

CHAPTER- I

INTRODUCTION

1.1 General Background of the Study

The world's economy is changing rapidly. Nepal is one of the least developed countries lying between two large countries India and China. It is a small kingdom of mountains and hills. It is endowed with richly diversified geography and bio-diversity with huge potentiality of hydroelectric power. It's religion, culture, natural beauty, art and archaeology is quite distinct in the world with in the small area of 1,47,181 sq km in total.

The economy of the country largely depends upon the utilization of its resources and mobilization of capital. Due to the lack of proper utilization of resources the country is going backward. The mobilization of the capital is an important tool to utilize the resources and hence it affects the overall economy directly and indirectly. The financial institutions contribute the national economy by accumulating the capital funds to meet the financial needs of different productive sectors. They actively participate in the money market and the capital market, as both demanders and suppliers of the funds.

Financial Market is the place where the financial instruments like share, bond and debenture are traded. "A financial market is a market for creation and exchange of financial assets if you buy or sell financial assets, you will participate in financial market in some way or other." (Pradhan, 2002:24). There are different types of financial markets. Each market serves a different set of customer or deal with different types of security. Transfer of capital between savers and those who need capital take place in different ways like direct transfer, indirect transfer through investment banks and indirect transfer through financial intermediaries.

Investment has significant role for the well development of the 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 categorized 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 markets such as securities.

Financial markets can be 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 securities. Money markets are sometimes classified as organized and unorganized markets. The organized or formal money markets an institutional mechanism for the transaction of short-term securities and commercial banks, finance companies and other savings/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 markets are involved. Secondary markets are markets in which existing/outstanding securities are traded among by the SEBO/N and the other services such as managers, underwriting and listing of corporate stocks are provided by licenses company/bodies. NEPSE is the only one organized stock markets which provides floor for the trading (buy and sell) of securities already issued.

Summary and Classification of Financial Markets

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|---|-------------------------------|----|---------------------------|
| 1 | Nature of claim----- | a. | Debt Market |
| | | b. | Equity Market |
| 2 | Maturity of claim----- | a. | Money Market |
| | | b. | Capital Market |
| 3 | Seasoning of claim----- | a. | Primary Market |
| | | b. | Secondary Market |
| 4 | Timing of deliver----- | a. | Cash or spot market |
| | | b. | Forward or futures Market |
| 5 | Organizational structure----- | a. | Exchange traded market |
| | | b. | Over the counter Market |

(Giri, 2007:2)

1.1.1 Constituent of Capital Market in Nepal

Securities Board, Nepal (SEBO/N)

Security board, Nepal was established on 26th 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 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 sound system in 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 objective 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.

As per the Securities act, 2006, the major functions, duties and power of SEBON are as follows.

- Register securities of public companies.
- Provide licence to operate stock exchanges.
- Provide licence to operate securities businesses.
- Permit the operation of collective investment schemes and investment fund programme.
- Draft regulations, issue directives and guidelines.
- Supervise and monitor stock exchanges and securities business activities.

- Take legal action against the non-compliance companies according to the existing laws.
- Review reporting of issuer and listed companies, and securities business persons.
- Conduct research, study and awareness programmes regarding securities markets.
- Coordinate and cooperate with other domestic as well as international securities related regulatory agencies.
- Formulate policies and programmes relating to securities market and advise the Government of Nepal as and when required.

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 was established with an objective of facilitating and promoting the growth of capital markets. The major task undertaken by Nepal Stock exchange are brokerage, undertaking, managing public issue, marking market for government bonds and other financial services. Nepal Stock Exchange is a non-profit organization operating under Securities Exchange Act 1983.

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 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.

According to the Securities Act, 1983, the board of directors of NEPSE of Nepal Government and different institutional investors nominate nine directors, among them six directors. Two from the licensed members and the General Manager of the NEPSE are the Ex-officer Director of the board. The authorized capital of exchange is Rs. 50 million and Rs.34.91 million are subscribed by Nepal Government/Nepal Rastra Bank, Nepal Industrial and Development Corporation and licensed members. At present 159 companies have listed their securities. NEPSE had adopted an “Open-out-cry system”. It means transactions of securities are conducted on the open auction principle on trading floor, where the price is determined when bid and offer price

match. This system is traditional and had various weaknesses. But now NEPSE has adopted a "Computerized Trading System" i.e.; "Automated trading System" in 7th Bhadra 2064. In this system, the broker traded the shares by entering the number of shares and price in computer. In the previous stage of computerized trading, the transaction is occurred only in the trading hall which is known as Local Area Networking. After the successful computerized trading, NEPSE adopted Wide Area Networking in 27th Ashoj 2064.

1.1.2 Security Market

In simple sense, securities market is a place where people buy and sell financial instruments. There, financial instruments may be in form of government bonds, corporate bonds or debentures, ordinary share, preference shares 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 are 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.

An efficient market is one where current price of the shares gives the best estimates of its true value transferred from one to another a fair price through the organized brokerage system. The major functions of securities market is to provide ready and continuous market for purchases and sales of securities at competitive price thereby, importing future market ability and liquidity. It is a medium through which scattered savings and scarce resources are transferred to productive areas that ultimately help in the economic development and industrialization of the nation.

Primary Market

Primary Markets denote the market mechanism for the original sale of securities by an issuer to the public. It is the marketing which the securities are sold at the time of their initial issuance. In other words, a market for a newly issued securities time of their

initial issuance is called primary market. Corporate bodies issue new securities in the primary market. Securities available for the first time are offered through the primary securities market. The issuer may be a brand new company or one that has been in business for many years. The securities offered might be a new type for the issuer or additional amount of security - used frequently in the past. The key is that these securities absorb a new fund for the coffers of the issuers.

All the securities whether in the money market or capital market, are initially issued in the primary market. This is the only market, in which the corporate or government issuer is directly involved in the transaction and receives direct benefits from the issue, which is the company actually receives the proceeds from the sale of securities.

Secondary Market

Secondary Market is the marketing which securities are traded that has been issued at some previous point of time. In other words, where outstanding securities are traded is referred to as the secondary market or more popularly known as the stock market. Share or stock market is a major component of securities market. Stock market is a medium through which corporate sector mobilizes funds to finance productive projects by issuing shares in the market. The efficient collection of small amounts of savings and transferring funds into the competitive and efficient uses requires a well functioning capital market to facilitate the process. Thus, secondary market deals with previously issued shares mainly traded through stock exchange, over the counter market or direct dealing.

Secondary market in simple sense, are markets in which existing, already outstanding securities are traded between investors. It is the market that creates the price and allow for liquidity. If secondary market did not exist, the investors would have no place to sell their assets. Without liquidity many people would not invest at all. The corporations whose securities are being traded are not involve in secondary market transactions and thus do not receive any funds from such a sale. The function of secondary market is to provide liquidity for the securities purchased in the primary market.

1.2 Statement of the Problem

Capital market investment in this present context plays a major role in the economic development of the country. The stage of development of capital market in any country and its effective growth depends upon the aggregate economic condition, saving and investment opportunities etc.

There are various institutions involved in the capital market but they are not showing positive and good performance as per the investor's expectations. On the other hand, the investors are responsible for not having self control, self judgment in the choice of the securities for investment. Besides that price earnings are not made available to the investors cannot identify good and bad stocks. Thus having lack of adequate information and knowledge about the certain companies, investors are unsystematically investing in stocks.

Existing economic imbalance, political instability, ineffective implementation of the liberal economic policy of the country have generated negative symbols in the economy. The price of the securities especially common stocks have been randomly fluctuating and declining over the past years. Consequently, some companies were liquidated and some are operating hardly in the market. The problem of Nepali stock market have not been diagnosed and identified. The policy makers are unable to make the appropriate policy for the development of the stock market. Most of the government level efforts for the development of the stock market have poorly contributed.

There are two approaches regarding the share price movement in the market. The first approach assumes that the market is inefficient in pricing of shares, in which the technical analysis theory argues that the analysis of the historical prices and trading of stocks provide meaningful information and which also provide the idea of future price movements to the investors. It attempts to explain and forecast changes in security price by studying the market data rather than information about a company or its prospects.

The second approach, the efficient market theory, which argues that market, is efficient in pricing the shares. In a situation where stock price movement follows random walks and every point in time actual prices represent good estimate of its

intrinsic values, general investors tend to select any security randomly to form his/her optimum portfolio. As the best investment decision strategy in such market will be random selection of securities.

The present study will try to examine the weak form of efficient market by hypothesis. It will also find out whether the price fluctuation is significantly correlated with past price movements. It also intends to explore ideas as to whether the stock market is efficient in pricing of shares or not.

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

- What are the major determinants of the stock price in NEPSE?
- How earning and book value affect to the stock price?
- What is the effect of the dividend to the stock price?

1.3 Objective of the Study

Investors require proper knowledge of share price i.e. how it is formed, why does it fluctuate, what factors are responsible for the determination of its price and so on.

Furthermore, this study is proposed to meet the following objective:

- To identify the financial indicators that has major influence on stock price.
- To analyze whether stocks of the sampled companies are over-priced, under-priced or equilibrium price.
- To examine the relationship of dividends and stock price.
- To examine and evaluate the relationship between MPS with the various financial indicators like EPS, BPS, DPS etc.
- To forecast the future market prices by using regression analysis

1.4 Significance of the Study

- The study may draw the attraction from every corner of entrepreneurs and investors and other academicians and also other interested parties.
- This study is extremely helpful to the financial managers of corporate firms to know about the movement and price formation of stock price with respect to change in financial position of the firms.
- This study is very useful to potential investors who are interested to know the effect of price trend, volume of stock and impact of signaling factors in NEPSE index.

1.5 Limitation of the Study

The study will have some limitations; basically the study is done for the partial fulfillment of Masters of Business Studies. Time constraints, financial problem and lack of research experience will be the primary limitation and other limitations are as follows;

- The study will confine only to Listed Companies of Nepal Stock Exchange and its members.
- Foreign information and rules affecting the share market is ignored.
- Studies and reference were also extremely limited in the prospective of Nepalese stock market.

1.6 Population and Sample

For this study, the population is concerned only with the selected listed company in NEPSE; of which study is conducted over five year's period of the study.

The samples for the study are taken as follows:

S N	Bank	Insurance	Finance
1.	Nabil Bank Ltd.	National Life and General Ins. Co.	Kathmandu Finance Ltd.
2.	Bank of Kathmandu Ltd.	Premier Insurance Co. Ltd.	Universal Finance Ltd.
3.	Kumari Bank Ltd.	NECO Insurance Co. Ltd.	People's Finance Ltd.

1.7 Chapter Scheme

This study has been organized over altogether five chapters. Starting from Introduction, Review of Literature, Research methodology, Presentation & Analysis of data and summary, to conclusion & Recommendation as get of the entire study. A brief outline of this chapter has been outlined as under.

The **First Chapter** entitled "**Introduction**" introduces the subject; present the research problem, reason for studying, objective of the study, along with limitation.

The **Second Chapter** entitled "**Review of Literature**" concerned with the study of Corporate Performance and Stock Price have been reviews & presented.

The **Third Chapter** discussed the “*Research Methodology*” used in the study. It comprises research design, nature & source of data, data gathering method and analytical tools used.

The **Fourth Chapter** deals with the “*Presentation & Analysis of Data*” & scoring the empirical finding out the study through definite course of research methodology.

The **Fifth Chapter** i.e. “*Summary*” of the study, which is followed by the basic conclusion of the study based in the fourth chapter on the basic of these conclusion and recommendation has also been presented for consideration.

CHAPTER - II

REVIEW OF LITERATURE

Review of literature is one of the most significant parts of research. Review of literature means reviewing research studies or other relevant propositions 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. The main reason for a full review of research in the past is to know the outcomes of those investigations in area where similar concepts and methodologies had been used successfully.

In the global context there are thousands of research papers, articles, books and journals relating to the securities market. Similarly, some of the major determinants of the stock price in various stock exchanges have been identified. Even though the capital market is not well developed in Nepal, these are various researches made on it. It is being very infancy; the factor which affects the stock price of Nepalese commercial bank large may vary from that of NEPSE. But some of the common factors are worldwide. In this chapter various books, magazines, journals, research papers, unpublished thesis reports etc are reviewed, which affects the stock price in Nepalese commercial banks listed in NEPSE. The first section of this chapter is attempted to present brief glimpses on the common stock as well findings of the related previous studies. This section includes the studies conducted in the foreign context as well as Nepalese context.

The basic concern of the study is to focus on the pricing behavior of the stocks of the companies listed in Nepalese Stock Exchange. So, in this chapter, an attempt is made to review some of the literature concerning the stock market in Nepal and abroad as well as the market price behavior. The price behavior of the stock and its trading activity has got the tremendous concentration in security investment. So, a better understanding of these determinants may increase investor's confidence in the stock market and thereby enhance the effectiveness of corporate resource allocation. Hence more and more concerns over pricing behavior are arising and most of the concerned books bear some paragraph on this issue.

2.1 Conceptual Framework

2.1.1 Common Stock

The common stocks represent ownership in a company. The holders of common stocks, called the shareholders or stockholders, are the legal owners of the company. The common stocks are the permanent and vital source of capital since they do not have a maturity date. For the capital contributed by the shareholders by purchasing common stocks, they are entitled to dividends. The amount or rate of dividend is fixed by company's Board of Directors. The common stock is, therefore, known as variable income security. Being the owners of the company, the stockholders bear the risk of ownership; they are entitled to dividends after the claims of others have been satisfied. Similarly, when the company is wound up, they can exercise their claims on assets after the claims of the other suppliers of capital have been met. The common stocks are issued by the firms to raise ownership capital and the investors buy them with the expectation that they receive a share of profit periodically. The common stocks legally represent the equity of business firm, and the holders are the owners who share all the profits and losses of the business. They enjoy all earnings after meeting the obligation of interests on debts and dividends on preferred stocks. Thus, they enjoy all net benefits of the business by assuming the risk of losing their capital.

Stock Certificates

“The ownership of a firm's stock has typically been represented by a single certificate, with the number of shares held by the particular investor noted on it. Such a stock certificate is usually registered, with the name, address, and holding of the investor included on the corporation's books. Dividend payments, voting materials, annual and quarterly reports and other things are then sent directly to investor, taking into account the size of his or her holdings.

Shares of stock held by an investor may be transferred to a new owner with the assistance of either the issuing corporation or, more commonly, its designated transfer agent. This agent will cancel the old stock certificate and issue a new one in its place, made out of the new owner. Frequently, a register will make sure that this canceling and issuing of certificate has been done properly. Usually, banks and trust companies act as transfer agents and registrars. Many stock holders have chosen to avoid these rather cumbersome procedures. Instead, depository trust companies are used which

substitute computerized records for embossed certificates.” (Sharpe, Alexander & Bailey, 2000:458)

Features of Common Stock:

1. Claim on income

The common stockholders bear a right to claim on income, which is earning available for ordinary shareholders, after paying expenses, interests charges, taxes and preferred dividend, if any. The income may be distributed among shareholders in the form of dividends or retained earnings. Dividends are immediate cash flow to shareholders, whereas retained earnings are the income reinvested in the organization, which ultimately increase the net worth of shareholders. Claim on Assets: The common stockholders have a residual claim on the company’s assets in case of liquidation. Out of the realized value of assets, first the claim of debt-holders and then preference shareholders are satisfied, and the remaining balance, if any, is paid to the common stockholders.

2. Voting Rights

Because the common stockholders of a company are its owners, they are entitled to elect the board of directors. In a large corporation, shareholders usually exercise only indirect control through the board of directors they elect, the board, in turns, selects the management and management actually controls the operations of the company. Voting can do either in person at shareholders annual meeting or by proxy.

3. Preemptive Right

The law grants the shareholders the right to purchase new share in proportion to their current ownership. Thus the preemptive right entitles the stockholders to maintain his proportionate share ownership in the company. The stockholder’s option to purchase, a stated number of new shares at a specified price during a given period, is called rights which can be exercised at a subscription price which is generally much below the current market price of the shares.

