. CV of DPS is 236.50 percent that indicates that it is more volatile than MPS and EPS. Similarly, CV of BVPS is 9.84 percent, which indicates that it is less volatile in comparison with other variables. If we compare these values with Sample average, average MPS of SBI is lesser (656.71) than sample mean MPS (1327.16). Similarly, Standard deviation of MPS is also lesser (455.76) than sample standard deviation (949.24). MPS of SBI has little bit lower Coefficient of Variation (69.40) than sample CV (73.93) of MPS. MPS of SBI is lesser than sample average, which indicates investing on the shares of the bank is beneficial and less risky for potential investor. Having lower than SD of MPS is good which says -share price is less volatile than sample average. Similarly, the CV of MPS is quite lower than Sample average that indicates per unit volatility of share price is lower than sample average.

Mean DPS of SBI is lesser (62.46) than sample average (319.02). Lower DPS than Sample average shows that the bank is not able to provide return to shareholders in accordance with sample average. Similarly, Coefficient of variation is higher (147.71) than sample average (115.31) and standard deviation is lower (236.50) than sample SD (353.71). Higher CV indicates that dividend payments made by the bank are instable over the period. Average BVPS of SBI over the period is lower (151.81) than sample average (228.31), standard deviation is lesser (14.94) than sample SD (96.07). Similarly, Coefficient of variation is lesser (9.84) than sample CV (42.03). Less BVPS shows financial strength of the bank is not accordance with sample average. However, lower SD and CV than sample average are justifying financial stability of the bank. Mean EPS of SBI is lower (19.23) than sample average (55.73), standard deviation (10.01) is lower than sample average (43.67) and CV is also lower (52.06) than sample average (80.61).

There is significant correlation between MPS and EPS and there is high degree of positive correlation with BVPS. But, it has lower degree of positive correlation with DPS. The coefficient of simple determination shows that 21.17 percent changes in the MPS is explained by DPS and remaining 78.83 percent is unexplained or it is explained by market related factors. While taking BVPS, 46.79 percent change in MPS is due to BVPS and remaining is unexplained. Similarly 74.12 percent of the change in the MPS is explained by EPS and rest is explained by other factors. The degree of correlation between MPS with DPS and BVPS is insignificant but with EPS is significant in case of SBI at 95 percent level of confidence.

From the simple regression analysis, the regression equations are found (MPS being dependant variable) as:

MPS on DPS

$$\text{MPS} = 568.04 + 1.42 \text{ DPS}$$

The regression constant 568.04 implies that when DPS is zero, MPS is Rs 568.04. The regression coefficient for DPS 1.42 implies that when DPS increases by RS.1, MPS increases by Rs.1.42 and vice versa. The simple correlation coefficient is 0.460 with 478.78 standard error of estimate.

MPS on BVPS

$$\text{MPS} = -2511.35 + 20.87 \text{ BVPS}$$

The regression constant -2511.35 implies that when BVPS is zero, MPS is Rs -2511.35. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for BVPS 20.87 implies that when BVPS increases by RS.1, MPS will increase by Rs. 20.87 and vice versa. The simple correlation coefficient is 0.684 with 393.355 standard error of estimate.

MPS on EPS

$$\text{MPS} = -96.95 + 39.20 \text{ EPS}$$

The regression constant -96.95 implies that when EPS is zero, MPS is -96.95. Since, the mathematical value of MPS is negative but in real world none of the stock has negative value. The regression coefficient for EPS 39.20 implies that when EPS increases by RS.1, MPS increases by Rs. 39.20 and vice versa. The simple correlation coefficient is 0.861 with 274.35 standard error of estimate.

The multiple regression analysis of SBI gives the multiple regression equation (MPS being dependant variable and DPS, BVPS and EPS being independent variables) as:

MPS on DPS, BVPS and EPS

$$\text{MPS} = 719.538 - 2.299 \text{ DPS} - 9.525 \text{ BVPS} + 79.408 \text{ EPS}$$

Where,

719.538 = Dependant variable – intercept (MPS – intercept), Multiple regression constant

-2.299 = Partial regression coefficient of dependant variable (MPS) on DPS when BVPS and EPS are held constant

-9.525 = Partial regression coefficient of dependant variable (MPS) on BVPS when DPS and EPS are held constant

79.408 = Partial regression coefficient of dependant variable (MPS) on EPS when DPS and BVPS are held constant

The equation implies that the multiple regression constant (a) is 719.538 which suggest that when DPS, BVPS and EPS are zero, MPS would be 719.538. The regression coefficient for DPS is -2.299 implies that when DPS increases by RS. 1, MPS decreases by Rs. 2.299, the coefficient for BVPS is -9.525, implies that when BVPS increases by RS. 1, MPS will decrease by Rs 9.525 and the coefficient for EPS is 79.408, implies that when EPS increases by Rs. 1, MPS will increase by Rs. 79.408 and vice versa, remaining intervening variables constant. The analysis shows that the multiple correlation coefficient 0.972 and coefficient of multiple determinations 0.945 with 163.376 standard error of estimate.

4.2 Presentation and Analysis of Primary Data

This research involves primary as well as secondary data. Primary data are collected through questionnaire and 100 respondents are taken to collect data. During the course of collecting primary data, direct interview and mail questionnaire method of collecting data are employed to get response personal as well as institutional investors, private commercial banks as well as security brokers and different investment companies are visited. Categorically, Yes, No question, multiple choice and Open End question are taken.

4.2.1 Factors Affecting the Stock Price of Listed Companies

With respect to the factors affecting stock price of listed companies, majority of respondents (40 percent) said stock prices are highly affected by political situation of the country. Whereas 29 percent believed rules and regulations regarding security market are responsible for changes in stock prices. Similarly 20 percent people believe financial strength of a particular company is major determinant of stock price and 11 percent of investor believed Nepalese stock market is driven by rumors rather than other company and economy related factors. The answers are displayed in the Table 4.2.1 below:

Table 4.2.1
Factors affecting the Stock Price of Listed Companies

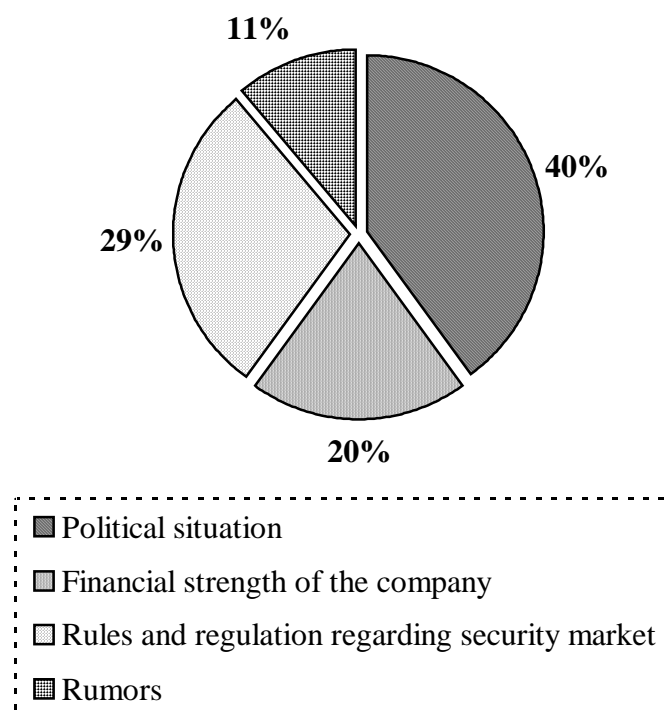
S.N.	Research Variable	No. of Investor	Percent of Investors
a)	Political situation	40	40%
b)	Financial strength of the company	20	20%
c)	Rules and regulation regarding security market	29	29%
d)	Rumors	11	11%
	Total	100	100%
	Calculated value of χ^2	18.48	

Sources: Field survey, 2011, March

Note: i) Tabulated t value of 2 at 0.05 level of significance for 3 d.f. is 7.82

The calculated value of chi-square (χ^2) is 18.48 which is greater than tabulated value 7.82, therefore, it is significant and alternative hypothesis (H_1) is accepted. That means there is significant difference among the view of respondent or between given alternatives.