The preemptive right allows the stockholders to subscribe to any new issue of stock so that they can maintain their previous fraction of the total number of shares sold (usually called the “outstanding shares”). Some states automatically make the preemptive right a part of every corporate charter: in others, its inclusion as part of the

charter is optional. To grant the preemptive right is to recognize that stockholders are part owners of corporations and such should have an interest in earnings and assets and a voice in management proportionate to the fraction of voting shares they own. The preemptive right, if exercised, prevents the dilution of ownership control inherent in additional stock shares. Thus the preemptive right, if exercised guarantees the investors' undiluted maintenance of voting control, share in earnings and share in assets. (Francis 1983).

4. Limited Liability

The common stock holders are the true owners of the company but their liability is limited to the amount of their investment in shares. If a stockholder has already fully paid the issue price of share purchased, s/he has nothing more to contribute in the event of financial distress or liquidation. The limited liability feature of share encourages unwilling investors to invest their funds in the company which helps company to raise funds (Pandey, 1999:905-908).

Most of the investors are wise to invest their saving funds in stocks, with the expectation of future cash inflow as dividends and maximization of value of their holdings in the market. The dividends and the value of the firm are linked with the earning power of the firms, which ultimately affects the market price of shares. So brief discussion of some financial indicators, like earning per share, dividend per share, book value per share and market price per share, have been presented in the following paragraph.

2.1.2 Stock Price

Stock price is the amount of money that one has to pay to purchase/receive a stock of a company. If A buys 10 shares of the Bank of Katmandu from B, s/he pays Rs. 2000 for these 10 shares, and then the price of share is Rs. 200 [i.e. Rs. 2000/10]. Thus, stock price is the amount of money paid by a buyer to buy one stock or the amount received by the seller by selling a stock. The stock price is determined in stock market, by market forces i.e. demand (buyer's force) and supply (seller's force). The demand and supply are based on the environmental forces and individuals' future expectations/assumptions. The stock (market) price is different from its par value and book value.

2.1.3 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. Some corporations issue no-par stock. In that case, a stated value must be recorded in place of the par value” (Weston and Brigham,1987:78). The initial offering price of the share may vary from the par value if stocks are issued on premium or discount.

Earning per share (EPS)

Accountings earnings that represents the difference between revenue and expenses, including the expenses associated with non-equity source of funds (such as interest to debt, dividend to preference share) is also known as total earnings available for common stock. If this portion of income is divided by number of outstanding shares, we get earnings per share. (Sharpe, Alexander and Biley, 2001:622)

Retained Earnings

The balance sheet account which indicates the total amount of earning of the firm has not paid out as dividends throughout its history; these earnings have been reinvested in the firms.

Dividend per share

Dividend per share are calculated by dividing the total dividend amount paid for the financial period by the number of ordinary shares in issue. The directors may pay an interim dividend during the accounting period and then recommend a final rate of dividend per share for approval by shareholders at Annual General Meeting (AGM).

Forms of dividends

) Cash Dividend

Payments made in cash to shareholders are termed as cash dividends. Distribution of cash dividend causes the reduction in total assets and net worth of the company.

) **Stock Dividend**

Distribution of bonus shares as dividend to the stockholder is known as stock dividend. This increases the number of shares of the company.

Book Value per Share

With the passage of time, a corporation will generate income much of which is paid out to creditors (as interest) and to stockholders (as dividend). Any remainder is added to the amount shown as cumulative retained earnings and other entries (such as “Common Stocks” and “Capital Contributed in excess of par value”) under stockholders’ equity is the book value of the equity:

Cumulative Retained Earnings + Capital Contributed in Excess of Par + Common Stock = Book Value of Equity

“The book value per share is obtained by dividing the book value of the equity by the numbers of shares outstanding” (Sharpe, Alexander & Bailey, 2000:461 to 462).

Market Price of Share/Market Value

Market value in the secondary markets is determined by the demand and supplies factors and reflects the consensus opinion of investors and traders concerning the “VALUE” of the stock. The Market Value is influenced by many factors including economic and industry conditions, expected earnings and dividends, and market company risk consideration (Chency and Mossess, 1995: 248).

Generally, market price share of common stock is greater than par value. Market value per share is determined is organized stock exchange. 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 by the buyer to the seller to purchase a stock of a company. The market price of shares carries from one company to another since the common shareholders are the owner of the organization and have least priority to claim in liquidation, the share price is highly volatile and very sensitive to the environmental factors. An organization has two types of environment, i.e. internal and 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 favorable environment to

maximize the share price in the stock market. On the other hand external environmental forces are not within the control of the organization, but such forces highly affect the market price of shares. So the firm tries to adjust themselves according to the changing environmental forces, and such adjustments are intended to maximize the share price or the value of the firm.

Since the market price of share is very much sensitive to the environmental forces, the shares price increases if there is favorable environment and vice versa. This increase in share price is based on the market mechanism or market forces, i.e. demands and supply. If the earning and dividend of an organization increases, then the investors has positive perception towards the organization and they like to buy shares of that organization, as a result demand increases; on the other hand the suppliers like to hold the shares and supply decreases, and there is gap between demand and supply so the market price of shares increases. The investors determined the price, they would like to pay for the shares of an organization and the sellers determine the price, they would like to receive by selling shares based on their assumptions towards the organization and future expectations. Such assumption and expectations vary from individual to individual. Since different person analyses the same situation differently with their limited knowledge.

2.1.4 Capital Market

In Capital Market long term borrowing takes place. The primary instruments of the capital market are equity share, bond and debt. Therefore it includes both the new issue market and the old market. Capital market is concerned with long term finance: widely it consists of series of channels through which the saving of the community are made available for industrial and commercial enterprises and authorities. It is concerned with that private saving, individual as well as corporate, that are turned into investment through new capital issue and also new public loan floated by government and semi government bodies. In capital market demands for fund comes from agriculture, industry, trade and government while the supply of funds comes from individual or corporate savings, institutional investors and surplus of government.

The history of capital market is not so old for Nepalese context. The Capital Market was developed by the establishment of Security Exchange Center on 2033 B.S. The number or listed companies and their trading were very negligible until the

government of Nepal has made economic reforms along with broad financial policy in the process of economic liberalization. The privatization of public entities has been started and various banking and finance companies as well as other companies in the private sector are being established with local and foreign investments. As they were established as public companies, these companies have to issue some of their share of the general public. So, the development of this security market in Nepal takes its pace only the establishment of these banking and finance companies.

2.1.5 Security Market

Security Market interchangeably known as the integral part of capital market is in fact basis of the economy of country. The most effective use of idle and surplus resources can be brought into practice only by means of market mechanism. Security market, a structural network of savers and users of fund, is such a market mechanism which mobilized the fund of savers to the users and thus this financialisation boosts the industrialization and trading activities, which will bring the positive result to the economy as a whole. (Sharma, 2002:16)

There are two important functions of securities market, namely the raising of funds in form of shares and debentures and trading in the securities already issued by companies. While the first aspect is obviously much more important from the point of view of economic growth, the second aspect is also considerably important. In fact, if facilities for transferring of existing securities are abundant, the raising of new capital is considered assisted as the buyer of a new issue of security become confident that whenever he wants to get cash he can find a buyer of the security without much difficulty. This aspect is called the liquidity of the stock market. Thus the liquidity of the stock market affects the raising of new capital from the market. (Levine, 1992:33)

Security market sets a price for the securities it trades and makes it easy for people to trade them. Securities market facilitates the sale and resale of transferable securities. The security market can be defined as a mechanism for bringing together buyer and sellers of financial assets to facilitate trading. Securities market is classified into two: the market in which new securities are sold is called the primary market and the market in which existing securities are resold is called the secondary market. Secondary markets are created by brokers, dealers and market makers. Brokers bring buyer and seller together with themselves actually buying or selling: dealers set price

at which they themselves are ready to buy and sell (bid and ask price respectively). Broker and dealer come together organized market or in stock exchange. (Gitman, 1992: 457)

Relation between Primary & Secondary market

The primary market and the secondary market have a symbiotic relationship. While the primary market creates long term securities, the secondary market provides liquidity through marketability of those institutions.

Fresh capital issues are influenced by the level and trend in stock prices at the time of issue. Actually, new activity in the primary market adds depth to the secondary market by enlarging the supply of instruments for trading and investment in the secondary market. Stock prices in turners are influenced by the large size and bunching of new issues. Besides, primary and secondary market is indispensable ingredients of the capital market and is the basis to meet the financial requirements of corporate bodies.

2.1.6 Stock Exchange

The stock exchange is an institution where quoted securities are exchanged between buyer and sellers. The stock exchange provides market in a wide range of traded securities, generally of medium to long-term maturities, issued by companies, government and public organizations. (Winfield, 1985: 22)

Most of the investors are attracted to the equity shares because of its marketability and liquidity. One may like to buy more shares or selling existing shares from time to time when he is in need of money or when he wants to shuffle his portfolio. Since the stock exchange is a place where a large number of buyers and sellers congregate, one can, by and large, easily find his counterpart for sale or purchase of shares. The investor can convert his shares into cash at the prevailing market price readily. The existence of stock exchange facilitates all these functions without which it is almost impossible to do so.

The key function of securities exchange is to create a continuous market for securities at a price that is not very different from the price at which they were previously sold. The continuity of securities market provides the liquidity necessary to attract

investor's funds. Without exchanges, investors might have to hold debt securities to maturity and equity securities indefinitely. It is doubtful that many people would be willing to invest under such conditions. A continuous market also reduces the volatility of security prices further enhancing liquidity. (Gitman, 1992: 458)

The securities exchanges help to allocate scarce fund to the best uses. That is by disclosing the price behavior of securities and requiring the disclosure of certain corporate financial data; they allow investors to access the securities risk and return and to move their fund into the promising investments. An efficient market is one that allocates fund to most productive uses. Along with this, there is lot of functions of security exchange such as ready market and continuous market, evaluation of securities, safety of transactions, canalization of savings and widening the share ownership etc. However, besides these functions, there are three things as security exchange must do:

- Determine a fair price for the securities it trades or price discovery function
- Enable transaction to be made at as low cost as possible or minimization of transaction cost.
- Enable transaction to be made at this price quickly and easily or provision for liquidity.

Main Function of Stock Exchange: Price Discovery

Security is a legal representation of the right to receive future benefits under conditions. Its value depends on expectation of the amount of those benefits and evaluation of risk involved. Expectation and evaluation reflect both the information available and conclusions people draw from that information. Since the market may quite big, no single buyer or seller can influence the price of a share to any significant extent.

Price discovery is the process of arriving at fair prices for securities. Fair price indicates the compromise between fair offer price (lowest price at which any well informed trade willing to sell) and fair bid price (highest price any well informed buyer is willing to pay). Different markets do this in different way and different ways of organizing a market affect how closely the market approaches the ideal of fair prices. However, a very important fact that should not be forgotten is the concept of ideal market or market efficiency, which also the necessary pre-condition for

approaching to the fair price. In an ideal market value of securities equal its price of securities and prices reflects all available information about the market.

In the securities market there is a great importance of demand and supply for price fixation. The price of a given stock is determined exclusively by the interacting forces of supply and demand converging on such stock at a given time, that the price and volumes of its past transaction are meaningful indications of the probable relationship of the future and demand pressure it is likely to encounter in the market and that such relationship is the most important element in determine the probable direction the price movements. (Ackerman, 1980: 85)

The stock exchange produces through its continuous process of evaluation, prices of securities as close as possible to investment value based on present and future income yielding prospects of various enterprises, capitalized at notional rate of interest the rate which will prevail if and when all the liquid savings are employed into productive purposes. (Gupta, 1982: 148)

2.1.7 Price Determination

The share price is determined in the floor by the interaction of market forces i.e. demand and supply. The price is determined by the point of equilibrium between supply and demand, the shifting of this balance results in incessant adjusting of price in search of the ever changing new equilibrium. Then market price moves upward and downward. There are many other reasons that causes the stock price fluctuation major of them are economic, non-economic and market factors.

Dividend is the most important factors on the determination of stock price. Dividends are strongly influenced by the earnings power of the firm. There is a very close correlation between corporate earnings and dividends. Earning power, in turn, is strongly influenced by interest rates. In this way, the most fundamental factor in stock price fluctuation lies in changes in corporate earnings, which together with interest rates and business cycle trends, contribute to making up the economic factors influencing stock price.

The next influencing factors are non economic factors including changes in political conditions, such as administrative changes, change in the weather and other natural

conditions, and changes in cultural conditions, such as technological advance and the like. Similarly the other influencing factors are market factors, or internal factors of the market, considering to the tone of the market and supply-demand relations, may be cited as the third category, that influences the stock prices. Besides these factors the stock prices are influenced by the corporate performance of the company, company's policy regarding the capitalization of earnings as well as government rules and signaling effect of the market.

2.1.8 Theory of Price Behavior

The forces of supply and demand interact to determine a stock market price. If demand is high and supply is low then the price of stock goes up and vice-versa. There are essentially two schools of thought to explain the stock price behavior. They are:

- i) Inefficient Market Theory
- ii) Efficient Market Theory

Inefficient Market Theory

Conventional approach has considered that market is inefficient, which includes technical analysis theory. "Prior to the development of the efficient market theory, investors were generally divided into two groups, Fundamentalists Technicians." (Reilly,1986:347) The two groups are analyzed as follows:

Technical Analysis

Technical analysis is based on the widely accepted premise that security prices are determined by the supply of and demand for securities. The tools of technical analysis are therefore designed to measure supply and demand. Typically, technical analysts record historical financial data on charts, study these charts in an effort to find meaningful patterns to predict future prices. Some charting techniques are used to predict the movements of a single security; some are used to predict the movements of a market index; and some are used to predict both the action of individual securities and the market action. The basic assumptions underlying technical analysis are listed below:

- Market value is determined solely by the interaction of supply and demand.
- Supply and demand is governed by numerous factors, both rational and irrational.

- Aside from the effect of minor fluctuations in the market, stock prices tend to move in trends that persist for appreciable lengths of time.
- Changes in trends are caused by shifts in supply and demand.
- Shifts in supply and demand, no matter why they occur, can be detected sooner or later in charts of market action.
- Some chart patterns tend to recur, and these recurring patterns can be used to forecast price movements.

Technical theory involves study of the past volume and price data of the securities to predict future price fluctuations. Technical analysis theory of share price behavior is based on past market information. On the assumption that history tends to repeat itself, it is believed that knowledge of past patterns of share prices will help to predict future prices under similar circumstances. It involves the study of past market behavior with reference to various financial and economic variables to forecast the future. The changes in financial and economic variables are to be adjusted in the light of the present situation. Technical analysts or chartists, as they are commonly called, believe that they can discern patterns in price or volume movements and that by observing and studying the past behavior patterns of given stocks, they can use this accumulated historical information to predict the future price movements in the security. Technical analysis comprises many different subjective approaches, but all have one thing in common that is belief that these past movements are very useful in predicting future movements. Technical analysts believe in the theory behind chart formations and patterns. They read charts much like ancient astrologers read the stars, looking for “head and shoulders” formations. These, they believe, reflect the patterns of buying and selling, accumulation and distribution or market psychology.

Stock prices always move in trends because of an imbalance between supply and demand. When the supply of a stock is greater than the demand the trend will be down as there are more sellers than buyers; when demand exceeds supply the trend will be up as buyers “bid up” the price; and if the forces of supply and demand are nearly equal, the market will move side ways in what is called a “trading range”. Eventually, new information will enter the market and the market will begin to trend again either up or down, depending on whether the new information is taken as positive or negative. Trends which are very brief are called minor trends; and trends

lasting for a period of months are major trends. By analyzing trend lines we can determine what trend is in force. It helps us to act safe in market both in bullish and bearish market.

Price move in trends. A trend indicates there exist an inequality between the forces of supply and demand. Such changes in the forces of supply and demand are usually readily identifiable by the action of the market itself as displayed in the prices. Certain patterns or formations that appear on the charts have a meaning and can be interpreted in terms of probable future trend development.

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 form 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 r the market average each day in order to trace out the primary and secondary trends. (Francis, 1986:524)

Fundamental Analysis

Fundamental analysis approach involves working to analyze different factors such as economic influences, industry factor, governmental actions, firm's financial statement, its competitor and pertinent company information like product demand, earnings, dividends and management in order to calculate an intrinsic value of firms securities. The analysts who believes on fundamental facts to determine the intrinsic value of stock is popularly known as fundamental analyst or fundamentalist.

Fundamentalists forecast stock price on the basis of economic, industry and company statistic. The principal decision variables ultimately take form of earnings and value with as risk-return framework based upon earning power and the economic environment. "Fundamental analysts believe in companies" earnings, their management, economic outlook, firms' competitor's market conditions and many other factors." (Francis, 1986:624)

The objective of fundamental security analysis is to appraise the intrinsic value of a security. The intrinsic value is the true economic work of financial assets. " The fundamentalists maintain that any points of time every stock has an intrinsic value, which should in principle be equal to the present value of the future stream of income from that stock discounted at an appropriate risk related rate of interest" (Bhalla, 1983:283). Therefore the actual price of security is considered to be a function of a set of anticipation. Price changes as anticipation changes which in turn change, as a result of new information. In other words: a new piece of news released, securities market prices will adjust towards the new values. "The value of common stock is simply the present value of all the future income which the owners of the share holder receive" (Francis, 1986:398). And the actual price should reflect intrinsic value of the stock i.e. good anticipation of cash flows and capitalization rate corresponding to future time period. But in practice, first it is not known in advance what the appropriate discount rate should be for a particular stock. Therefore fundamentalists estimate their intrinsic value by studying in detail of all matters that is relevant to company. There are various models developed by fundamentalists to reflect the price of the securities. Some of them are as follows:

Capital Assets Pricing Model (CAPM)

The basic foundation of the theory was laid down in the microeconomics studies of mean variance choice by Markowitz (1959) and Tobin (1958). The critical extension to equilibrium in the capital market, and the development of the CAPM, was accomplished by Sharpe (1964) and Lintner (1965) (Stephen, 1978:886). Like the portfolio models of Markowitz and Tobin, the Sharpe-Lintner asset pricing model assumes a market of risk averse consumers who can make portfolio decisions on the basis of the means and standard deviations of one period portfolio returns, implicitly assuming that these standard deviations exist (Fama, 1971:30). The CAPM substantiated the idea that, in competitive equilibrium, assets earn premium over the risk less rate that increase with their risk, by showing that the determining influence on risk premium is the covariance between the asset and the market portfolio rather than the own or intrinsic risk of the asset. (Stephen, 1978:886) CAPM is concerned with two key questions:

- What is the relationship between risk and return for an efficient portfolio?
- What is the relationship between risk and return for an individual security?

The CAPM is based on the following assumptions:

- Individuals are risk averse
- Individuals seek to maximize the expected utility of their portfolios over a single period planning horizon.
- Individuals have homogeneous expectations they have identical subjective estimates of the means, variances and co-variances among returns, expected returns and standard deviations.
- Individuals can borrow and lend freely at a risk free rate of interest.
- The market is perfect; there are no taxes there are no transaction costs securities are completely divisible; the market is competitive.
- The quantity of risky securities in the market is given.

Gorden's Model

As per the Gordon's model about relationship of dividend policy and stock price, investors are not indifferent between current dividends and retention of earnings. An increase in dividend payout ratio leads to increase in the stock prices for the reason

that investors consider the dividend yield is less risky than the expected capital gain. Similarly investors required rate of return increases as the amount of dividend decreases. This means that there exists a positive relationship between the amount of dividend and the stock prices.

The model is based on the following assumptions:

- The firm is an all-equity firm.
- No external financing is available.
- Internal rate of return r , appropriate discount rate (K_e) are constant.
- The firm and its stream of earnings are perpetual.
- The corporate tax, do not exist.
- The retention ratio (b) once decided upon is constant. Thus the growth rate ($g=br$) is constant forever.
- The discount rate is greater than growth rate, $K > g$.

As per this model, the relationship between stock price and dividend varies on the following stages:

a) Growth Firm ($r > k$)

In case of growth firm the share price tends to decline in correspondence with increase in payout ratio or decrease in payout ratio or decrease in retention ratio. It means high dividend leads to increase in share prices. Therefore dividends and stock price are negatively correlated in such firms.

b) Normal Firm ($r = k$):

The price of share remains constant regardless of change in dividend. It means dividend and stock price are free from each other in normal firm.

c) Declining Firm ($r < k$):

The share price tends to rise in correspondence with rise in dividend payout ratio. It means dividend and stock prices are positively correlated with each other in declining firm.

J.E. Walter's model:

As per the study of J.E. Walter on the relationship of dividend and stock price, dividend policy of a firm affects its stock price. The relationship between firm's internal rate of return and cost of capital are the determining factors to retain profits or distribution of dividend. The stock price will be increased with the increase in the retention ratio of the firm when the internal rate of return is greater than the cost of capital. Thus as per Walter Zero dividend policy will maximize the market value of share for growth firms.

Assumptions of Walter's model:

- Retained earnings constitute the exclusive sources of financing. The firm does resort to debt or equity financing.
- The firm's internal rate of return and its cost of capital are constant.
- Value of earning per share (EPS) and dividend per share (DPS) are remaining constant.
- The firm has perpetual life.
- The firm distributes its entire earnings or retains it for immediate reinvestment.

The relationship between stock price and dividend varies on the following stages:

a) Growth Firm ($r > k$)

If the firm's internal rate of return exceeds the cost of capital such firms are known as growth firms. The relationship between dividend and stock price is negative on such firms. It means that more dividends leads to decrease in stock price and zero dividends will maximize that market value of shares for such growth firms.

b) Normal Firm ($r = k$)

If the firm's internal rate of return and cost of capital are equal such firms are called normal firms and there is no role of dividend on such firm's stock price. Dividend payout ratio does not affect the value of share whether the firm retains the profit or distributes dividend.

c) Declining Form ($r < k$)

If the firm's internal rate of return is less than cost of capital, such firms are known as declining firms. The relationship between dividend and stock price positive that is increase in dividend per share leads to increase in stock price of such firms.

Thus Walter concluded that when the firm is in growth stage then dividend is negatively correlated with price of share. Similarly, in normal firm there is no relationship between dividend and stock price. In the same way, there is positive relationship between dividend and price of stock in declining stage of firm.

Efficient Market Theory:

In a competitive market, the equilibrium price of any goods or services at particular movement in time is such that the available supply is equated to the aggregate demand. This price represents a consensus of the members trading in the market about the true worth of the good or service, based on all publicly available information. As soon as a new piece of relevant information becomes available, it is analyzed and interpreted by the market. The result is a possible change in the existing equilibrium price. The new equilibrium price will hold until yet another bit of information is available for analysis and interpretation. "The role of information is two fold: a) to aid in establishing a set of security prices, such that there exist an optimal allocation of securities among investors and b) to aid the individual investor, who faces a given set of prices in the selection of an optimal portfolio of securities." (Sharma, 2002:27)

The word "Efficiency" as applied to securities market has unfortunately been used to represent a variety of logically distinct concepts. In particular it means: A) exchange efficiency B) production efficiency and C) information efficiency. In this study, it is concerned only with informational efficiency. In an efficient market security price 'fully reflect' available information" (Fama, 1976:133). Regardless of the form of information, it is the key to the determination of stock prices; therefore it is the central issue of the efficient market concept.

An efficient market can exist if the following events occur:

- 1) 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 in one participant alone can not affect the price of a security.

- 2) Information is free of cost and widely available to market participants at approximately the same time.
- 3) Information is generated in a random fashion such that announcements are basically independent of one another
- 4) Investors react quickly and accurately to the new information, causing stock prices to adjust accordingly. (Charles, 1999:425)

In such a market, the current prices of a security obviously “Fully Reflect” all available information. Similarly, “in a perfect and competitive economy compared of rational individual with homogeneous beliefs about future prices, by any meaningful definition present security price must fully reflect all available information about future prices”. (Rubinstein, 1975:812)

In an efficient market, market participants, acting in their own self-interest, use available information to attempt to secure more desirable (higher returns, *ceterisparibus*) portfolio position. In doing so they collectively ensure that price movements in response to new information are instantaneous and unbiased and will fully reflect all relevant information. Competition among participants to secure useful information will drive security prices from one equilibrium level to another so that the change in price in response to new information will be independent of the prior change in price. Price change will be random walk in response to the information.

“In an idle efficient market, every one knows all possible to know information simultaneously, interprets it similarly, and behaves rationally.” (Bhalla, 1983:2). In such a world, the only price change that would occur is due to the result from new information. “An initial and very important premise of an efficient market is that there are large numbers of knowledgeable and profit maximizing investors adjust the information rapidly.” (Reilly, 1986:166) “The degree of market efficiency has important implications for the economy and for the investment decision makers. In an economic sense, it is important that security prices provide accurate signals that can be used to allocate capital resources correctly. Mis-priced security result in incorrect allocation of capital.” (Cheney, 1997:746).

In such a market, all prices are correctly stated and there are no “bargains” in the stock market. “Efficiency in this context means the ability of the capital markets to function so that prices of securities react rapidly to new information. Such efficiency will produce prices that are appropriate in terms of current knowledge and investors will be less likely to make unwise investments. A corollary is that investors will also be less likely to discover great bargains and thereby earn extraordinary high rates of return.” (Bhalla, 1983:3).

The conclusion is that – “In an efficient market there are neither free lunches nor expensive dinners. It is not possible to systematically gain or lose abnormal profits from trading on the basis of available information” (Weston and Copland, 1996:934). No one can consistently do better than the average. “Efficient market theorists believe that some do better than average because of luck. In fact they suggest that the ‘traders’-those who buy and sell their stock frequently – do less well than the stock market averages by an amount equal to the commissions they pay” (Rubinstein 1975:815).

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:

a) 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, 1996:94)

b) Semi-strong Form Market Efficiency

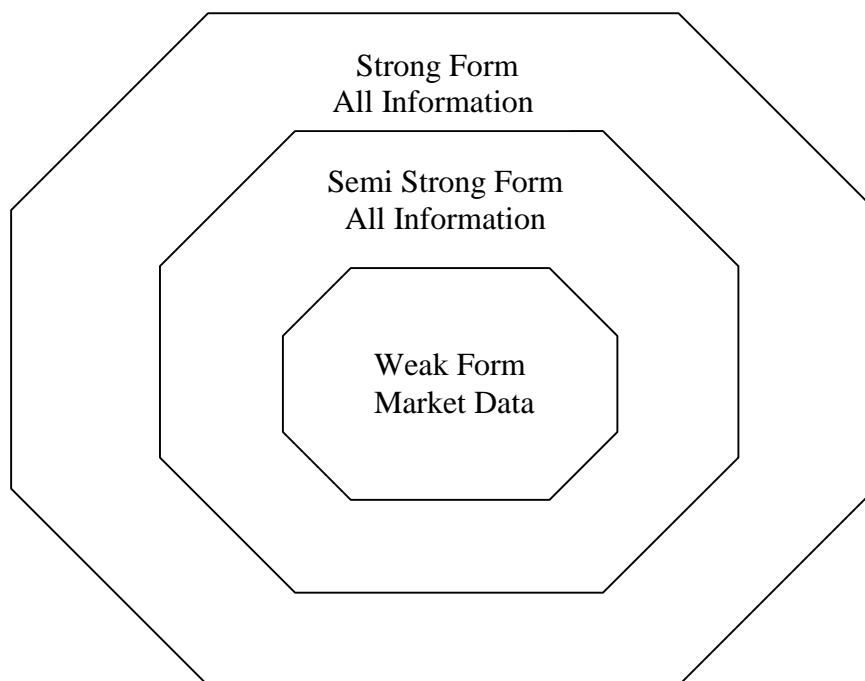
It says that security prices fully reflect all publicly available information. Thus, no investors could earn excess return using publicly available resources such as corporate annual reports, NEPSE price information or published investment advisory reports. It contains all publicly available data such 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, 1986:608)

c) Strong Form Market Efficiency

“The most stringent form of market efficiency is the strong form, which asserts that price fully reflect al information, public and non public.” (Jones, 1943:29) 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.

2.2 Review of Journal and Article

Articles, journal and bulletins are of great significances for thesis writing. So in order to make this study more comprehensive some articles, books etc related to stock price are consulted and reviewed.

Louis Bachelier first tested the random walk model in 1900. He tested the model in commodity prices and found that those prices followed a random walk. He presented the evidence that the commodity speculation in France was a 'Fair Game'. He also concluded that the certain price of a commodity was an unbiased certain estimate of its future price. After the first discovery of the random walk model in 1900 by Louis Bachelier, empirical testing of the model in the stock market prices almost remained stagnant until 1960s.

In the journal of Financial Economics, summer 1996, entitled "Commonality in the Determinants of Expected Stock Returns" by Robert A. Haugen and Nardin L. Baker, 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.

Fama's study (1965) on the random walk model was one of the best definitive and comprehensive every study conducted. He observed the daily proportionate prices of 30 individual stocks of the Dow Jones Industrial Average Index (DJIAI) for the

period of 1957 to 1962. He employed the statically tools such as serial correlation and runs test to draw inference about depended of the price series. He calculated auto-correlation coefficient for daily changes in log prices for lag from 1 to 30 and found that the coefficient were almost close to zero in overall. The correlation coefficient for daily changes in average was +0.03, which is near to zero. But on the daily price changes, 11 out of 30 stocks had correlation coefficient more than twice their computed standard errors. The coefficient ranged from smallest 0.06 to largest 0.123. However Fama concluded, "Dependence as such a small order of magnitude is, from a practical point of view, probably unimportant for both the statistician and the investor." Fama also calculated serial correlation for lag from 1 to 10 for no-overlapping differencing intervals of four, nine and sixteen days to examine the possibility if price change across longer interval shows dependence. All the results are again not significantly different from zero.

In 1997 International Monetary Fund [IMF], Policy Development and Review Development Division published a working paper entitled "Determinants of Stock Prices: The case of Zimbabwe". The working paper examined the general relationship between stock price and macroeconomic variables in Zimbabwe, using the revised DDM, error-correction model, and multi factor return generating model. Despite the large fluctuation in stock prices since 1991, the analysts indicated that the Zimbabwe Stock Exchange functioned quite constitutently during the period. Whereas, sharp increases in the share prices in stock prices during 1993-94 were mainly due to the shift of the risk premium that was caused by partial capital account liberalization, the monetary.

Nepalese Context

Prof. Dr. Rahde Shyam Pradhan (1993) studied the market behavior 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 large 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.

In Business age (1999:10), Panta, Rekha analyzed in her study, “Current status of share market in Nepal”, the trend of Nepalese stock market and present state of primary and secondary market was found satisfactory. According to her study, the development of stock market primarily depends on program and their implementation. In Nepal, the overall policy environment has not been conducted to the development of stock market. Therefore, it is difficult to develop more efficient secondary market, trading system for both equity and debt securities.

Capital Market is a crucial element in the national economy. Its role in reinvigorating and boosting the economic activity in the country holds significant. The strategic plan released by securities board can, to a great extent, energize the investors, dealers by increasing investor interest in it. Security market experiences both boom and bust

soon after the beginning of securities trading through broker's member in the stock exchange floor. Through the market started to function quickly boosting the price of share to an unexpected level, it could not sustained

In Business age (2001:20), "Return from investment in stock is not short run phenomenon. "Investors have to learn few things before they make investment on stock. First of all they should know the financial health of that company. For example; if somebody want to invest in the share of Standard Chartered Bank, he/she must see its balance sheet or at least paid-up capital, last year net profit, current year anticipated profit and calculate earning per share and price earning per share and price earnings ratio. These two numbers would give a fair idea about company health and then market price would judged through the discount factors based upon one of the sound company's data. Market price is equal to earning per share divided by discount factor. EPS can derived by dividing total net profit after tax by total number of shares and price earning ration by dividing market price per share by EPS. Lower the P/E ratio higher the chance of profit with capital gain and others."