Figure 4.10
Factors affecting the Stock Price of Listed Companies



4.2.2 Factors that to be considered while making investment decision regarding the stock of a particular company.

The question was asked to the factor, which should be considered while making investment decisions. This question was asked with four alternatives. Out of 100 respondents, majority of them (44 percent) consider profitability and dividend policy of a company as a major factor before making investment. Where as 30 percent consider future prospect of a company. Similarly financial stability of a company was considered by 17 percent of respondents and only 9 percent looked towards corporate governance of a company. The result is shown in the Table 4.2.2 and Figure 4.11 below.

Table 4.2.2

Factor to be considered while making investment decision

S.N.	Research Variable	No. of Investor	% of Investors
a)	Profitability and Dividend policy	44	44%
b)	Corporate governance	9	9%
c)	Future prospect	30	30%
d)	Financial stability	17	17%
	Total	100	100%
	Calculated value of χ^2		28.24

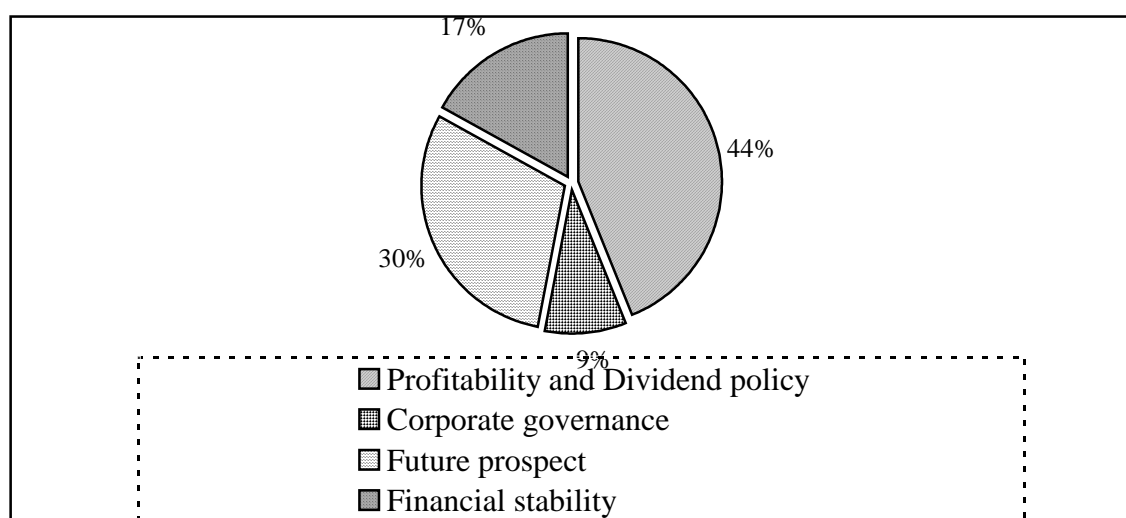
Sources: Field survey, 2011, March

Note: i) Tabulated t value of χ^2 at 0.05 level of significance for 3 d.f. is 7.82

The calculated value of chi-square (χ^2) 28.24 is greater than tabulated value 7.82, therefore, it is significant and alternative hypothesis (H_1) is accepted. That means there is significant difference among the view of respondent or between given alternatives.

Figure 4.11

Factor to be considered while making investment decision



4.2.3 Preference of valuation model to value the share before making transaction

Regarding the question of preference of investor to different valuation model before making transaction, 12 percent responded to net assets valuation method, 20 percent to earning valuation model. Similarly, 24 percent preferred dividend valuation model and 52 percent respondents do not use any model. From this it is found most of the investor use EVM method to valuation of the share. Those figures are also shown in the Table 4.2.3 and Figure 4.12 below.

Table 4.2.3
Preference of Valuation Model

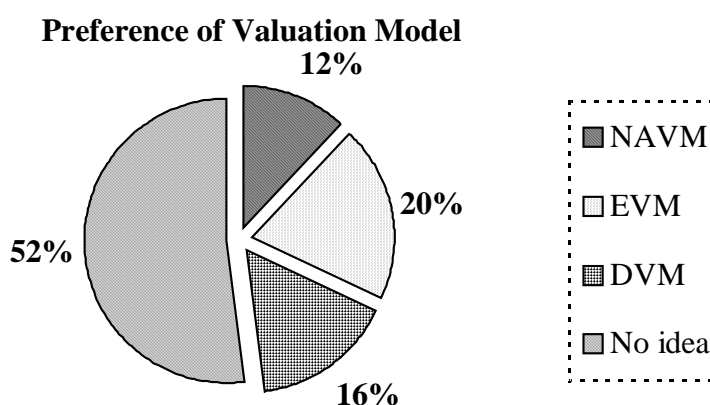
S.N.	Research Variable	No. of Investor	% of Investors
a)	Net asset Valuation Models (NAVM)	12	12%
b)	Earning Valuation Model (EVM)	20	20%
c)	Dividend Valuation Model (DVM)	16	16%
d)	No idea	52	52%
	Total	100	100%
	Calculated value of χ^2		40.16

Sources: Field survey, 2011 March

Note: i) Tabulated t value of χ^2 at 0.05 level of significance for 3 d.f. is 7.82

The calculated value of chi-square (χ^2) 40.16 is greater than tabulated value 7.82, therefore, it is significant and alternative hypothesis (H_1) is accepted. That means there is significant difference among the view of respondent or between given alternatives.

Figure: 4.12



4.2.4 Suitable trend of Stock Price movement in Nepalese security market

Regarding the suitability trend of the stock price movement in Nepalese security market different investors, NEPSE staff and brokers gave the different opinion about the trend on which 39 percent gave their opinion towards no particular trend, 31 percent to bullish trend, 12 percent to bearish trend but 18 percent didn't have any idea about this. The results are shown in the Table 4.2.4 and Figure 4.13.

Table 4.2.4
Trend of Stock Price Movement

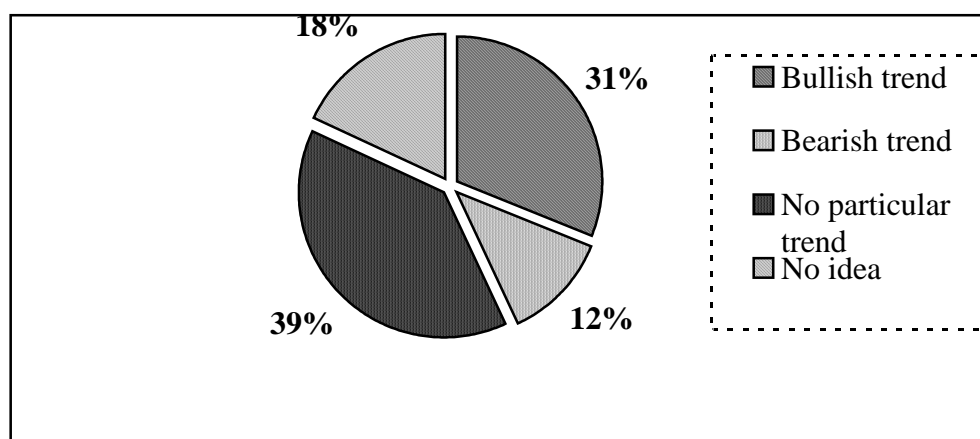
S.N.	Research Variable	No. of Investor	% of Investors
a)	Bullish trend	31	31%
b)	Bearish trend	12	12%
c)	No particular trend	39	39%
d)	No idea	18	18%
	Total	100	100%
	Calculated value of χ^2		18.00

Sources: Field survey, 2011 March

Note: i) Tabulated t value of χ^2 at .05 level of significance for 3 d.f. is 7.82

The calculated value of chi-square (χ^2) 18 is grater than tabulated value 7.82, therefore, it is significant and alternative hypothesis (H_1) is accepted. That means there is significant difference among the view of respondent or between given alternatives.

Figure: 4.13
Trend of Stock Price movement



4.2.5 Purpose for owning the share of the company

Different investors were asked for their interest on investment motives. if they were interested with investment, ownership and control, social status and have no specific purpose; 45 percent of the investor said as investment, 30 percent invest with the motive of ownership and control, 12 percent with social status and 13 percent have no specific motive. Table 4.2.5 represents the detailed information about this:

Table 4.2.5
Purpose for Owning the share of a Company

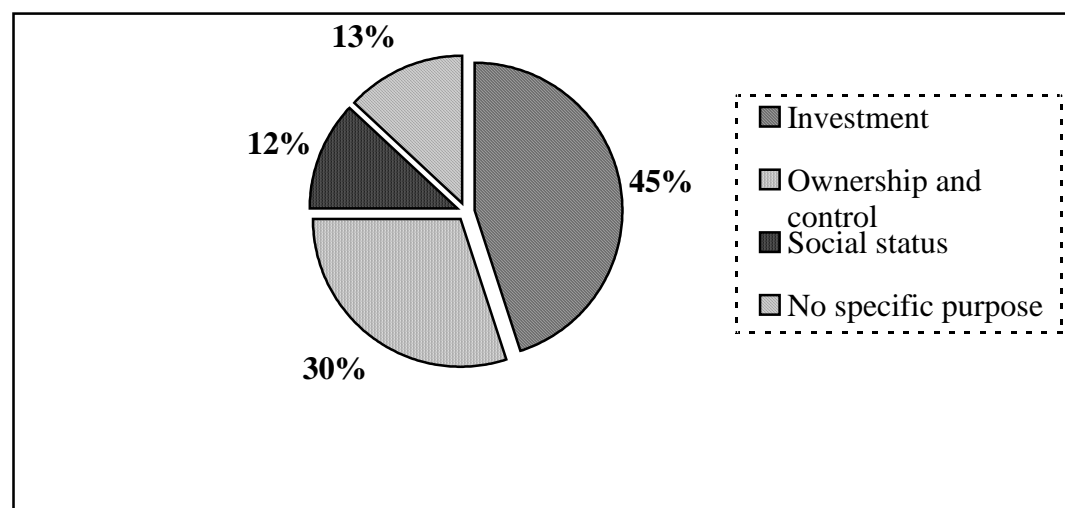
S.N.	Research Variable	No. of Investor	% of Investors
a)	Investment	45	45%
b)	Ownership and control	30	30%
c)	Social status	12	12%
d)	No specific purpose	13	13%
	Total	100	100%
	Calculated value of 2		29.52

Sources: Field survey, 2011, March

Note: i) Tabulated t value of 2 at 0.05 level of significance for 3 d.f. is 7.82

The calculated value of chi-square (χ^2) is 29.52 which is greater than tabulated value 7.82, therefore, it is significant and alternative hypothesis (H_1) is accepted. That means there is significant difference among the view of respondent or between given alternatives

Figure: 4.14
Purpose for owning the share of a company



4.2.6 Secure sector for investment point of view

Regarding the secure sector for investment the investors are asked whether the investor are interested in which sector they are interested to invest, 57 percent of the investor are interested with banking sector, 29 percent in hydro-power sector, 14 percent in Insurance sector and none of the investor interested to invest in manufacturing sector. Table 4.2.6 and figure 4.15 represents the detailed information about this:

Table 4.2.6
Secure sector for investment point of view

S.N.	Research Variable	No. of Investor	% of Investors
a)	Banking sector	57	57%
b)	Manufacturing sector	0	0%
c)	Hydro-power sector	29	29%
d)	Insurance sector	14	14%
	Total	100	100%
	Calculated value of χ^2		71.44

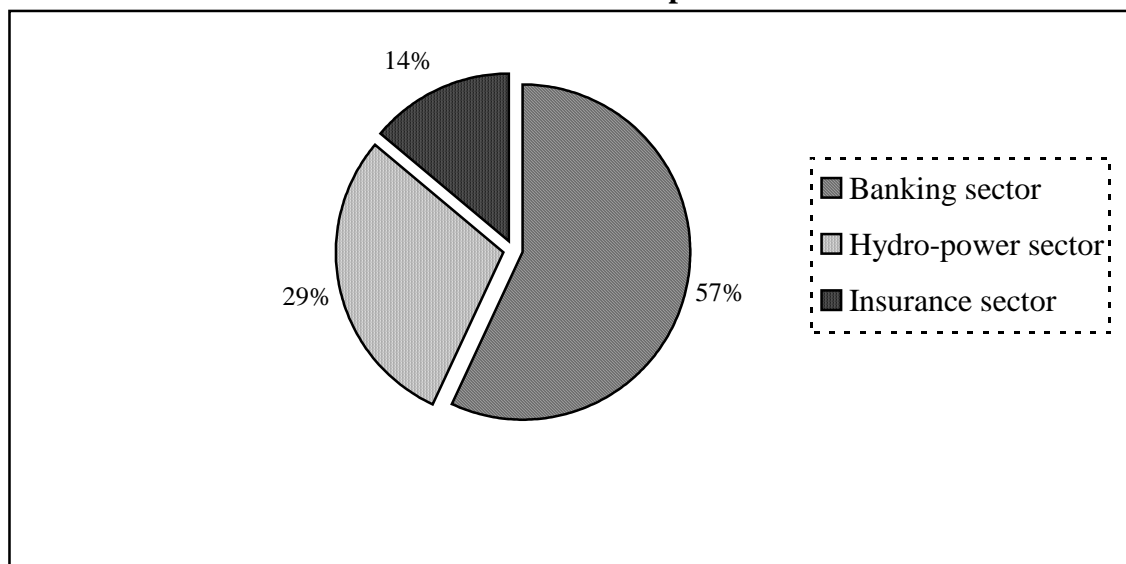
Sources: Field survey, 2011, March

Note: i) Tabulated t value of χ^2 at 0.05 level of significance for 3 d.f. is 7.82

The calculated value of chi-square (χ^2) is 71.44 which is greater than tabulated value 7.82, therefore, it is significant and alternative hypothesis (H_1) is accepted. That means there is significant difference among the view of respondent or between given alternatives.

Figure: 4.15

Secure sector for investment point of view



4.2.7 Effect of tax on stock price

There are different types of tax imposed by government to investor. Among them capital gain tax and dividend gain tax are two types of tax which affect the investor to invest in shares of a company. A large amount of tax has to pay to the government. Thus 56 percent said that capital gain tax and dividend gain tax reduce the interest of investors and it affects the market, 19 percent said no and 25 percent expect that different types of tax imposed by the government affects the market to some extent.

Table 4.2.7
Effect of different types of tax imposed by government

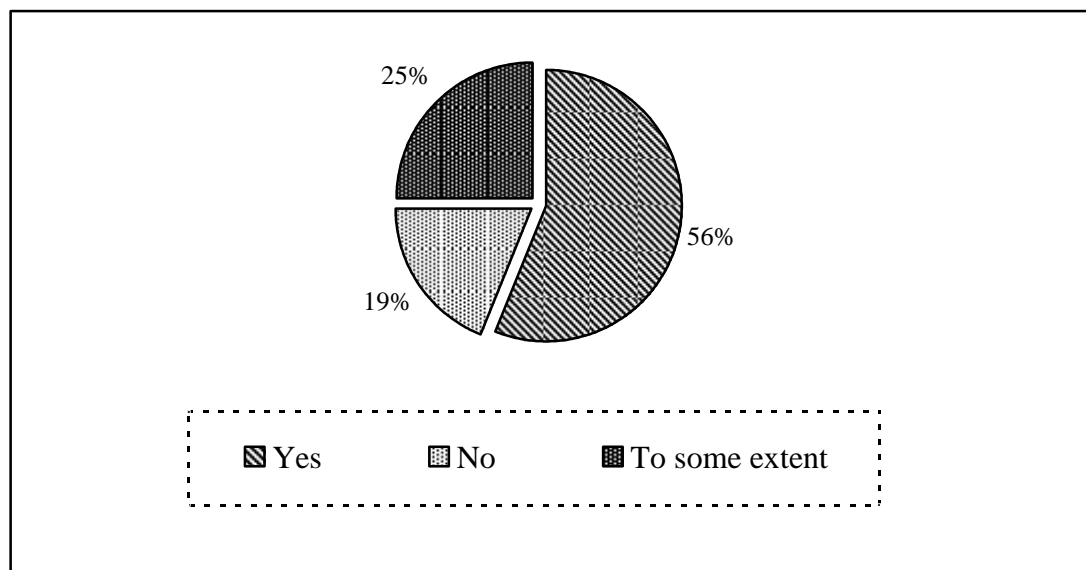
S.N.	Research Variable	No. of Investor	% of Investors
a)	Yes	56	56%
b)	No	19	19%
c)	To some extent	25	25%
d)	No idea	0	0%
	Total	100	100%
	Calculated value of χ^2	64.88	

Sources: Field survey, 2011, March

Note: i) Tabulated t value of χ^2 at 0.05 level of significance for 3 d.f. is 7.82

The calculated value of chi-square (χ^2) is 64.88 which is greater than tabulated value 7.82, therefore, it is significant and alternative hypothesis (H_1) is accepted. That means there is significant difference among the view of respondent or between given alternatives.