In Business Age (July 2004:53) Nepal stock exchange's securities price index (NEPSE Index) during the month of June remained fluctuating. It remained bullish till June 10 reaching 216.75 and than it turned bearish continuously reaching the level of 211.31 on June 15. The rise was started with the appointment of new government and the main leader was commercial bank group the market dominating sector in the exchange understandable enough, the increase in the price was fueled by the expectation for early end of conflict between government and political parties, after the appointment of Deuba as a prime minister. But the publication of the third quarter financial result was no way less important factor for such positive impact on commercial bank sector as been in June 2004.

NEPSE index fell after reaching 216.75 on June 10 and plummeted to 211.31 over a short span of three days. This fall was however caused by notices published by some companies inviting application for their new issue as well as possible strike of the NEPSE employees and the wrangle among the political parties that delayed the formation of coalition of government.

Since June 16, the index turned bullish again till the end of the month. Despite the strike of employees of NEPSE, the market increased on June 16, one day before the strike and continued to increase during and after the strike till the end of the month. There were no any major events to cause the price of share goes up. However, the expectation of fewer disturbances after the four parties suspended the outgoing demonstration and the Maoist, student union called off the education strike, the country budget and positive development reported for the formation of coalition government etc increases the expectation of investors.

The NEPSE index seems sensitive to political economical and financial sectors developments it has raised after the disclosure of financial situation by the companies and when there were positive signs of political stability and it decreased for some company shares. It shows that the investors are becoming aware about when to buy and sell the securities.

The Rising Nepal (Jan 20 2001:6), “ADB experts have seen many obstacles to the growth of the capital market. This includes low level of investors’ confidence, disclosure of poor and manipulated financial information. Week enforcements of regulation, absence of instructional investors, lack of diversity in range of financial instrument and the scope of active participation for the various intermediaries

“Investors were enlightened and thy stated inquiring about company’s financial health and future prospect before buying or selling shares. People turned to price earning multiples: NEPSE indexes informed trading became sort of a norm when stock market entered 1995. Many who could not cope with the system of intelligent speculation left the ground. As a result, the numbers of buyers gradually came down and so did the prices.” (The Kathmandu Post, May 18, 1996:6)

In an article published on “New Business Age” by **Rabindra Bhattarai** entitled “**Big Bull Bang & Banks**” about of the market price share of Nepalese commercial bank. The past few months of the market reveals that the stock price are going up and making new highs every couple of days. One brake has already been in the market by the book closure of the commercial banks. Now the NABIL shares will not cause the market to increase by so many points as before in the rest of the year. The book

closure of the Big Banks like Standard Chartered, Nepal Investment, Everest Bank, Himalayan Bank will put other brakes in the market and will turn to the bearish area.

Due to the announcement about the capital requirement many series of declaration of dividend, bonus share and right shares has been declare by commercial bank to meet this requirement that made the increasing expectations of the investors towards the bonus and right shares from commercial are pushing the market every day (Bhattarai, Rabindra , Oct-2007: 216, New Business Age).

Supply Pressure Yet Overpriced

The investor these days are extremely attracted towards IPO's evident from the oversubscription of NDEP's shares. This has resulted in the liquidity crisis, a topic of concern among the investors these days. Nevertheless the uncertainly prevailing in the market has left the investors trembling. This has resulted in the supply pressure- and demand crunch hence dragging the share price downwards. Another major factor dipping the market down is rise in market interest rate by financial institutions detracting investor from stock market. This reality has contributed in the downfall of the NEPSE and other sub indices as well. Moreover, initiative taken by SEBO-N these days to detract unnatural forces prevailing in the market and the addition of brokers in NEPSE planned after CA election would establish natural forces in the market. (New Business Age- April 2008: 65).

Making it or Breaking it on the Stock Market

Investor should not confuse investing and creating wealth with gambling's zero sum game still it should be kept in the mind that investing is not a zero-sum game only if the motive of investment is not short term gain. If you invest for the long term, even if you lose some money on a few stocks this year you will on some other. Interestingly, all other investors are also making profit since prices in the stock market are continuously rising over the long term.

The best way to grow your money stock you like and sit on them for as long as you can. You can't beat the stock market, so you might as will just wait it out (New Business Age, A.R. Bhattarai May 2008: 58).

2.3 Review of Unpublished Thesis

Under this section various master's level dissertation related to this study have been reviewed.

Surya Chandra Shrestha (1999) has conducted research on “*Stock Price Behavior in Nepal*”. This study has focused to examine the efficiency of the stock market in Nepal. The serial correlation coefficient of the daily change for 1 and lag2 days and runs of the series of daily price changes lead to conclude that the successive price changes are not independent random variable for the 30 sample stocks listed in the Nepal stock exchange. Therefore, the random walk theory is not a suitable description for the stock price behavior in Nepal. The dependence in the series of price changes observed simply that the price changes in the future market will not be independent from the price changes of the previous days. It implies that the information of the past price changes is helpful in predicting future price changes in a way that the speculation through technical analysis can make higher expectation profit that they would be under naïve-buy-and-hold strategy. Therefore, opportunities are available to sophisticated investors to earn higher return in the market. The existence and participation of the sophisticated investors have dominated in the market that can cause prices to diverge significantly from intrinsic values because the very existence of the sophisticated traders causes to erase the opportunities of persistence in price which established independence of successive price changes.”

Mukti Aryal (1995), has conducted research on “*The General Behavior of stock market prices*”, the main objectives of this study were to discuss the movement of stock market prices and develop the empirical probability distribution of successive price change of an individual common stock and a stock market as a whole. This study is based on secondary information obtained from Nepal Stock Exchange. This study covers almost 8 months period and took about 21 stocks listed in NEPSE. He has applied run test as statically tools to analyze the data and get results. He has conducted that the assumption of independence, as predicted by random walk model of security price behavior, has been refuted at least for Nepalese context as the first approximation even in the rough way for curly days of stock market operation. This rejection of hypothesis made clear that the knowledge of past and now become useful in predicting the future movements of stock market prices. The investors, on the floor

of stock exchanges for security, can make higher expected price in the future based on these historical price series. In other words, the dependence nature of price series produced by general market fluctuation statistically implied, today's price change is positively depending upon yesterday price change. This implied that there is a sufficient lack of financial and market analysis who are sophisticate and superior in analyzing the general market fluctuations, predicting the occurrence of future potential and economic events that their eventual affects on price series."

P.K. Poudyal (2001) on "*A study on Share Price Behavior of Joint Venture Banks in Nepal*" is undertaken by using financial and statistical tools and revealed that:

- The growth rate analysis as a stand alone may not be adequate for the analysis of share prices behavior and may not represent the bank's performance in the secondary market.
- The ordinary least square equation of the book value per share on market value per share reveals that the independent variable does not fully explain the dependant variables on the basis of above mentioned two points; Nepal Stock Exchange operated in a weak form of efficient market hypothesis, including that the market prices move randomly. The market value per share does not accommodate all the available historical information.
- Having good track record of the financial position, the market potential investors buy the shares of joint venture commercial banks. Therefore, the shares of joint venture bans emerge as a blue chip in the Nepalese Stock Market.
- The beta coefficient, which measures the risky ness of individual security in relative term, 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. The shares of publicly quoted joint venture commercial banks are less risky as compared to the other average stocks traded in the stock exchange.

Mainali (2003) has conducted the study on "*Share Price Behavior of listed Commercial Banks*". The prime objective of his study is to analyze the performance of stock market and the behavior of share price of listed commercial banks. The other specific objectives were to provide glimpse of NEPSE, examine the risk involved in

the common stock investment of the sampled commercial banks and discuss the movements of the stock market price. He used parametric and non-parametric test to explore the randomness of stock return. He used standard deviation, coefficient of variation beta coefficient for individual stock to test the friskiness of share. The results of estimate serial correlation were found to have deviated significantly from the expected value zero i.e. serially correlated. So that the results obtained from the serial correlation test tend to invalidate the hypothesis of independence. The result of run tests also consistence with the result of serial correlation tests. He found that past and present price changes can screen out some valuable information in predicting future price changes. So there exists sufficient amount of opportunity for sophisticated investors. The statical analysis is regarding the risk and return of sample stock showed that most of the stock seemed to be riskier than the average stock. But most of the banks are offering cash dividends every year, which may not be applicable to other non-banking firms.

Apar 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. He concluded his 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 behavior.
- In NEPSE, DPS, BPS & EPS individually do not have constituent relationship [with the market price of the share among the listed companies. The pricing behavior 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.
- Since NEPSE is in increasing trend, in spite of unfavorable environment for investment, Nepalese citizens 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.

Bharat Prasad Bhatta (1997), he focused that, resource mobilization has a vital role in the developing economy like Nepal. The development of the Stock market is a must for the resource mobilization. There are various problems of Nepalese Stock Market, which have checked the resource mobilization in the economy. In his research work, *“Dynamic of Stock Market in Nepal”* Bhatta set the following objectives and followed by the some recommendation too which is given below:

- To analyze the trend of the Nepalese stock market
- To diagnose and compare the sectorial financial status of the stock in Nepalese stock market.
- To analyze the market share prices of the Nepalese stock market.
- To find out the impact of the secondary or primary market and vice versa.

According to the above objectives “Bhatta recommended the following points by his recommendation and conclusion section:

- The government should make not only policies for the capital market development but also implement these policies appropriately.
- Investment in corporate sector should be encouraged and their share should be listed in the stock exchange.
- The regulatory authorities of the stock market should create an environment to rise the trading of share in the stock exchange.
- The government should make appropriate policies and programs for the enhancement of the entrepreneurship development in the Nepalese economy.

In his conclusion he try to show that although it has become late to take steps to overcome such problems of the Nepalese stock market in order to make it active and supportive, the stock market has a good prospect for the resource mobilization to finance the productive enterprises in the Nepalese economy.

Sadakar Timilsina (1997) has conducted research on “*Dividend and Stock Price*” The study was carried out by the data for 16 enterprises from 1900 to 1994.

The main objectives of that study were as follows:

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

To explain the price behavior, the study used simultaneous equation model as developed by Friend and Puckett (1964). The main findings of that study were as follows:

- The difference 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 share.
- The difference between stock prices and retained earnings per share is not prominent.

- The difference between stock prices and lagged earnings ratio is negative.
- Though there were above-mentioned studies in the context of Nepal, it has overcome necessary to find out whether their findings are still valid.

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

Khagendra Prasad Ojha (2000) has conducted a research on "*Financial Performance and Common Stock Pricing*". The main objectives of his research were;

- To study and examine the difference of financial performance and stock prices.
- To examine the relationship of dividends and stock price.
- To explore the signaling effects in stock price.

Nepalese stock market is in infancy stage; in general it is very new and just started to develop. Dominance of banking sector is prevalent in the market due to other industries including finance companies, insurance and manufacturing is not encouraging. Corporate firms with long history have relatively stable profitability parameters that the firm established after the economic liberalization of 1990. Older firms have been issuing bonus share more times than the new one. Dividend per share is relatively more stable than the dividend payout ratio. That's why payout ratio and dividend yields have been highly fluctuating. Due to lack of proper investment opportunity most of the investors have directed their saving towards the secondary stock market. There is significant positive correlation between the dividends paid and stocks prices of banking and manufacturing industries. All other industries have not a perfect correlation between the dividends paid and stock prices. There is a positive correlation between the net worth per share and stock prices of banking, airline and

hotel industries, there is no perfect correlation between the net worth per share and common stock price.”

Kiran Dhamala (2004) has conducted research on “*Determinants of share price in Nepalese Financial Market*”. The main objectives of his studies are as follows:

1. To examine and evaluate the relationship of MPS with various financial indicators like EPS, NWPS, DPS, ROE, etc.
2. To analyze the market trends of MPS with various financial indicators like EPS, NWPS, DPS, ROE, etc.
3. To identify whether stocks of the sampled companies equilibrium priced or not.
4. To present some recommendations bases on the findings of the study.

The major findings of the research pointed out by Dhamala are as follows:

1. HBL’s MPS is negatively correlated with major financial indicators. But it has positive relationship with DPS and DPR respectively.
2. NBL’s MPS has positive relationship with EPS and ROE, whereas it has negative relation with other financial variables.
3. NBBL’s MPS is positively correlated with EPS, NWPS and DPS which are statistically significant at 1% and 5% levels of significance. Further, MPS is positively correlated with DPR and ROE.
4. NIBL’s MPS is reversely correlated with major financial variables. However MPS and DPS are statistically significant at 1% level of significance.
5. SCNBL’s MPS is negatively correlated with major financial indicators. But it has higher positive relationship with ROE.
6. AFCL’s MPS has positive correlation with main financial variables except ROE, with which it has negative relationship. But no such relationship is statistically significant.
7. KFL’s MPS has positive relationship with major financial variables except DPR and ROE with which it has opposite relationship. The relationship of MPS with EPS and NWPS is statistically significant at 5% level.
8. NHDL’s MPS has positive relationship with major financial indicators, but such relationship is not statistically significant.

Dhamala conducted that 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. If considered on the basis of the average data for the past five years, MPS of ten financial institutions has higher positive correlation with major financial indicators such as EPS, NWPS and DPS, and such relationship is significant.

Tulsi Prasad Dahal (2007) has conducted research on “*Determinants of Stock Price of listed companies in Nepal Stock Exchange*”. The main objectives of his studies are as follows:

- To identify the financial indicators that has major influence on stock price.
- To analyze whether stocks of the sampled companies are over-priced, under-priced or equilibrium price.
- To study the investors’ response regarding the change of stock price.
- To forecast the future market prices by using regression analysis.

He conducted research on 12 listed companies like banks, finance, insurance companies and other manufacturing and trading companies and shows the relationship between EPS, DPS and BVPS to MVPS. He concluded that there is adequate knowledge and information regarding the capital market is lacking in Nepalese investors.

Dipak Raj Adhikari (2008), conducted a research on “*Factors affecting the share price in Nepalese Commercial Banks listed in NEPSE*” . The main objectives of his research were:

- To explore the effect of major financial indicators and its relationship with MVPS.
- To identify whether the stock of sample banks are over price, under price and equilibrium price.
- To study informational and other factors affecting the share price of the Nepalese commercial bank.
- To analyze the investor awareness regarding the share price of Nepalese commercial bank.

The major findings of his studies are as follows:

- The MVPS depends upon the EPS, DPS and BVPS. He concluded that the commercial bank sectors have good financial environment in Nepal.
- Adequate knowledge and information regarding the securities market lacking in Nepalese investors.

- Signaling factors plays major role for making investment decision, so investors should analyzed impact of signaling factors before making investment decision.

Dushyant Lal Joshi (2008), made a research entitled “*Determinants of stock price in Nepal Stock Exchange with special focus to Commercial Banks*”. The main objectives of his studies are as follows:

- To identify qualitative as well as quantitative factors affecting the stock price in NEPSE with focus to commercial banks.
- To determine the effect of earnings and book value to the stock price
- To determine the effect of dividend to the stock price.
- To make appropriate recommendations/suggestions for the betterment of the stock market and so on.

The major findings of his studies are as follows:

- There is lack of effective watchdog to implement rules and regulations.
- The listed companies other than banks and financial companies, are not able to conduct the AGM in time.
- Most of the companies are unable to meet organizational objectives.

Mina Devi Bhatta (2008), has conducted a research on “*Determinants of share price in Nepal Stock Exchange*”. Bhatta set the following objectives:

- To identify the prime determining factors of share price determination of Nepalese Commercial Banks.
- To examine and evaluate the relationship between MPS with the various financial indicators like EPS,BPS,DPS etc.
- To analyze the market trends of MPS with financial indicators.
- To conduct the opinion survey of potential investors regarding various aspects of share behaviors of Nepal.

The major findings of the studies are as follows:

- Due to the inadequate knowledge regarding the share market among Nepalese investors, capital market of Nepal has not been well developed yet.
- EPS and DPS are the major influencer of the share price. Beside this, political situation, annual general meeting, assets structure and capital structure of the organization also influence the share price of the company.