Figure: 4.16
Effect of different types of tax imposed by government



4.2.8 Environmental analysis

About the environmental factors that affect the Nepalese stock market or not, different individual and institutional investors, brokers, NEPSE staff and SEBON staff gave their own idea. Among them 38 percent said that environment affect the NEPSE, 42 percent said it dose not affect, 20 percent said to some extent. Following Table 4.18 shows the clear vision about this:

Table 4.2.8
Environmental analysis

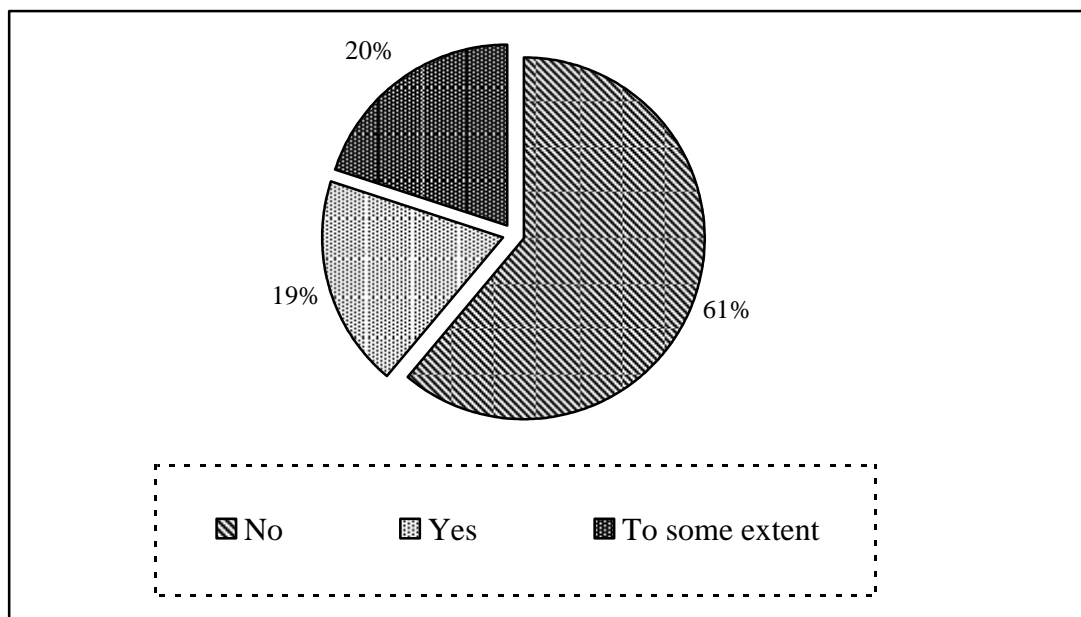
S.N.	Research Variable	No. of Investor	% of Investors
a)	Yes	19	19%
b)	No	61	61%
c)	To some extent	20	20%
d)	No idea	0	0%
	Total	100	100%
	Calculated value of 2	79.28	

Sources: Field survey, 2011, March

Note: i) Tabulated t value of 2 at 0.05 level of significance for 3 d.f. is 7.82

The calculated value of chi-square (χ^2) 79.28 is grater than tabulated value 7.82, therefore, it is significant and alternative hypothesis (H_1) is accepted. That means there is significant difference among the view of respondent or between given alternatives.

Figure: 4.17
Environmental Analysis



4.2.9 Information accessibility

19 percent of respondents said that general investors have no access to all the information related to stock market, 48 percent said no, 22 percent said to some extent and 11 percent had no idea about this matter. Thus we know that the Security market is information ally inefficient. It is clearer from the following Table 4.2.9.

Table 4.2.9

Accessibility of Market Information

S.N.	Research Variable	No. of Investor	% of Investors
a)	Yes	19	19%
b)	No	48	48%
c)	To some extent	22	22%
d)	No idea	11	11%
	Total	100	100%
	Calculated value of χ^2		30.80

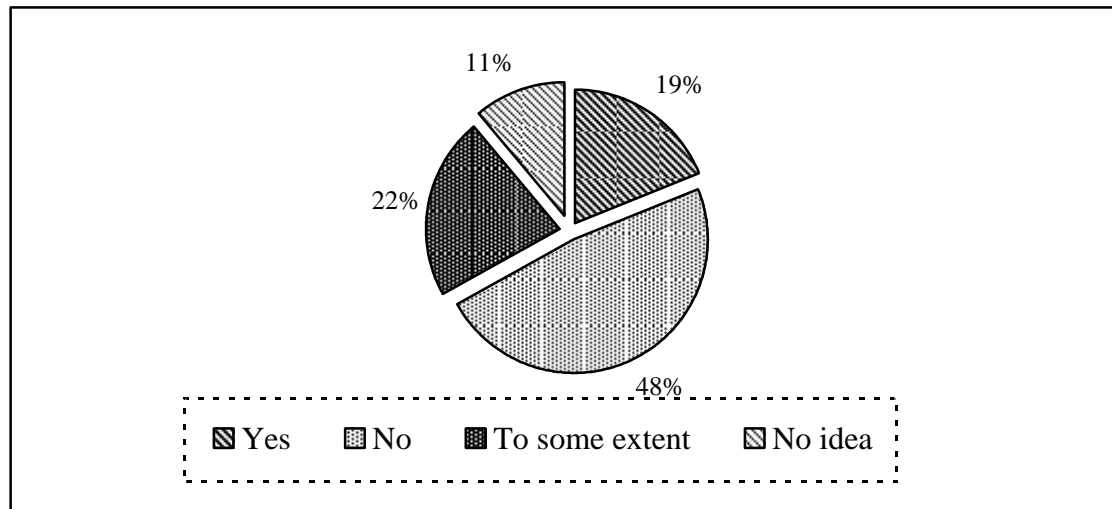
Sources: Field survey, 2011, March

Note: i) Tabulated t value of χ^2 at 0.05 level of significance for 3 d.f. is 7.82

The calculated value of chi-square (χ^2) 30.80 is greater than tabulated value 7.82, therefore, it is significant and alternative hypothesis (H_1) is accepted. That means there is significant difference among the view of respondent or between given alternatives.

Figure: 4.18

Accessibility of Market Information



4.2.10 Basis of decision making to invest in security market

Regarding the decision to invest in shares at the secondary market, different respondents responded in different way, 5 percent of the respondent replied that they takes decision on the basis of expert advice, 15 percent takes decision on the basis of broker advice, 32 percent replied that they takes the decision on the basis of own analysis and 48 percent of respondents replied that they takes decision on the basis of friends and colleges' suggestion. This statement will be cleared from the following Table 4.2.10.