The commercial bank is the first choice of Nepalese investors.

CHAPTER- III

RESEARCH METHODOLOGY

Research methodology is a way to systematically solve the research problem. It refers to the various sequential steps that are to be adopted by a researcher during the course of studying the problem with certain objectives. This chapter refers to the overall research method from the theoretical aspects to the collection and analysis of data. This study covers quantitative methodology in a greater extent and also uses the descriptive part based on both technical aspects and logical aspect. This research tries to perform a well-designed quantitative and qualitative research in a very clear and direct way using both financial and statistical tools. Detail research methods are described in the following headings;

3.1 Research Design

Generally, research design is the plan, structure and strategy of investigation conceived so as to obtain answer to research questions and to control variance. In order to make any type of research a well-set research design is necessary to fulfill the objectives of the study. Generally, research design means definite procedure and techniques which guides to study and provide ways for research viability. It is arrangements for collection and analysis of data. To achieve the objective of this study, descriptive and analytical research design has been used. Some financial and statistical tools have been applied to examine facts and descriptive techniques have been adopted to determine the relation between corporate performance and stock price of listed companies in the NEPSE.

3.2 Variables

A variable is a symbol to which numerals or values are assigned. So, the variables can take on values. This research intends to identify the factors that affect share price in NEPSE. So, the market price of the share is the dependant variable, which is affected by many variables, such variables are regarded as the independent variables in the study. The entire factors that affects the market price of shares , such as, earnings, dividends, interest rate, liquidity, book value of share, economy of the nation, peace & prosperity, rumors and whims international events, political factors and other signaling factors etc. are the independent variables.

3.3 Population and Sample

This study has been totally confined to the institutions listed in the Nepal stock exchange. Total numbers of organization listed are 142. These listed organizations according to their nature of business are categorized into six groups also called sectors. These sectors are;

1. Banking
2. Finance
3. Insurance
4. Hotel and Service
5. Manufacturing
6. Trading

This study has been limited to the 3 banking, 3 finance and 3 insurance sector. The purposive sampling method is applied in the study to select the listed stocks of the NEPSE. Nine organizations have been selected from the population of 142 listed stocks. The selected stocks are as follows:

Banking sector

1. NABIL Bank Ltd.
2. Bank of Kathmandu Ltd.
3. Kumari Bank Ltd.

Finance Sector

4. Kathmandu Finance
5. Universal Finance
6. People Finance

Insurance Sector

7. National Life & General Insurance
8. Premium Insurance
9. Neco Insurance

3.4 Sources of Data

The study is based on primary data as well as secondary data. To show the relationship between market price per share with earnings, book value and dividend, secondary data are used but to determine the factors, which affect the stock price, primary data are collected from respondent through research questionnaire and the observation of researcher. A variety of questions were asked to the respondent in order to identify which factors affect the share price.

The sources of secondary data are AGM reports of listed companies, SEBO/N, NEPSE, and other concerned organizations, bulletins, publications, researches, journals, unpublished thesis reports, newspapers, journals, and internet. The sample period cover the period of five years commencing from 2004/05 to 2008/09. Using these data financial performance as well as relation has been developed. The facilities available at Shanker Dev Campus Library, Central Library and concerned agencies researcher used which have a wide range of related books journals and other publication.

3.5 Data Collection Techniques

The research consists of both primary and secondary data. Since the nature of these two types of data is different; the data collection procedure also varies. To collect the secondary data, the researcher has visited the different libraries, concerned companies, NEPSE, SEBO-N and other useful book stores; and collected related publications and periodicals. Official websites were searched in order to collect required information. Furthermore, secondary data related to common stocks of concerned companies have been downloaded from the official website of NEPSE, <http://www.nepalstock.com>.

3.6 Data Analysis Tools

The data collected from various sources leads to the logical conclusion, only if the appropriate tools and techniques are adapted to analyze such data. The collected data has been no meaning, if such data are not analyzed. To analyze the data in this research, the researcher has used some statistical and financial tools, which are explained here.

3.6.1 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

3.6.1.1 Earning per share

The earning per share (EPS) is the share of a stock on the earning of the company.

$$\text{EPS} = \frac{\text{Toal Earning of Company}}{\text{No. of Shares Outstanding}}$$

3.6.1.2 Dividend per Share

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

$$\text{DPS} = \frac{\text{Toal Dividend Paid}}{\text{No. of Shares Outstanding}}$$

3.6.1.3 Market Price per Share

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

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

3.6.1.4 Book Value per Share

The BPS 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.

$$\text{BPS} = \frac{\text{Net Worth}}{\text{No. of Shares Outstanding}}$$

3.6.1.5 Holding Period Return

Generally, single period return or holding period return is represented by R and expressed in terms of percentage basis. It is calculated as

$$\text{HPR} = \frac{\text{Ending Price} - \text{Beginning Price} + \text{Cash Dividend}}{\text{Beginning Price}}$$

Symbolically,

$$\text{HPR} = \frac{P_t - P_{t-1} + D_t}{P_{t-1}} = \text{Capital Gain} + \text{Dividend Yield}$$

Where, P_t = Price of a stock at time t
 P_{t-1} = Price of a stock at time t-1
 D_t = Dividend per share at time t

Risk and Return Analysis of Market

Return on Market

Annual return on market is the average return of market based on the index of market. It is denoted by R_m . Under this study, NEPSE index will be used. It is a value-weighted index and comprises of all the stocks listed in NEPSE. The NEPSE index is used for the study.

$$\text{Annual Market Return } (R_m) = \frac{\text{Ending NEPSE Index} - \text{Beginning NEPSE Index}}{\text{Beginning NEPSE Index}}$$

$$\text{Average Market Return } (\bar{R}_m) = \frac{R_m}{N}$$

where R_m = Summation of annual market return
 N = Number of observations

Risk of Market Return

Risk of market return is also measured by the standard deviation of the returns of market. The standard deviation of market returns is computed as

$$\text{Standard Deviation } \sigma_{R_m} = \sqrt{\frac{\sum (R_m - \bar{R}_m)^2}{N}}$$

Market Sensitivity Analysis

Covariance

The covariance measures how two variables co-vary. It is a measure of the absolute association between two variables. Here, how the returns of individual stocks and the market return co-vary will be measured by covariance between the return of individual stocks and market return. It is computed as

$$\text{Cov } \sum_{j=1}^n R_j - \bar{R}_j \sum_{m=1}^n R_m - \bar{R}_m A = \frac{\sum_{j=1}^n \sum_{m=1}^n (R_j - \bar{R}_j)(R_m - \bar{R}_m)}{N-1} = \dots_{jm} \uparrow_j \uparrow_m$$

If two variables are independent, their covariance is zero.

3.6.2 Statistical Tools

Statistical tools are the measures or the instruments to analyze the collected data from different sources. In statistics, there are numerous statistical tools to analyze data of various natures. In this study, the researcher has used the following statistical tools to analyze the data.

Correlation Coefficient

When the relationship is of quantity 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 (R):

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

Where,

r_{xy} = is the correlation coefficient between two variables x & 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.

Probable Error (P.E.)

The probable error denoted by P.E. is used to measure the reliability and test of significance of correlation coefficient. Significance of relationship has been tested by using the probable error (P.E.) and it is denoted by the following model:

$$\text{Probable Error (P.E.)} = 0.6745X \frac{1-r^2}{\sqrt{n}}$$

Where, r = the value of correlation coefficient

n = number of pairs of observations

If $r < \text{P.E.}$, it is insignificant, i.e. there is no evidence of correlation

If $r > 6 \text{ P.E.}$, it is significant

If $\text{P.E.} < r < 6 \text{ P.E.}$, nothing can be concluded.

Coefficient of (Multiple) Determination (R^2)

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

$$\text{Coefficient of Determination } R^2 = \frac{\text{Explained Variation}}{\text{Total Variation}}$$

Regression Equation of X on Y

The regression equation is expressed as;

$$Y = a + bx$$

We shall get the normal equation for estimating 'a' and 'b' as

$$Y = na + b \quad X$$

$$XY = a \quad X + b \quad X^2$$

Where,

Y= the value of dependent variable

a = Y-intercept

b = slope of the trend line/coefficient of regression

X = value of independent variable

Coefficient of Regression

The coefficient 'b', which is the slope of line of regression of Y on X is called the coefficient of regression of Y on X. It represents the increment in the value of the independent Y for a unit change in the value of the independent variable X. In other words, it is represent the rate of change. The convenient way to calculate the variable of 'b' is as;

$$b = \frac{n \sum XY - \sum X \sum Y}{n \sum X^2 - f \sum X^2}$$

Similarly, the value of Y-intercept can be computed as;

$$b = \frac{n \sum XY - \sum X \sum Y}{n \sum X^2 - f \sum X^2}$$

Test of Regression Coefficient by t-Test

It was developed for the significant contribution in the theory of sampling applicable in case of small samples. When population variance is not known, the test is commonly known as student's t-test and is based on the t-distribution. As the sample size gets larger, the shape of the t-distribution loses its flatness and becomes approximately equal to the normal distribution.

For applying t-test in context of small samples, the t-value is calculated first of all and then compared with table value 't' at certain level of significance for given degree of freedom. If the calculated value of 't' exceeds the table value say ($t_{0.05}$) it infers that the difference is significant at 5% level but if 't' is less than the concerning table value of 't', the difference is not treated as significant.

The test is used when two conditions are fulfilled;

- The sample size is less than 30.
- The population standard deviation must be unknown.

Let r be the observed sample correlation coefficient of a sample of n pairs of observations from a bivariate normal population. In order to test whether the sample correlation coefficient is significant of any correlation between the variables in the population, a t -test for significance of an observed sample correlation coefficient is applied. The steps for testing of significance of an observed sample correlation coefficient are as follows.

Null Hypothesis $H_0: \rho = 0$ that is population correlation coefficient is zero. In other words, the variables are insignificantly correlated in the population i.e. ' r ' is not significant of correlation in the population.

Alternative Hypothesis $H_1: \rho \neq 0$ that is population correlation coefficient is not zero. In other words, the variables are significantly correlated in the population i.e. ' r ' is significant of correlation in the population.

Test Statistic, under H_0 , the test statistic is

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

i.e. follows t -distribution with $(n-2)$ df., n being the sample.

CHAPTER - IV

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter is the backbone of the research. In this chapter, both the primary and secondary data are presented in systematic manner. The sources of data were company brochure, annual reports, NEPSE website, SEBO/N website and library. Those collected data are presented in systematic formats and analyzed using different appropriate tools and techniques. In this chapter, in addition to that the relationship of the variables is presented in graphs and figures. The analysis of data consists of organizing, tabulating and performing statistical analysis. In this chapter, the secondary as well as primary data, collected from different sources are presented in understandable form and analyzed separately using both qualitative and quantitative measures whichever is appropriate.

Table 4.1
Listed Companies by the End of the Fiscal Year 2007/08

S.N.	Sectors	Number of Listed Companies	Company Percent
1	Commercial Bank	21	13.20
2	Development Bank	29	18.24
3	Finance Company	61	38.36
4	Insurance Company	17	10.70
5	Hotel	4	2.52
6	Mfg. & Process. Co.	18	11.32
7	Trading Company	4	2.52
8	Other Company	5	3.14
Total		159	100.00

Source: SEBO Annual Report 2008/09

Classification of Listed Companies

Out of 159 listed companies, NEPSE classified 21 commercial bank, 29 development banks, 61 finance company, 17 insurance companies, 4 hotels, 18 manufacturing and processing company, 4 trading company and 5 other company listed in the NEPSE. Out of 159 only 9 companies are taken for the study.

Table 4.2
Listed Companies under Study

S.N.	Name of the Sample Companies
1	NABIL Bank Ltd.
2	Bank of Kathmandu Ltd.
3	Kumari Bank Ltd
4	National Life & General Insurance Co. Ltd
5	Premier Insurance Co. Ltd
6	NECO Insurance Co. Ltd
7	Kathmandu Finance
8	Universal Finance
9	Peoples Finance

4.1.1 Analysis of Individual Company

From among the listed companies, the researcher has chosen 9 listed private companies that fall in-group 'A'. The summary of the financial data of the sample listed companies of the study are presented with five Years data (from fiscal year 2004/05 to 2008/09) including Market Price of Share (MVPS), Earning Per Share (EPS), Dividend Per Share (DPS) and Book Value Per Share (BVPS) in the table 4.3

Table 4.3
Analysis of Individual Company

	FISCAL YEAR				
	2004/05	2005/06	2006/07	2007/08	2008/09
NABIL Bank					
EPS	105.49	129.21	137.08	108.31	106.76
DPS	70	85	140	100	85
MVPS	1505	2240	5050	5275	4899
BVPS	337	381	418	354	324
Bank of Kathmandu Ltd					
EPS	30.10	43.67	43.50	59.94	54.68
DPS	15	48	20	42.11	47.37
MVPS	430	850	1375	2350	1825
BVPS	213.60	230.67	164.68	222.51	206.25

Kumari Bank Ltd						
EPS	17.58	16.59	22.70	16.35	22.04	
DPS	-	21.05	21.05	10.53	10.58	
MVPS	369	443	830	1005	700	
BVPS	141	149	137	128	137	
National Life & General Insurance Co. Ltd						
EPS	40.27	34.83	1.61	(25.90)	10.40	
DPS	-	-	-	-	-	
MVPS	431	304	-	-	-	
BVPS	100	250	102	76	91	
Premier Insurance Co. Ltd						
EPS	46.68	43.54	18.43	16.51	13.38	
DPS	-	-	5.79	-	10.53	
MVPS	210	200	260	300	190	
BVPS	259.92	303.46	316.10	167.13	144.29	
NECO Insurance Co. Ltd						
EPS	3.01	0.54	(10.03)	2.97	7.23	
DPS	-	-	-	-	-	
MVPS	110	90	121	121	121	
BVPS	195.98	180.31	135.37	113.84	125.34	
Kathmandu Finance						
EPS	17.97	26.3	20.04	25.57	23.54	
DPS	7.51	5.59	10.13	11.15	13.85	
MVPS	135	147	203	285	326	
BVPS	145	156	175.31	178.02	161.72	
Universal Finance						
EPS	30.70	28.28	34.24	29.18	13.77	
DPS	19.05	35.09	21.05	21.05	10	
MVPS	130	195	200	283	335	
BVPS	152.69	134.41	167.51	167.39	134.96	
Peoples Finance						
EPS	17.62	9.72	13.14	19.01	13.54	
DPS	-	10	-	20	10	
MVPS	100	137	127	699	285	
BVPS	128.80	83.14	130	141.68	122.41	

(Source: AGM reports of the listed companies, NEPSE & SEBON)

4.2 Relationship Between EPS, DPS & BVPS to MVPS

To analyze the relationship of EPS, DPS and BVPS to MVPS, it is assumed that the market price of share is influenced with the changes in EPS, DPS and BVPS. So, MVPS is the dependant variable; whereas EPS, DPS & BVPS are independent variables. Here in this section, relationship of EPS, DPS & BVPS with MVPS is determined separately to each of the sampled listed companies. The correlation analysis is performed to determine the relationship of EPS, DPS, & BVPS with MVPS. To determine the effect of EPS, DPS & BVPS on MVPS, simple correlation as well as their coefficient of determination are calculated. For the test of hypothesis of simple and multiple coefficient; calculated t-value are compared with the tabulated t-value at 95% confidence limit. 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, multiple coefficient of determination (MVPS being dependant variable and EPS, DPS and BVPS being independent variables), Standard errors of estimate are analyzed during the correlation and regression analysis.

4.2.1 Correlation & Regression Analysis of NABIL

Table 4.4 summarizes the financial performances of NABIL over last five Years and table 4.5 shows the relationship (correlation) of EPS, DPS & BVPS to MVPS along with the significance of such relationship.

Table 4.4
Summary of the Financial Performance of NABIL

Year	MVPS (a)	EPS (b)	DPS (c)	BVPS (d)
2004/05	1505	105.49	70	337
2005/06	2240	129.21	85	381
2006/07	5050	137.08	140	418
2007/08	5275	108.31	100	354
2008/09	4899	106.76	85	324
Total	18969	586.85	480	1814
Mean	3793.8	117.37	96	362.8
SD	1590.37	13.15	23.96	33.55
CV	41.92	11.20	24.96	9.25

Source: Table 4.3 and Excel Software

Table 4.5
Relationship of EPS, DPS and BVPS with MVPS

Variables	r	r²	t-cal	t-table	Remarks
r _{ab}	0.08	0.01	0.139	3.182	Not Significance
r _{ac}	0.66	0.43	1.522	3.182	Not Significance
r _{ad}	0.17	0.03	0.299	3.182	Not Significance

Source: Annex (1, 2 & 3)

Where,

T-table value is at 95% confidence limit ($n-2 = 5-2 = 3$ degree of freedom)

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

r² = coefficient of (simple) determination

SD = standard deviation

CV = coefficient of variation

Mean = arithmetic mean

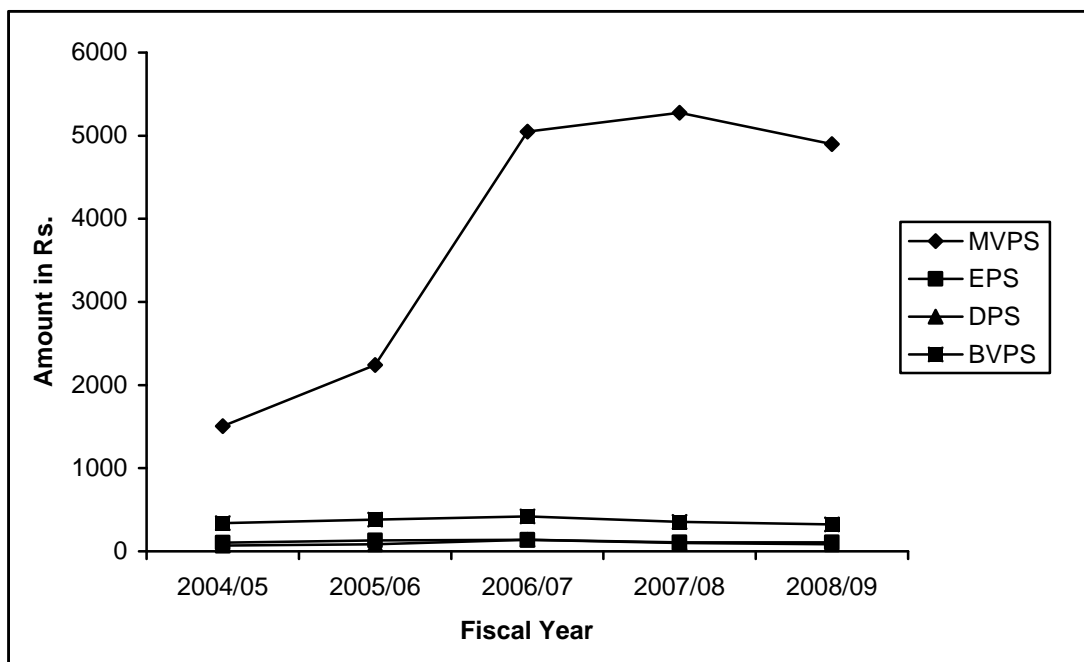
For NABIL, it is found from the table and figure 4.2 that the BVPS and EPS are in the increasing trend till the year 2008/09. BVPS and EPS are very less volatile with 9.25% coefficient of variation (CV) of BVPS and 11.20% CV of EPS. In comparison to these, DPS is little bit more volatile with 24.96% of CV where as MVPS is highly volatile with 41.92% CV in the last five Years period. Looking at the simple correlation analysis, MVPS of NABIL is positively correlated with DPS meaning that increasing the DPS, MVPS increases and vice versa. On the other hand, MVPS is positively correlated with BVPS and EPS. However, there is low degree of correlation. The coefficient of simple determination shows that 43% of changes in the MVPS is explained by DPS, where as only 3% and 1% of the changes in the MVPS is explained by BVPS and EPS respectively. Even though, the MVPS is affected by DPS, BVPS and EPS, the degree of correlation are not significant at 95% level of confidence for all these three independent variables even the MVPS is relatively more negatively correlated with DPS and positively correlated with BVPS and EPS.

Similarly, while comparing NABIL with Industrial benchmark (i.e. the average performance of selected 9 companies) it is revealed that for MVPS, mean MVPS of NABIL is greater (3793.8) than industrial mean of MVPS (782.02), Standard deviation of MVPS is greater (1590.37) than industrial standard deviation (343.97) and Coefficient of Variation is lesser (41.92) than industrial CV (46.73). This result

shows that MVPS has very good performance. For EPS, its mean is higher (117.37) than industrial average (32), coefficient of variation is lesser (11.20) than industrial average (126.87) but standard deviation is greater (13.15) than industrial SD (9.32), thus, is good however it is no more risky than industrial average EPS. For DPS NABIL mean is greater (96) than industrial average mean (20.59), standard deviation is greater (23.96) than industrial average SD (7.62) and less Coefficient of variation (24.96) is lesser than industrial CV (46.69). It proves that NABIL BVPS is satisfactory. Finally, for BVPS, NABIL mean BVPS is greater (3628) than industrial average (670.68), standard deviation is greater (33.55) than industrial average (30.71) and CV is also lesser (9.25) than industrial average (17.93). Thus, BVPS has very good performance. Thus, in overall, NABIL has very good performance in the last five Years

The linear relationship of EPS, DPS, BVPS and MVPS of NABIL is presented in the figure 4.1.

Figure 4.1
Relation of MVPS with EPS, DPS & BVP of NABIL



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

MVPS on EPS

$$MVPS = 1141.55 + 9.73 \text{ EPS}$$

The regression constant 1141.55 implies that when EPS is zero, MVPS is 1141.55. The constant for EPS 9.73 implies that when EPS increases by Rs.1, MVPS increases by Rs.9.73 and vice versa. The simple correlation coefficient is 0.08.

MVPS on DPS

$$\text{MVPS} = 3793.8 + 43.78 \text{ DPS}$$

The regression constant 3793.8 implies that when DPS is zero, MVPS is 3793.8. The constant for DPS 43.78 implies that when DPS increases by Rs.1, MVPS increases by Rs.43.78 and vice versa. The simple correlation coefficient is 0.66.

MVPS on BVPS

$$\text{MVPS} = 944.05 + 7.85 \text{ BVPS}$$

The regression constant 944.05 implies that when BVPS is zero, MVPS is 944.05. The constant for BVPS 7.85 implies that when BVPS increases by Rs1, MVPS increases by Rs.7.85 and vice versa. The simple correlation coefficient is 0.17.

4.2.2 Correlation and Regression Analysis of BOK

Table 4.6 summarizes the financial performances of BOK over last five Years and table 4.7 shows the relationship (correlation) of EPS, DPS & BVPS to MVPS along with the significance of such relationship.

Table 4.6
Summary of the Financial Performance of BOK

Year	MVPS (a)	EPS (b)	DPS (c)	BVPS (d)
2004/05	430	30.10	15	213.60
2005/06	850	43.67	48	230.67
2006/07	1375	43.50	20	164.68
2007/08	2350	59.94	42.11	222.51
2008/09	1825	54.68	47.37	206.25
Total	6830	231.89	172.48	1037.71
Mean	1366	46.38	34.50	207.54
SD	681.38	10.33	14.12	22.95
CV	49.88	22.27	40.92	11.06

Source: Table 4.3 and Excel Software

Table 4.7
Relationship of BVPS, EPS and DPS with MVPS

Variables	r	R²	t-cal	t-table	Remarks
r _{ab}	0.96	0.92	5.938	3.182	Significance
r _{ac}	0.51	0.26	1.027	3.182	Not Significance
r _{ad}	-0.05	0.003	-0.087	3.182	Not Significance

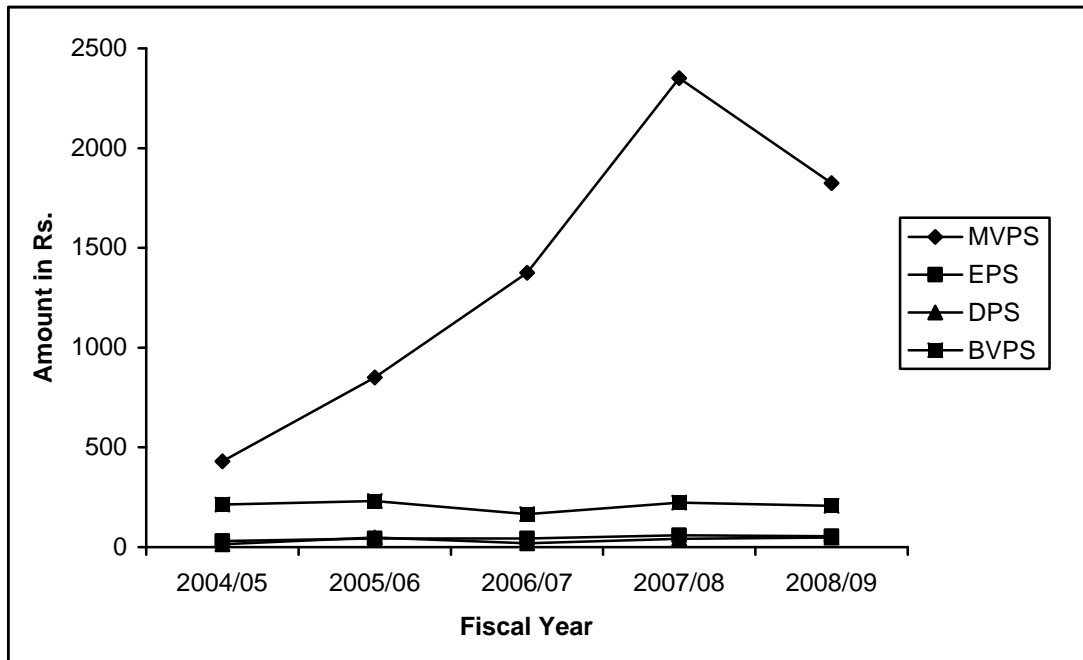
Source: Annex (1, 2 & 3)

It is revealed from above tables and figure 4.3 that the BOK has not consistent performance over the five Years period. MVPS is more volatile with 49.88% of CV. In comparison to MVPS, EPS and DPS are less volatile with 22.27% CV of EPS and 40.92% CV of DPS. On the other hand, BVPS has relatively consistence performance with lower CV of 11.06%. The simple correlation analysis reveled that the MVPS is positively correlated with the independent variables EPS and DPS which indicates that on increasing EPS, and DPS, MVPS also increases and vice versa. BVPS is more correlated to MVPS than the EPS & DPS. The coefficient of determination shows that the 95% of changes in the MVPS is explained by BVPS, 96% of changes in the MVPS are explained by EPS and this ratio to DPS is 51%. The simple correlation of coefficients of EPS & DPS with MVPS is not significant at 95% level of significance but significant at 95% confidence limit with the correlation of coefficients of BVPS with MVPS.

For MVPS of BOK, mean MVPS, SD and CV is greater than that of industrial average. It indicates clearly that MVPS of BOK isn't satisfactory. For EPS, mean EPS is greater, SD is greater, and CV is lesser than industrial average; meaning that it is not satisfactory. For DPS, BOK has higher mean of DPS, greater SD and lesser CV, so DPS can be taken as a good performer. And finally for BVPS of BOK, mean BVPS is lesser, and SD and CV are also lesser than that of industrial average, meaning that is also good. Thus, it is revealed from above analysis that BOK has good performance in last five Years

The linear relationship of EPS, DPS and BVPS to MVPS of BOK are presented in figure 4.2

Figure 4.2
Relation of MVPS with EPS, DPS & VBP of BOK



From the simple regression analysis, the regression equations are found (MVPS being dependent variable) as:

MVPS on EPS

$$MVPS = -1569.55 + 63.29 \text{ EPS}$$

The regression constant -1569.55 implies that when EPS is zero, MVPS is -1569.55. The constant for EPS 63.29 implies that when EPS increases by Rs1, MVPS increases by Rs.63.29 and vice versa. The simple correlation coefficient is 0.96.

MVPS on DPS

$$MVPS = 515.84 + 24.64 \text{ DPS}$$

The regression constant 515.84 implies that when DPS is zero, MVPS is 515.84. The constant for DPS 24.64 implies that when DPS increases by Rs1, MVPS increases by Rs.24.64 and vice versa. The simple correlation coefficient is 0.51.

MVPS on BVPS

$$MVPS = 1669.66 - 1.46 \text{ BVPS}$$

The regression constant 1669.66 implies that when BVPS is zero, MVPS is 1669.66. The constant for BVPS -1.46 implies that when BVPS increases by Rs1, MVPS decreases by Rs1.46 and vice versa. The simple correlation coefficient is -0.05.

4.2.3 Correlation and Regression Analysis of KBL

Table 4.8 summarizes the financial performances of KBL over last five Years and table 4.9 shows the relationship (correlation) of EPS, DPS & BVPS to MVPS along with the significance of such relationship.

Table 4.8
Summary of the Financial Performance of KBL

Year	MVPS (a)	EPS (b)	DPS (c)	BVPS (d)
2004/05	369	17.58	-	141
2005/06	443	16.59	21.05	149
2006/07	830	22.70	21.05	137
2007/08	1005	16.35	10.53	128
2008/09	700	22.04	10.58	137
Total	3347	95.26	63.21	692
Mean	669.4	19.05	12.64	138.40
SD	237	2.75	7.87	6.80
CV	35.40	14.44	62.26	4.91

Source: Table 4.3 and Excel Software

Table 4.9
Relationship of BVPS, EPS and DPS with MVPS

Variables	R	R ²	t-cal	t-table	Remarks
r _{ab}	0.24	0.06	0.428	3.182	Not Significance
r _{ac}	0.37	0.137	0.69	3.182	Not Significance
r _{ad}	-1.20	1.44	0	3.182	Not Significance

Source: Annex (1, 2 & 3)

It is revealed from above tables and figure 4.4 that the KBL has not consistent performance over the five Years period. MVPS is highly volatile with 35.40% of CV. In comparison with MVPS, EPS are less volatile with 14.44% CV of EPS. On the other hand, BVPS had relatively consistence performance with lower CV of 4.91%.

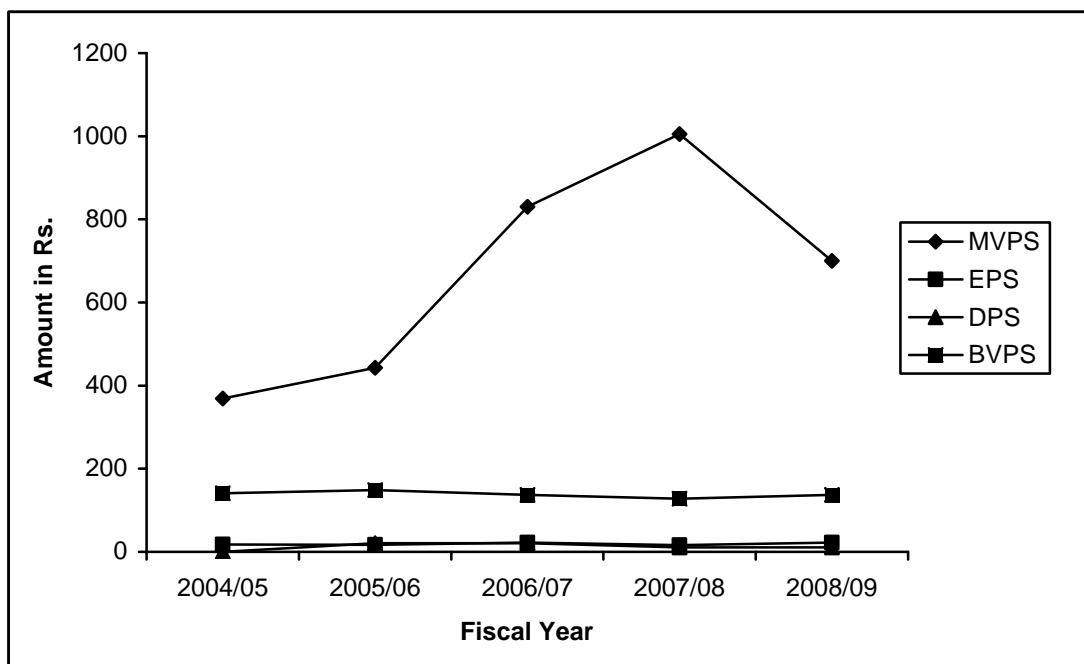
The simple correlation analysis revealed that the MVPS is positively correlated with all the independent variables (i.e. EPS & BVPS) which indicates that on increasing EPS and BVPS, MVPS also increases and vice versa. MVPS is more correlated to EPS than the BVPS. The coefficient of determination shows that the 24% of changes in the MVPS is explained by EPS, 37% of changes in the MVPS are explained by DPS and this ratio to BVPS is-120%. The simple correlation of coefficients of DPS and BVPS with MVPS are not significant at 95% level of significance even EPS is more positively correlated with MVPS than others and significant at 95% confidence limit.