Table 4.2.10

Basis of decision making to invest in security market

S.N.	Research Variable	No. of Investor	% of Investors
a)	Expert advice	5	5%
b)	Broker advice	15	15%
c)	Self decision	32	32%
d)	Friends and colleges' suggestion	48	48%
	Total	100	100%
	Calculated value of χ^2		43.12

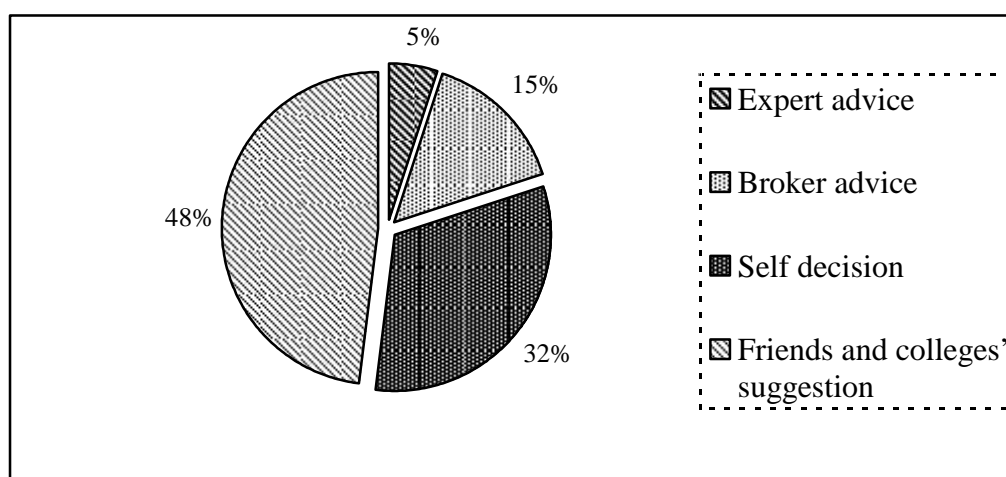
Sources: Field survey, 2011, March

Note: i) Tabulated t value of χ^2 at 0.05 level of significance for 3 d.f. is 7.82

The calculated value of chi-square (χ^2) 43.12 is greater than tabulated value 7.82, therefore, it is significant and alternative hypothesis (H_1) is accepted. That means there is significant difference among the view of respondent or between given alternatives.

Figure: 4.19

Basis of decision making to invest in security market



4.2.11 Difficulties in trading the share in Nepalese stock market

Regarding the question whether the trading the share in Nepalese securities market is difficult; 52 percent of the investor replied that they have to face many difficulties while trading, 27 percent of the investor replied that they have to face no problem and 21 percent replied that there is to some extent problem in trading shares in Nepalese stock market. Thus it is clear that some how the investor have problem while trading in security market. It is clear from Table 4.2.11

Table 4.2.11

Difficulties in trading the share in Nepalese stock market

S.N.	Research Variable	No. of Investor	% of Investors
a)	Yes	52	52%
b)	No	27	27%
c)	To some extent	21	21%
d)	No idea	0	0%
	Total	100	100%
	Calculated value of χ^2	54.96	

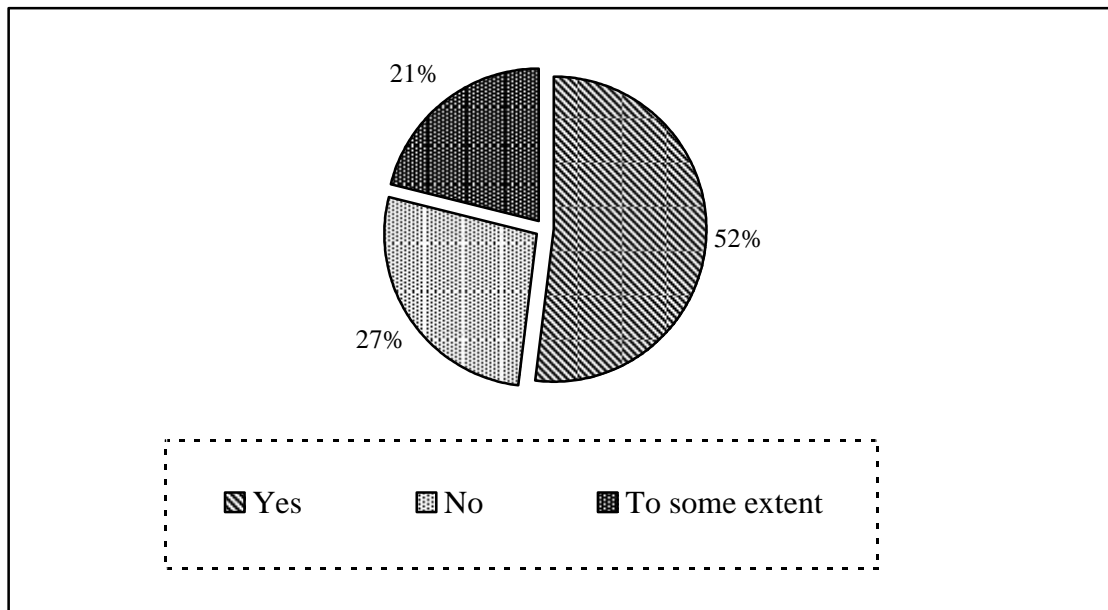
Sources: Field survey, 2011, March

Note: i) Tabulated t value of χ^2 at 0.05 level of significance for 3 d.f. is 7.82

The calculated value of chi-square (χ^2) 54.96 is greater than tabulated value 7.82, therefore, it is significant and alternative hypothesis (H_1) is accepted. That means there is significant difference among the view of respondent or between given alternatives.

Figure: 4.20

Difficulties in trading the share in Nepalese stock market



4.2.12 Experience regarding factors affecting the stock price in NEPSE

Many respondents have given their different types of view in these questionnaires. They have different opinion, some said that political stability, economic condition, Fundamental of company affect the share price in NEPSE, some said public saving, companies report, market trend, future plan affect the stock price. Some said strikes and demonstration called by different political parties also affect stock price.

4.3 Major findings of the study

In this study both of primary as well as secondary data are analyzed. It has gathered primary data with the help of research questionnaire, which has helped to identify the determinants of stock price. Similarly, with the help of secondary data, the relationship of market price per share with dividend, earning as well as book value has determined. Here, the empirical findings from both of primary as well as secondary data analysis are presented separately below:

4.3.1 Major findings from Secondary Data Analysis

The analysis of secondary data of nine private commercial banks gives the following results:

- For standard Chartered Bank Ltd, MPS is positively correlated with DPS, BVPS and EPS. Where, DPS and BVPS have very high degree of positive correlation and EPS is insignificantly correlated with MPS. All of these relationships except with DPS are not significant at 5% level of significance. BVPS and EPS are less volatile, MPS has moderate level of volatility but DPS is highly volatile in comparing with other variables. In overall, SCB has very good performance in the last seven years.
- For NABIL, MPS is positively correlated with DPS, BVPS and EPS. Where, DPS and BVPS have very high degree of positive correlation with MPS and EPS has high degree of positive correlation with MPS. However, all of these relationships except with EPS are significant at 5% level of significance. BVPS as well as EPS are less volatile in comparison with MPS and DPS but DPS is highly volatile in comparing with other variables. It is revealed from analysis that NABIL has good performance in last seven years.
- For BOK, MPS is positively correlated with all independent variables i.e. DPS, BVPS and EPS. Where, DPS and EPS have very high degree of positive correlation with MPS and BVPS has low degree of positive correlation with MPS. However, all of these relationships except with BVPS are significant at 5% level of significance. The volatility of MPS and EPS are higher than that of BVPS but DPS is highly volatile in comparison with other variables. It does not reach the sample benchmark lacked of lower mean. In overall, BOK has not satisfactory performance in the seven years.
- For NIB, MPS is positively correlated with DPS and EPS but BVPS is negatively correlated with MPS. Where, DPS and EPS have very high degree of positive correlation with MPS but BVPS has low degree of negative correlation with MPS. However, these degrees of correlation except with DPS are not significant at 5% level of significance. BVPS of this bank has satisfactory performance in comparison with other variables. EPS and BVPS are less volatile than DPS and MPS. BVPS is less volatile but DPS is highly volatile in comparison with other variables. In overall, NIB

does not reach the sample benchmark because of lower mean of most of the independent variables.