Similarly, the comparative analysis of KBL with industrial benchmark reveals the following results:

For MVPS of KBL, it is less risky but mean is less than industrial average and more volatile. For EPS of KBL, mean is less than industrial average, risk level as well as CV is also less. Similarly, looking at DPS, the factors mean is lesser, SD is greater than that of industrial average and CV is more than that of industrial average. Finally, the BVPS shows the result that mean, risk and CV of BVPS is less than industry average. Thus, in overall, KBL does not have good performance in the last five Years

The linear relationship of EPS, DPS and BVPS to MVPS of KBL are presented in figure 4.3

Figure 4.3
Relation of MVPS with EPS, DPS & BVP of KBL



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

MVPS on EPS

$$\text{MVPS} = 280.94 + 20.39 \text{ EPS}$$

The regression constant 280.94 implies that when EPS is zero, MVPS is 280.94. The constant for EPS 20.39 implies that when EPS increases by Rs1, MVPS increases by Rs.20.39 and vice versa. The simple correlation coefficient is 0.24.

MVPS on DPS

$$\text{MVPS} = 568.56 + 7.98 \text{ DPS}$$

The regression constant 568.56 implies that when DPS is zero, MVPS is 568.56. The constant for DPS 7.98 implies that when DPS increases by Rs1, MVPS increases by Rs7.98 and vice versa. The simple correlation coefficient is 0.37.

MVPS on BVPS

$$\text{MVPS} = 4823.08 - 30.01 \text{ BVPS}$$

The regression constant 4823.08 implies that when BVPS is zero, MVPS is 4823.08. The constant for BVPS -30.01 implies that when BVPS increases by Rs1, MVPS decreases by Rs.30.01 and vice versa. The simple correlation coefficient is -1.20.

4.2.4 Correlation and Regression Analysis of NL& GI

Table 4.10 summarizes the financial performances of BOK over last five Years and table 4.11 shows the relationship (correlation) of EPS, DPS & BVPS to MVPS along with the significance of such relationship.

Table 4.10**Summary of the Financial Performance of NL&GI**

Year	MVPS (a)	EPS (b)	DPS (c)	BVPS (d)
2004/05	431	40.27	-	100
2005/06	304	34.83	-	250
2006/07	-	1.61	-	102
2007/08	-	(25.90)	-	76
2008/09	-	10.40	-	91
Total	735	61.21	0	619
Mean	147	12.24	0	123.8
SD	184.46	23.95	0	63.76
CV	125.48	195.66	0	51.50

Source: Table 4.3 and Excel Software

Table 4.11**Relationship of BVPS, EPS and DPS with MVPS**

Variables	r	r²	t-cal	t-table	Remarks
r _{ab}	0.86	0.74	2.919	3.182	Not Significance
r _{ac}	0	0	0	3.182	Not Significance
r _{ad}	0.48	0.23	0.948	3.182	Not Significance

Source: Annex (1, 2 & 3)

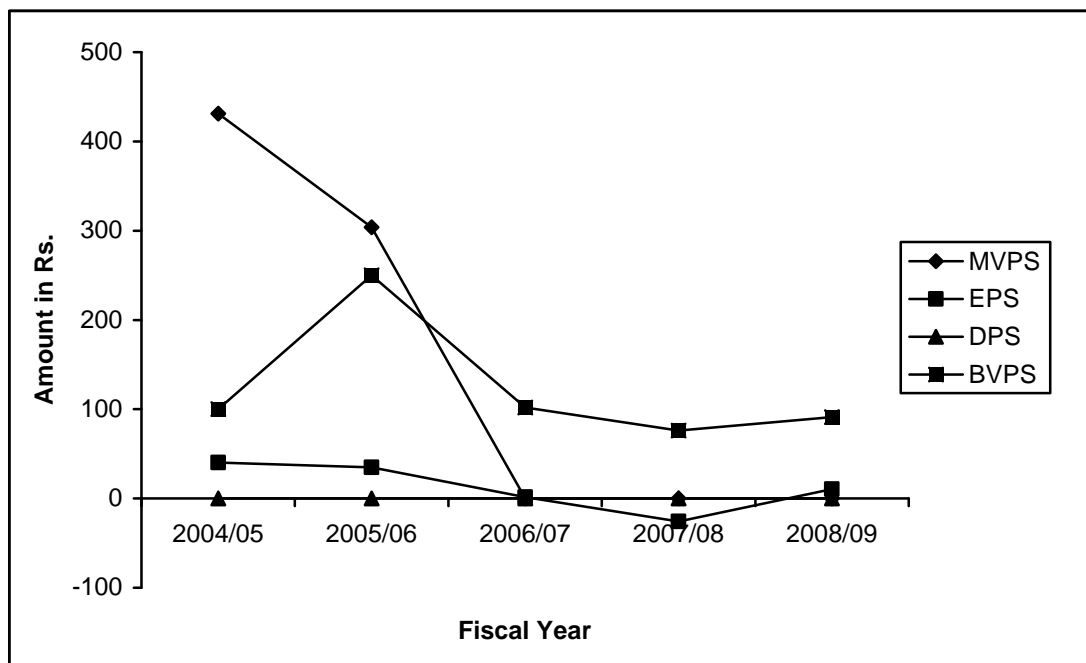
It is revealed from above tables and figure 4.5 that the NL& GI has not consistent performance over the five Years period. MVPS is highly volatile with 125.48% of CV. In comparison to MVPS, EPS and BVPS are less volatile with 195.66% CV of EPS and 51.50% CV of BVPS. The simple correlation analysis revealed that the MVPS is negatively correlated with the independent variables EPS & BVPS which indicates that on decreasing EPS and BVPS, MVPS also decreases and vice versa. MVPS is a little more correlated to DPS. The coefficient of determination shows that the 0% of changes in the MVPS is explained by DPS, 23% of changes in the MVPS are explained by BVPS and this ratio to EPS is 74%.The simple correlation of coefficients of DPS, BVPS and EPS with MVPS are not significant at 95% confidence limit.

Similarly, comparative analysis of NL& GI with industrial benchmark reveals the following information:

For NL& GI, MVPS has good performance; EPS is good, mean EPS is less than industrial average. Likewise, DPS is no satisfactory and its level of consistence is very low and last but not least, BVPS is satisfactory as well. Therefore, NL& GI in overall have satisfactory performance.

The linear relationship of EPS, DPS and DPS to MVPS of NL& GI are presented in figure 4.4

Figure 4.4
Relation of MVPS with EPS, DPS & BVP of NB & GL



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

MVPS on EPS

$$MVPS = 66.11 + 6.61 \text{ EPS}$$

The regression constant 66.11 implies that when EPS is zero, MVPS is 66.11. The constant for EPS 6.61 implies that when EPS increases by Rs1, MVPS increases by Rs6.61 and vice versa. The simple correlation coefficient is 0.86.

MVPS on DPS

$$\text{MVPS} = 0 + 0 \text{ DPS}$$

The regression constant 0 implies that when DPS is zero, MVPS is 0. The simple correlation coefficient is 0.

MVPS on BVPS

$$\text{MVPS} = -24.17 + 1.38 \text{ BVPS}$$

The regression constant -24.17 implies that when BVPS is zero, MVPS is -24.17. The constant for BVPS 1.38 implies that when BVPS increases by Rs1, MVPS increases by Rs.1.38 and vice versa. The simple correlation coefficient is 0.48.

4.2.5 Correlation and Regression Analysis of PICL

Table 4.12 summarizes the financial performances of PICL over last five Years and table 4.13 shows the relationship (correlation) of EPS, DPS & BVPS to MVPS along with the significance of such relationship.

Table 4.12

Summary of the Financial Performance of PICL

Year	MVPS (a)	EPS (b)	DPS (c)	BVPS (d)
2004/05	210	46.68	-	259.92
2005/06	200	43.54	-	303.46
2006/07	260	18.43	5.79	316.10
2007/08	300	16.51	-	167.13
2008/09	190	13.38	10.53	144.29
Total	1160	138.54	16.32	1190.90
Mean	232	27.71	3.26	238.18
SD	18.63	14.33	4.27	70.24
CV	8.03	51.71	130.98	29.49

Source: Table 4.3 and Excel Software

Table 4.13
Relationship of BVPS, EPS and DPS with MVPS

Variables	r	r²	t-cal	t-table	Remarks
r _{ab}	-0.45	0.203	-0.873	3.182	Not Significance
r _{ac}	-0.31	0.096	-0.565	3.182	Not Significance
r _{ad}	-0.09	0.008	-0.157	3.182	Not Significance

Source: Annex (1, 2 & 3)

It is revealed from above tables and figure 4.6 that the PICL has not consistent performance over the five Years period. DPS is highly volatile with 130.98% of CV. In comparison to DPS, MVPS, EPS & BVPS are less volatile with 8.03% CV of MVPS, 51.71% CV of EPS as well as 29.49% CV of BVPS. The simple correlation analysis revealed that the MVPS is positively correlated with independent variables EPS & BVPS which indicates that on increasing EPS & BVPS, MVPS also increases and vice versa. And negative correlated with independent variables DPS. MVPS is a little more correlated to BVPS than the EPS. On the other hand EPS is least correlated with MVPS. The coefficient of determination shows that the 20.3% of changes in the MVPS is explained by EPS, 0.8% of changes in the MVPS are explained by BVPS. The simple correlation of coefficients of DPS, BVPS and EPS with MVPS are not significant at 95% confidence limit.

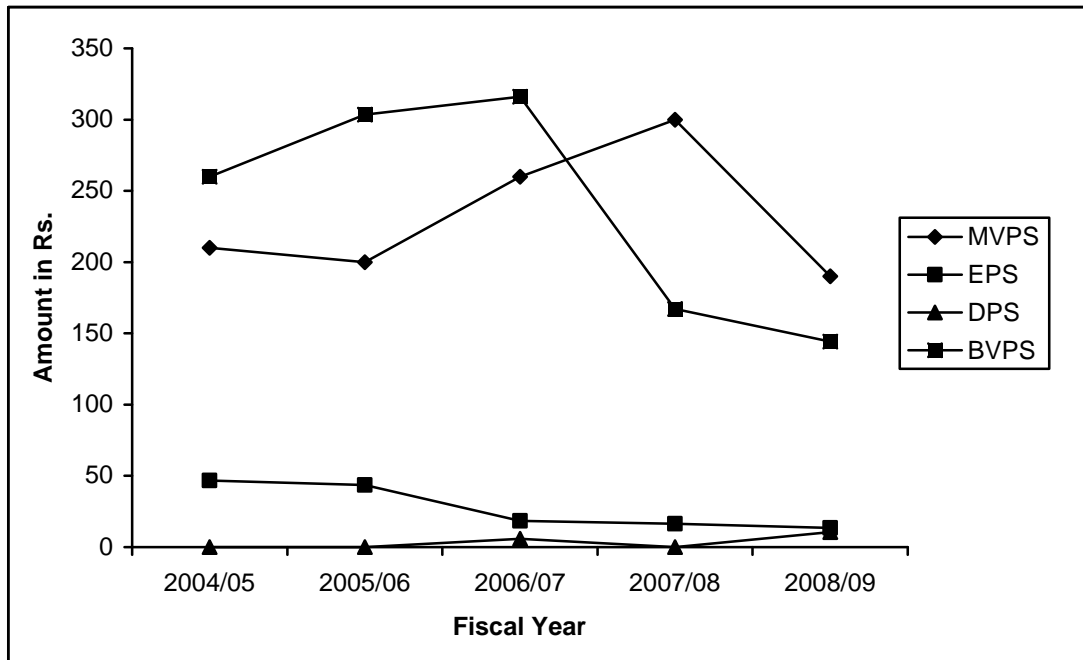
The comparative analysis of PICL performance with industrial benchmark yields the following results:

For MVPS of PICL, it means that it is lesser than that of average otherwise good, for EPS, it is more similar to MVPS, for DPS, it has the same case as of MVPS but CV is more than that of industry average and finally, for BVPS, mean is less than industry average and risk and CV is greater than that of industry average. Thus, in overall, the good performance of PICL is lacked by lower mean of independent variables in the last five Years period.

The linear relationship of EPS, DPS and BVPS to MVPS of PICL are presented in figure 4.5

Figure 4.5

Relation of MVPS with EPS, DPS & BVPS of PICL



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

MVPS on EPS

$$MVPS = 268.24 - 1.31 \text{ EPS}$$

The regression constant 268.24 implies that when EPS is zero, MVPS is 268.24. The constant for EPS -1.31 implies that when EPS increases by Rs1, MVPS decreases by Rs1.31 and vice versa. The simple correlation coefficient is -0.45.

MVPS on DPS

$$MVPS = 242.02 - 3.07 \text{ DPS}$$

The regression constant 242.02 implies that when DPS is zero, MVPS is 242.02. The constant for DPS -3.07 implies that when DPS increases by Rs1, MVPS decreases by Rs.3.07 and vice versa. The simple correlation coefficient is -0.31.

MVPS on BVPS

$$MVPS = 244.30 - 0.05 \text{ BVPS}$$

The regression constant 244.30 implies that when BVPS is zero, MVPS is 244.30. The simple correlation coefficient is -0.09.

4.2.6 Correlation and Regression Analysis of NECO

Table 4.14 summarizes the financial performances of NECO over last five Years and table 4.15 shows the relationship (correlation) of EPS, DPS & BVPS to MVPS along with the significance of such relationship.