- While analyzing HBL, MPS is positively correlated with all of the independent variables i.e. DPS, BVPS and EPS. Where, DPS and EPS have very high degree of positive correlation with MPS and BVPS has low degree of positive correlation with MPS. The degree of correlation is insignificant to BVPS but significant to DPS and EPS at 5% level of significance. BVPS is more consistent where as MPS and EPS are not so bad and DPS is more volatile than other variables. It does reach the sample benchmark due to lesser mean. In overall HBL has not satisfactory performance.
- For NIC, MPS has positive correlation with DPS, BVPS and EPS. Where, DPS and EPS have very high degree of positive correlation with MPS and BVPS has high degree of positive correlation with MPS. However, these relationships are not significant to BVPS and EPS but significant to DPS at 5% level of significance. BVPS has very low degree of volatility where as DPS has higher degree of volatility. MPS and EPS have got a bit higher inconsistency than BVPS but lesser than DPS. In overall, MPS, DPS, BVPS and EPS of this bank are more consistent in comparison with sample benchmark. Hence, NIC does not have satisfactory performance than sample benchmark having lower mean but not such bad.
- For EBL, there exists higher degree of positive correlation of MPS with all independent variables. However, the degree of correlation shows significant at 5% level of significance. The performance of MPS, BVPS and EPS are good but MPS is bit more volatile than BVPS and EPS where as DPS has high degree of volatility which is not good. MPS, BVPS and EPS reach the sample benchmark due to higher mean but DPS does not reach industrial benchmark. In overall, the good performance of EBL is continued by higher mean of independent variables (i.e. BVPS and EPS) in the last seven years.
- For KBL, MPS is positively correlated with DPS, BVPS and EPS. MPS has high degree of positive correlation with DPS and BVPS but MPS is significantly correlated with EPS. However, these degrees of correlation except with EPS are insignificant at 5% level of significance. BVPS is more consistent in comparison with other variables, EPS has moderate degree of volatility and MPS and DPS has higher degree

of volatility. In overall, the KBL does not have satisfactory performance than sample benchmark having lower mean of dependent variables.

- For SBI, MPS is positively correlated with DPS, BVPS and EPS. MPS has significant correlation with EPS, low degree of positive correlation with DPS and high degree of positive correlation with BVPS. However, these degrees of correlation except with EPS are insignificant at 5% level of significance. BVPS is more consistent in comparison with other variables, EPS and MPS has moderate level of volatility but DPS has higher degree of volatility. In overall, the SBI does not have satisfactory performance than sample benchmark.

4.3.2 Major findings from Primary Data Analysis

Analyzing the primary data the following result are reveals:

- Major factor affecting the stock price is political situation of a country.
- Profitability and dividend policy are major factor that investor consider while making investment decision. Beside this, significant portion of investor tend to evaluate future prospects of the company.
- Most of the investors do not know about stock valuation model before investment. But investors, who have knowledge about valuation model use earning valuation model.
- According to respondents, Nepalese stock market does not follow any particular tend. Some of them also assert that market follows bullish trend.
- Most of the respondents purchase share of particular company for investment purpose.
- Banking sector is considered as secure sector for investment with low risk and higher return.
- Majority of investor opined that tax rate fluctuation and changes have significant effect in stock market.
- Most of the investors replied that environmental factors don't affect the stock price of Nepalese securities.
- Information related to share market is not in access of general investor so, it is concluded that Nepalese security market is not efficient.

- Most of respondent takes decision to invest in security market on the basis of friends and colleges' suggestion. Then some invest on sole.
- Many of the investors said that there are many difficulties while trading share in Nepalese stock market.
- Since, alternative hypothesis has been accepted in each questionnaire, so there is no similarity between the options presented in each query of research questionnaire.
- Investors have poor knowledge and understanding about stock market.
- The government policy is not clear and perfect about Nepalese stock market when analyzing the primary data. It is quite confusing type.
- Lastly in while asking personal experience, many investors mainly said that economical, political, fundamental and legal factors affect the share price. Beside these factors strike and demonstrations, cease-fire also affects the share price adversely.

CHAPTER – V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter ‘summary, conclusion and recommendation’ is the concluding part of this study, which summarizes the major findings. The facts and findings from primary and secondary data analysis are presented in this chapter. Besides summarizing and concluding research work, recommendations are made to concerned persons and organizations.

5.1 Summary

Financial market is the place where different types of financial securities are traded. The history of securities market began with the floatation of shares by Biratnagar Jute Mills Ltd. and Nepal Bank Ltd. in 1937. The Company Act was introduced in 1964. Government Bonds were issued for the first time in 1964. Securities exchange centre Ltd. was established in 1976 with the objective of facilitating and promoting the growth of capital markets with the initiative of the Government of Nepal and Nepal Rastra Bank. It was the only capital market institution that undertook the responsibilities of brokering, underwriting, managing public issues, creating market for government bonds and other securities. It was converted in to Nepal Stock Exchange (NEPSE) under a program to reform capital markets in 1993. Nepal stock exchange was non-profit making organization at past but now it has changed into profit making organization and now operating under Securities Exchange Act-2063. NEPSE has brought a number of changes in order to upgrade itself and provide efficient and reliable services. In August 2010, it automated its trading system.

The trading can be done earlier from NEPSE's trading floor but now NEPSE uses sophisticated technology, through which brokers can trade directly from their offices based in the Kathmandu valley. This remote trading facility was started from 1 November 2010. After the introduction of automated trading system and with the initiative and guidance of NEPSE member brokers have started trading from their own office through the wide area network (WAN) from 13 October 2010. Because of these facilities, now brokers do not have to come to NEPSE's office and can post orders to buy or sale shares from their respective offices. All brokers have been working from their own office since June 2011.

NEPSE has began trading of promoters' shares on 31st March 2011, adopting a different price quoting mechanism for the first trading of promoters' shares of the listed companies. for the first trading, the price of the promoters' share of a company that has a positive net worth shouldn't be less than half of five times its net worth per share or half of the current market price of the ordinary share, whichever is low. Similarly, in the case of a company that has a negative net worth, the first trading price could not be below half of the current market price of the ordinary share. Earlier, one could have traded the promoters' shares on the basis of the market price of ordinary share.

The researcher has tried to explore the determinants of stock price in NEPSE, with special focus to private commercial banks. The objectives of this research work are:

- To identify the major determinants of the stock price of listed companies in NEPSE.
- To identify the relationship between performance and market price of the selected companies.
- To identify whether Nepalese securities market is efficient or not.
- To identify important factors related with the secondary market in Nepal.

This research follows descriptive and analytical research methodology, which is commonly used for academic research. To meet the desired objectives, different statistical and financial tools has been used. Arithmetic mean, correlation and regression analysis, t-test are the major statistical tools that have been used for the study. To analyze qualitative factors affecting the share price, chi-square testing method of hypothesis has been used.

Even though DPS, BVPS and EPS affect the MPS positively, there are several other factors i.e. internal as well as external environment that affect the market price of stock. Theoretically, when earnings, dividends and book value per share increases, the market price per share also increases and vice versa. But in the case of NEPSE, this theory does not seem to be true hundred percent. Meaning that there are various other factors too that affects the share price. From the primary data analysis, factors of volatility of the stock price in NEPSE are identified. Such internal factors affecting the share price are earnings, dividend paid, net worth and risk associated with the company. Similarly, there are other environmental factors affecting the market price of share. Such environment factors affecting the share price are Nepal Rastra Bank's guidelines; price trend, information regarding the companies, demand and supply forces, time of AGM, political stability, tax

rate, global/national economy, change in management, market liquidity etc are the major factors for the sensitivity of the stock price in NEPSE.

5.2 Conclusion

There is a gap between the theory and practice of investment in Nepalese stock market due to lack of proper study and analysis of stock market. Nepalese investors are more conscious towards the dividend and price appreciation of the shares they are investing but most of the investors are only using buy and hold strategy as only few of them are trading their shares in secondary market. This shows that there lacks professionalism in Nepalese investors. Nepal Rastra Bank's guidelines are also affecting the share price of financial institutions. Recently NRB guidelines about paid-up capital and margin- lending are greatly affecting the share prices. There are small group of investors who believes on price- trend, they only invest on such companies whose prices are increasing which leads to the fluctuation of share prices.

Pricing behavior differs from company to company. Even though, DPS, BVPS and EPS jointly have significant effect on the share price, individually they do not have consistent relationship with MPS. It means there are some other factors that have been influencing and determining the share price significantly.

Company performance (EPS, BVPS, DPS, risk), information disclosed, change in management, timely AGM, other political and economic factors such as political stability, national economy, peace, strikes, demand and supply situation of the share are some factor they have direct impact on share prices. Similarly, other relevant factors, interest rate, tax rate, seasonal factors, day of the week effect, gold price, global economy, cost of equity, market liquidity and size of the firm do not have significant effect . In spite of the several constraints, the NEPSE has been growing gradually. The commercial banking sector is the best performer among the listed companies. We can't undermine the truth that with the presence of peace and political stability, the capital market gets far better soon.

5.3 Recommendations

The findings of the study can provide important information for those who concern, directly or indirectly with the stock market activities. Thus, the following recommendations can be outlined for the concerned:

- Dividend payments of the sample entity have greater inconsistency, so the companies need to think about their dividend policy.
- Independent rating agencies should be encouraged so that the investors will have a confident picture of financial health and future prospects of related companies.
- Lack of education and sufficient information is the main weakness of the investors. They should seek their right towards accurate and timely information, as well as for protection. Government should encourage the concerned body to organize programs, seminars time to time to create awareness among the investors.
- Similarly, investors should be alert to exploit the opportunities through short-term speculation. So, they are suggested to raise their voice and complain about the misconduct of relevant company or NEPSE, SEBON as well as of Government. They are encouraged to enrich their level of knowledge and make the investment opportunities fruitful.
- Brokers are suggested not only to look at own interests but also be sincere and cooperate with investors. Since, they have greater level of practical knowledge they should provide rational and accurate advices to their clients/investors and foster professionalism.
- To be a perfect market all information concerning future risks and returns of securities is readily available to all investors. As there exists various market imperfections, relevant information are not easily available to the investors. They are often published in national dailies, but most of the information is highly aggregated and not reliable. Because of the lack of technical knowledge, majority of the investors is unable to analyze the available information. As such, a single buyer and a single seller can affect the price of securities. NEPSE has to insure listed companies relevant information.
- NEPSE should expand its service to regional and local level. It will give equal opportunity to all the potential investors. The existing unwanted and unnecessary

paper work should be avoided by sifting into CDS system. It should monitor the activities of brokers as well as listed companies strictly.

- Listed companies are requested to avail the accurate and timely information to concerned authorities as well as to investors. They should conduct timely AGM, and fulfill the requirement of concerned authorities
- Government should formulate as well as implement effective rules and regulations, code of conduct, for the gradual development of capital market. For this purpose national as well as international stock experts should be consulted.

Future Avenues

- Research is an ongoing process. Study of security is a vast field of study. Through this research, it has tried to explore the determinants of stock price of selected commercial banks only, which I believe more specific, the further researcher can focus their study towards more specific factors.
- Researchers should also try to conduct study on effect of inflation, energy prices, world politics, world trade and other global phenomenon.
- Studies with sample of financial sector are flooded in recent years, so others should analyze companies from other sector.

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Appendix - I

The following hypothesis is set to test for the chi-square (χ^2) for the whole document.

Null Hypothesis (H_0):

There is no significance difference among the view of respondents (i.e. no difference).

Alternative Hypothesis (H_1):

There is significance difference among the view of respondents (i.e. difference).

Decision Criteria

- If calculated value of chi-square is greater than its tabulated value, that is significant and H_1 is accepted.
- If calculated value of chi-square is lesser than its tabulated value, that is insignificant and H_0 is accepted.

Q.N.1

Setting of Hypothesis

Null Hypothesis (H_0): There is no significance difference among the view of respondents.

Alternative Hypothesis (H_1): There is significance difference among the view of respondents.

Computing the Value of chi-square (χ^2)

Alternatives	O	E	O-E	(O-E) ²	$\frac{(O-E)^2}{E}$
a	40	25	15	225	9
b	20	25	-5	25	1
c	29	25	4	16	0.64
d	11	25	-14	196	7.84
	100	100			18.48

The test of statistics

Under H_0 is given by

$$\chi^2 = \frac{(O - E)^2}{E} = 18.48$$

Where,

O = Observed frequency

E = Expected frequency

Degree of freedom (d.f.) = n-1

$$= 4-1 = 3$$

Level of significance (α) = 5 % = 0.05

Critical Value: The tabulated value of chi-square (χ^2) at 5% level of significance for 3 degree of freedom is 7.82.

Result and Conclusion: Since, the calculated value of chi-square (χ^2) 18.48 is greater than tabulated value 7.82, it is significant and alternative hypothesis (H_1) is accepted. That means there is significant difference among the view of respondent or between given alternatives.

Q.N.2. Computing the Value of chi-square (χ^2)

Alternatives	O	E	O-E	(O-E) ²	$\frac{(O - E)^2}{E}$
a	44	25	19	361	14.44
b	9	25	-16	256	10.24
c	30	25	5	25	1
d	17	25	-8	64	2.56
	100	100			28.24

Q.N.3. Computing the Value of chi-square (χ^2)

Alternatives	O	E	O-E	(O-E) ²	$\frac{(O - E)^2}{E}$
a	12	25	-13	169	6.76
b	20	25	-5	25	1
c	16	25	-9	81	3.24
d	52	25	27	729	29.16
	100	100			40.16

Q.N.4. Computing the Value of chi-square (t^2)

Alternatives	O	E	O-E	(O-E) ²	$\frac{(O-E)^2}{E}$
a	31	25	6	36	1.44
b	12	25	-13	169	6.76
c	39	25	14	196	7.84
d	18	25	-7	49	1.96
	100	100			18

Q.N.5. Computing the Value of chi-square (t^2)

Alternatives	O	E	O-E	(O-E) ²	$\frac{(O-E)^2}{E}$
a	45	25	20	400	16
b	30	25	5	25	1
c	12	25	-13	169	6.76
d	13	25	-12	144	5.76
	100	100			29.52

Q.N.6. Computing the Value of chi-square (t^2)

Alternatives	O	E	O-E	(O-E) ²	$\frac{(O-E)^2}{E}$
a	57	25	32	1024	40.96
b	0	25	-25	625	25
c	29	25	4	16	0.64
d	14	25	-11	121	4.84
	100	100			71.44

Q.N.7. Computing the Value of chi-square (t^2)

Alternatives	O	E	O-E	(O-E) ²	$\frac{(O-E)^2}{E}$
a	56	25	31	961	38.44
b	19	25	-6	36	1.44
c	25	25	0	0	0
d	0	25	-25	625	25
	100	100			64.88

Q.N.8. Computing the Value of chi-square (χ^2)

Alternatives	O	E	O-E	(O-E) ²	$\frac{(O-E)^2}{E}$
a	19	25	-6	36	1.44
b	61	25	36	1296	51.84
c	20	25	-5	25	1
d	0	25	-25	625	25
	100	100			79.28

Q.N.9. Computing the Value of chi-square (χ^2)

Alternatives	O	E	O-E	(O-E) ²	$\frac{(O-E)^2}{E}$
a	19	25	-6	36	1.44
b	48	25	23	529	21.16
c	22	25	-3	9	0.36
d	11	25	-14	196	7.84
	100	100			30.8

Q.N.10. Computing the Value of chi-square (χ^2)

Alternatives	O	E	O-E	(O-E) ²	$\frac{(O-E)^2}{E}$
a	5	25	-20	400	16
b	15	25	-10	100	4
c	32	25	7	49	1.96
d	48	25	23	529	21.16
	100	100			43.12

Q.N.11. Computing the Value of chi-square (χ^2)

Alternatives	O	E	O-E	(O-E) ²	$\frac{(O-E)^2}{E}$
a	52	25	27	729	29.16
b	27	25	2	4	0.16
c	21	25	-4	16	0.64
d	0	25	-25	625	25
	100	100			54.96

Appendix - II

SAMPLE AVERAGE AND AVERAGE OF NINE COMMERCIAL BANKS Market Price Per Share (MPS)

YEAR	SCB	NABIL	BOK	HBL	EBL	NIB	SBI	NIC	KBL	Total	Mean	SD	CV
2004/05	1,575	700	254	1000	430	760	401	245	0	5365	596.11	449.73	75.44
2005/06	1640	740	198	836	445	795	255	220	0	5129	569.89	470.91	82.63
2006/07	1745	1000	295	840	680	940	307	218	0	6025	669.44	504.65	75.38
2007/08	2345	1505	430	920	870	800	335	366	369	7940	882.22	629.79	71.39
2008/09	3775	2240	850	1100	1379	1260	612	496	443	12155	1350.56	1005.03	74.42
2009/10	5900	5050	1375	1740	2430	1729	1176	950	830	21180	2353.33	1740.24	73.95
2010/11	6830	5275	2350	1980	3132	2450	1511	1284	1005	25817	2868.56	1844.32	64.29
Total	23810	16510	5752	8416	9366	8734	4597	3779	2647	Total	9290.11	6644.67	517.50
Mean	3401.43	2358.57	821.71	1202.29	1338.00	1247.71	656.71	539.86	378.14	Mean	1327.16	949.24	73.93
SD	2015.50	1840.35	735.31	429.36	977.35	587.39	455.76	386.74	383.66				
CV	59.25	78.03	89.48	35.71	73.05	47.08	69.40	71.64	101.46				

Dividend Per Share (DPS)

YEAR	SCB	NABIL	BOK	HBL	EBL	NIB	SBI	NIC	KBL	Total	Mean	SD	CV
2004/05	100	30	10	125	81	30	0	0	0	376	41.78	45.19	108.16
2005/06	274	50	5	199.28	20	20	8	0	0	576.28	64.03	95.03	148.41
2006/07	110	65	10	20	20	15	0	0	0	240	26.67	35.04	131.40
2007/08	120	70	15	185.58	174	12.5	0	83.2	0	660.28	73.36	69.02	94.08
2008/09	507.5	85	273	85	25	466.8	5	50.13	89.65	1587.08	176.34	181.28	102.80
2009/10	3030	2120	20	450	739	437.25	424.19	191.05	167.05	7578.54	842.06	970.58	115.26
2010/11	3495	2170	942.11	421	959.6	824.09	0	257.85	10.58	9080.23	1008.91	1079.82	107.03
Total	7636.5	4590	1275.11	1485.86	2018.6	1805.64	437.19	582.23	267.28	Total	2233.16	2475.97	807.15
Mean	1090.93	655.71	182.16	212.27	288.37	257.95	62.46	83.18	38.18	Mean	319.02	353.71	115.31
SD	1385.34	942.13	323.08	152.01	363.14	298.60	147.71	95.61	60.77				
CV	126.99	143.68	177.36	71.61	125.93	115.76	236.50	114.95	159.15				

Book Value Per Share (BVPS)

YEAR	SCB	NABIL	BOK	HBL	EBL	NIB	SBI	NIC	KBL	Total	Mean	SD	CV
2004/05	363.86	233	171.83	220.02	150.74	307.94	131.88	105.24	103.89	1788.40	198.71	85.67	43.11
2005/06	403.15	267	193.52	247.81	150.1	216.24	134.05	110.43	112	1834.30	203.81	88.71	43.53
2006/07	399.25	301	218.38	246.93	171.52	246.89	146.8	124.09	114	1968.86	218.76	87.10	39.81
2007/08	422.38	337	213.6	239.59	219.87	200.8	159.54	136.84	141	2070.62	230.07	89.03	38.70
2008/09	468.22	381	230.67	228.72	217.67	239.67	151.78	116.13	149	2182.86	242.54	107.51	44.33
2009/10	512.12	418	164.68	264.74	292.75	234.37	178.04	139.17	137	2340.87	260.10	122.84	47.23
2010/11	401.52	354	222.51	247.95	321.77	223.17	160.57	138.09	128	2197.58	244.18	91.59	37.51
Total	2970.5	2291	1415.19	1695.76	1524.42	1669.08	1062.66	869.99	884.89	Total	1598.17	672.46	294.22
Mean	424.36	327.29	202.17	242.25	217.77	238.44	151.81	124.28	126.41	Mean	228.31	96.07	42.03
SD	46.12	59.93	23.96	13.50	62.85	31.76	14.94	13.04	15.61				
CV	10.87	18.31	11.85	5.57	28.86	13.32	9.84	10.50	12.35				

Earning Per Share (EPS)

YEAR	SCB	NABIL	BOK	HBL	EBL	NIB	SBI	NIC	KBL	Total	Mean	SD	CV
2004/05	141.13	55.25	2	60.26	32.91	33.59	9.61	1.36	0.38	336.49	44.37	42.60	96.01
2005/06	149.3	84.66	17.72	49.45	29.9	39.56	11.47	5.19	3.26	390.51	43.39	44.60	102.78
2006/07	143.55	92.61	27.5	49.05	45.6	51.7	14.26	13.65	9.74	447.66	49.74	41.25	82.94
2007/08	143.14	105.49	30.1	47.91	54.2	39.5	13.29	22.75	17.58	473.96	52.66	41.31	78.45
2008/09	175.84	129.21	43.67	59.24	62.8	59.35	18.27	16.1	16.59	581.07	64.56	51.48	79.73
2009/10	167.37	137.08	43.5	60.66	78.4	62.57	39.35	24.01	22.7	635.64	70.63	47.36	67.05
2010/11	131.92	108.31	59.94	62.74	91.82	57.87	28.33	25.75	16.35	583.03	64.78	37.13	57.31
Total	1052.25	712.61	224.43	389.31	395.63	344.14	134.58	108.81	86.60	Total	390.13	305.72	564.28
Mean	150.32	101.80	32.06	55.62	56.52	49.16	19.23	15.54	12.37	Mean	55.73	43.67	80.61
SD	14.46	25.63	17.63	5.99	21.23	10.65	10.01	8.78	7.57				
CV	9.62	25.17	55.00	10.78	37.56	21.66	52.06	56.51	61.19				

Appendix - III

Determinants of Stock Price in Nepal

RESEARCH QUESTIONNAIRE

Please make tick mark (✓) for the best option.

1. Which of the following factors affect the stock price of the listed companies?
 - a) Political situation ()
 - b) Financial strength of the company ()
 - c) Rules and regulation regarding security market ()
 - d) Rumors ()

2. Which of the following factor do you consider while making investment decision regarding the stock of a particular company?
 - a) Profitability and Dividend policy ()
 - b) Corporate governance ()
 - c) Future prospect ()
 - d) Financial stability ()

3. Which valuation model do you prefer while valuing the share before making transaction?
 - a) Net Asset Value Model ()
 - b) Earning Valuation Model ()
 - c) Dividend Valuation Model ()
 - d) No idea ()

4. In your opinion which of the following trend of stock price movement is suitable for Nepalese security market?
 - a) Bullish Trend ()
 - b) Bearish Trend ()
 - c) No particular Trend ()
 - d) No idea ()

5. For what purpose do you want to own share of a company?
 - a) Investment ()

- b) Ownership & Control ()
- c) Social Status ()
- d) No Specific purpose ()

6. Which of the following sector do you think secure from investment point of view?

- a) Banking sector ()
- b) Manufacturing sector ()
- c) Hydro-power sector ()
- d) If any

7. Do you think the capital gain tax and dividend tax imposed by the government is responsible for affecting security market?

- a) Yes ()
- b) No ()
- c) To some extent ()
- d) No idea ()

8. Does international environment affect the stock price of Nepalese Securities?

- a) Yes ()
- b) No ()
- c) To some extent ()
- d) No idea ()

9. Do you think necessary information is easily available in Nepalese stock market?

- a) Yes ()
- b) No ()
- c) To some extent ()
- c) No idea ()

10. On which basis do you make decision to invest in share in secondary market?

- a) Expert advice ()

- b) Broker advice ()
- c) Self decision ()
- d) Friends and colleges' suggestion ()

11. Do you think is there any difficulties in trading shares in Nepalese stock market?

- a) Yes ()
- b) No ()
- c) To some extent ()
- d) No idea ()

12. Any experience you want to share with us regarding the factors affecting the stock price in NEPSE?

- A.....
- B.....
- C.....

Name (Optional)

Designation (Optional)

Email Address (Optional)