Table 4.14

Summary of the Financial Performance of NECO

Year	MVPS (a)	EPS (b)	DPS (c)	BVPS (d)
2004/05	110	3.01	-	195.98
2005/06	90	0.54	-	180.31
2006/07	121	(10.03)	-	135.37
2007/08	121	2.97	-	113.84
2008/09	121	7.23	-	125.34
Total	563	3.72	0	750.84
Mean	112.60	0.74	0	150.17
SD	12.08	5.80	0	32.13
CV	10.73	783.78	0	21.40

Source: Table 4.3 and Excel Software

Table 4.15

Relationship of BVPS, EPS and DPS with MVPS

Variables	r	r ²	t-cal	t-table	Remarks
r _{ab}	-0.05	0.003	-0.087	3.182	Not Significant
r _{ac}	0	0	0	3.182	Not Significant
r _{ad}	-0.74	0.548	-1.906	3.182	Not Significant

Source: Annex (1, 2 & 3)

It is revealed from above tables and figure 4.7 that the NECO has not consistent performance over the five Years period. EPS is highly volatile with 783.78% of CV. In comparison to EPS, MVPS & BVPS are volatile in decreasing rate with 10.73% CV of MVPS, 21.40% CV of BVPS. The simple correlation analysis revealed that the MVPS is positively correlated with independent variables EPS & DPS which indicates that on increasing EPS & DPS, MVPS also increases and vice versa. MVPS

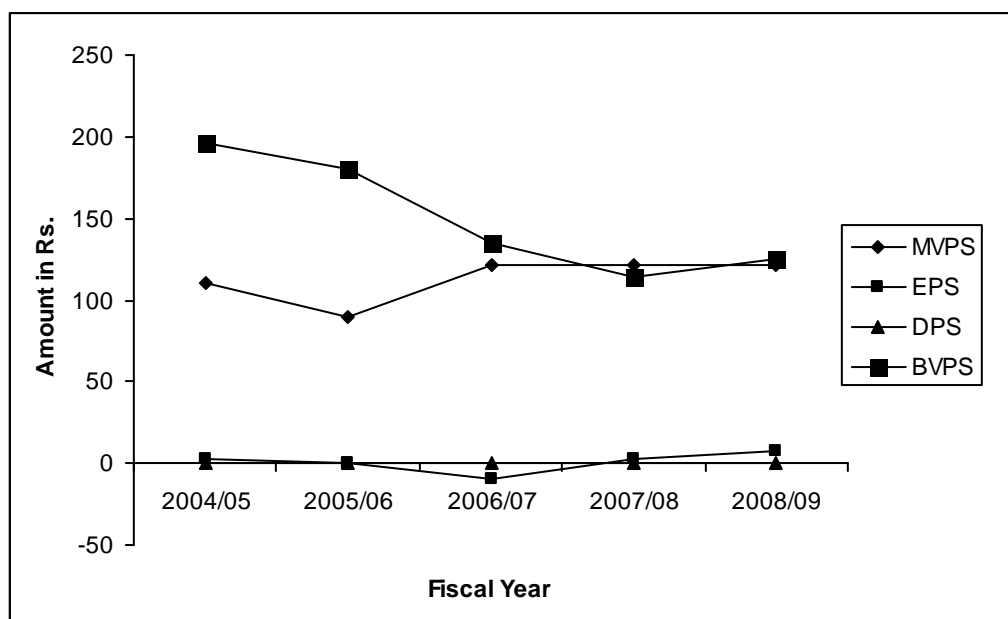
has high degree of positive correlation with independent variable DPS, moderate degree of positive correlated with independent variable EPS and highly negative correlated with independent variable BVPS. The coefficient of determination shows that the 96% of changes in the MVPS is explained by DPS, 0.3% of changes in the MVPS are explained by EPS. The simple correlation of coefficients of DPS with MVPS is significant at 95% confidence limit and EPS & BVPS with MVPS are not significant at 95% confidence limit.

The comparison of NECO with industrial benchmark gives the following clues:

For MVPS of NECO, mean, risk and volatility is less than the industrial average meaning that MVPS does not seem good. For EPS, mean and SD are lesser as well as CV is greater than industrial average. DPS is more or less similar to the EPS but its CV is more than industry average. Finally, BVPS seems lesser in mean and greater in risk and volatility with industrial average. Thus, in overall, the NECO do not reach the industrial benchmark because of lower mean of independent variables

The linear relationship of EPS, DPS and BVPS to MVPS of PICL are presented in figure 4.6

Figure 4.6
Relationship of MVPS with EPS, DPS & BVPS of NECO



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

MVPS on EPS

$$\text{MVPS} = 112.68 - 0.11 \text{ EPS}$$

The regression constant 112.68 implies that when EPS is zero, MVPS is 112.68. The constant for EPS 0.11 implies that when EPS increases by Rs1, MVPS decreases by Rs.0.11 and vice versa. The simple correlation coefficient is -0.05.

MVPS on DPS

$$\text{MVPS} = 0 + 0 \text{ DPS}$$

The regression constant 0 implies that when DPS is zero, MVPS is 0. The simple correlation coefficient is 0.05.

MVPS on BVPS

$$\text{MVPS} = 154.44 - 0.28 \text{ BVPS}$$

The regression constant 154.44 implies that when BVPS is zero, MVPS is 154.44. The constant for BVPS -0.28 implies that when BVPS increases by Rs1, MVPS decreases by Rs.0.28 and vice versa. The simple correlation coefficient is -0.74.

4.2.7 Correlation and Regression Analysis of KFL

Table 4.16 summarizes the financial performances of KFL over last five Years and table 4.17 shows the relationship (correlation) of EPS, DPS & BVPS to MVPS along with the significance of such relationship.

Table 4.16

Summary of the Financial Performance of KFL

Year	MVPS (a)	EPS (b)	DPS (c)	BVPS (d)
2004/05	135	17.97	7.51	145
2005/06	147	26.30	5.59	156
2006/07	203	20.04	10.13	175.31
2007/08	285	25.57	11.15	178.02
2008/09	326	23.54	13.85	161.72
Total	1096	113.42	48.23	816.05
Mean	219.20	22.68	9.65	163.21
SD	75.23	3.20	2.87	12.26
CV	34.32	14.11	29.74	7.51

Source: Table 4.3 and Excel Software

Table 4.17
Relationship of BVPS, EPS and DPS with MVPS

Variables	R	r ²	t-cal	t-table	Remarks
r _{ab}	0.38	0.144	0.712	3.182	Not Significance
r _{ac}	0.94	0.884	4.772	3.182	Significance
r _{ad}	0.58	0.336	1.233	3.182	Not Significance

Source: Annex (1, 2 & 3)

It is revealed from above tables and figure 4.8 that the KFL has not consistent performance over the five Years period MVPS is more volatile with 34.32% of CV. In comparison to MVPS, EPS, DPS & BVPS are volatile in decreasing rate with 14.11% CV of EPS, 29.74% CV of DPS and relatively low degree of volatility i.e. 7.51% CV of BVPS. The simple correlation analysis revealed that the MVPS is positively correlated with all independent variables EPS, DPS & BVPS which indicates that on increasing EPS, DPS and BVPS, MVPS also increases and vice versa. It has low degree of correlation of EPS, DPS and BVPS with MVPS. The coefficient of determination shows that the 14.4% of changes in the MVPS is explained by EPS, 33.6% of changes in the MVPS are explained by BVPS and this ratio to DPS is 88.4%. The simple correlation coefficients of EPS, DPS and BVPS with MVPS are not significant at 95% confidence limit.

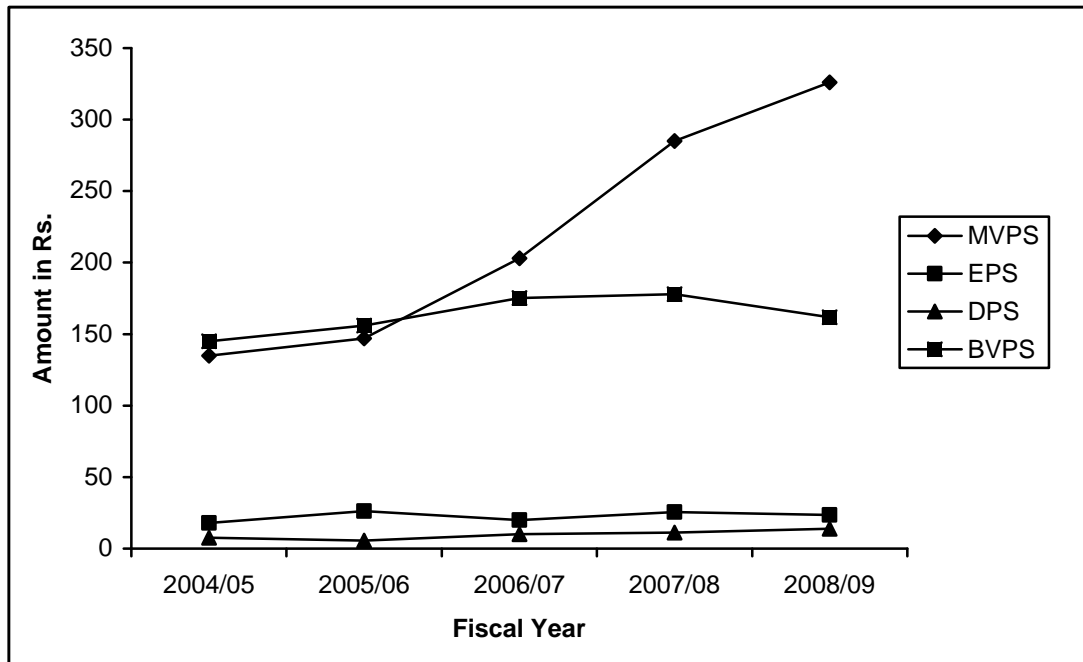
The comparison of KFL with industrial Benchmark gives the following clues:

For MVPS of KFL, mean, level of risk and volatility is less than the industrial average meaning that MVPS does seem good. For EPS, mean and SD as well as CV is lesser than industrial average. DPS, mean, SD and CV are less than industrial average and finally BVPS mean, risk and volatility is less than the industrial average so that BVPS does seem good. The level of risk seems very lower. Thus, in overall, the KFL does not reach the industrial benchmark because of lower mean of independent variables.

The linear relationship of EPS, DPS and BVPS to MVPS of KFL are presented in figure 4.7

Figure 4.7

Relation of MVPS with EPS, DPS & BVPS of KFL



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

MVPS on EPS

$$MVPS = 16.03 + 8.96 \text{ EPS}$$

The regression constant 16.3 implies that when EPS is zero, MVPS is 16.03. The constant for EPS 8.96 implies that when EPS increases by Rs1, MVPS increases by Rs.8.96 and vice versa. The simple correlation coefficient is 0.38.

MVPS on DPS

$$MVPS = 77.63 + 3.62 \text{ DPS}$$

The regression constant 77.63 implies that when DPS is zero, MVPS is 77.63. The constant for DPS 3.62 implies that when DPS increases by Rs1, MVPS increases by Rs.3.62 and vice versa. The simple correlation coefficient is 0.94.

MVPS on BVPS

$$MVPS = 20.56 + 0.56 \text{ BVPS}$$

The regression constant 20.56 implies that when BVPS is zero, MVPS is 20.56. The simple correlation coefficient is 0.58.

4.2.8 Correlation and Regression Analysis of UFL

Table 4.18 summarizes the financial performances of UFL over last five Years and table 4.19 shows the relationship (correlation) of EPS, DPS & BVPS to MVPS along with the significance of such relationship.

Table 4.18
Summary of the Financial Performance of UFL

Year	MVPS (a)	EPS (b)	DPS (c)	BVPS (d)
2004/05	130	30.70	19.05	152.69
2005/06	195	28.28	35.09	134.41
2006/07	200	34.24	21.05	167.51
2007/08	283	29.18	21.05	167.39
2008/09	335	13.77	10	134.96
Total	1143	136.17	106.24	756.96
Mean	228.60	27.23	21.25	151.39
SD	72.40	7.03	8.04	14.67
CV	31.67	25.82	37.84	9.69

Source: Table 4.3 and Excel Software

Table 4.19
Relationship of BVPS, EPS and DPS with MVPS

Variables	r	r²	t-cal	t-table	Remarks
r _{ab}	-0.75	0.56	-1.964	3.182	Not Significance
r _{ac}	-0.50	0.25	-1	3.182	Not Significance
r _{ad}	-0.17	0.029	-0.299	3.182	Not Significance

Source: Annex (1, 2 & 3)

It is revealed from above tables and figure 4.9 that the UFL has not consistent performance over the five Years period. DPS is more volatile with 37.84% of CV. In comparison to DPS, EPS, MVPS & BVPS are volatile in decreasing rate with 25.82% CV of EPS, 31.67% CV of MVPS and relatively low degree of volatility i.e. 9.69% CV of BVPS. The simple correlation analysis revealed that the MVPS is positively correlated with DPS, which indicates that on increasing DPS, MVPS also increases and vice versa. On the other hand, MVPS is negatively correlated with EPS & BVPS however the degree of correlation is low. There is high degree of correlation with MVPS and DPS. The coefficient of determination shows that the 2.9% of changes in

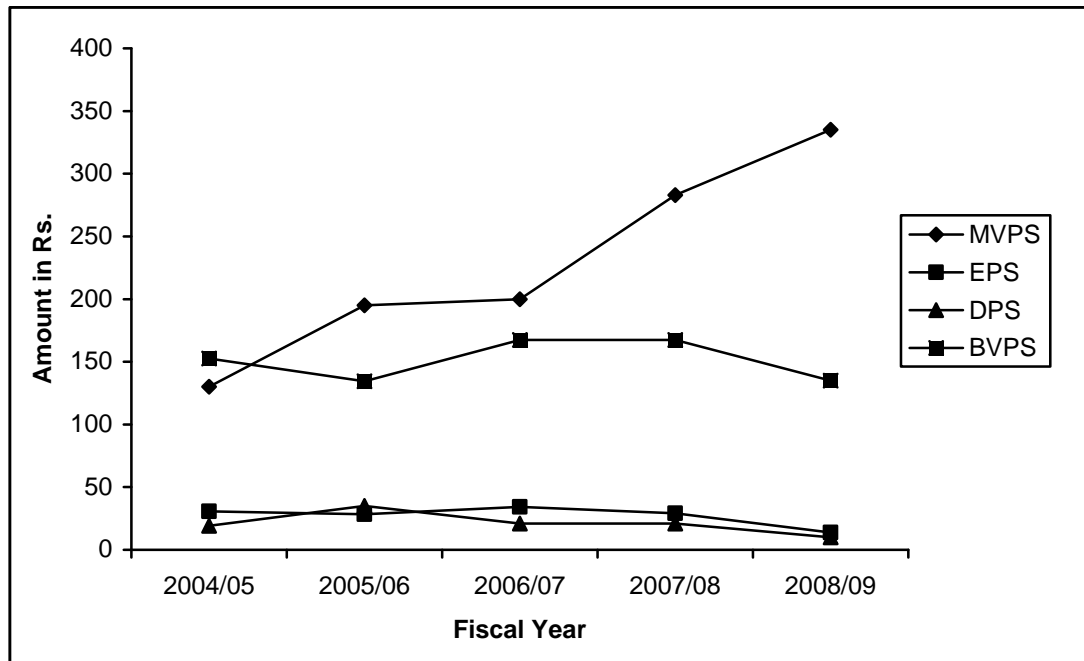
the MVPS is explained by BVPS, 25% of changes in the MVPS are explained by DPS and this ratio to EPS is 56%. The simple correlation coefficients of EPS, DPS and BVPS with MVPS are not significant at 95% confidence limit.

The comparison of UFL with industrial Benchmark gives the following information:

For MVPS of UFL, mean, level of risk and CV are less than the industrial average meaning that MVPS does not seem good. For EPS, mean is nearly equal to industrial average and SD as well as CV is lesser than industrial average. DPS mean, risk and volatility are less than industrial average. BVPS mean is lesser than average industrial and risk & volatility are less. Thus, in overall, the KFL have satisfactory performance than industrial benchmark.

The linear relationship of EPS, DPS and BVPS to MVPS of UFL are presented in figure 4.8

Figure 4.8
Relation of MVPS with EPS, DPS & BVPS of UFL



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

MVPS on EPS

$$MVPS = 438.28 - 7.70 \text{ EPS}$$

The regression constant 438.28 implies that when EPS is zero, MVPS is 438.28. The constant for EPS -7.70 implies that when EPS increases by Rs1, MVPS decreases by Rs.7.70 and vice versa. The simple correlation coefficient is -0.75.

MVPS on DPS

$$\text{MVPS} = 324 - 4.49 \text{ DPS}$$

The regression constant 324 implies that when DPS is zero, MVPS is 324 . The constant for DPS -4.49 implies that when DPS increases by Rs1, MVPS decreases by Rs.4.49 and vice versa. The simple correlation coefficient is -0.50.

MVPS on BVPS

$$\text{MVPS} = 354.75 - 0.83 \text{ BVPS}$$

The regression constant 354.74 implies that when BVPS is zero, MVPS is 354.75. The constant for BVPS -0.83 implies that when BVPS increases by Rs1, MVPS decreases by Rs.0.83 and vice versa. The simple correlation coefficient is -0.17.

4.2.9 Correlation and Regression Analysis of PFL

Table 4.20 summarizes the financial performances of PFL over last Years and table 4.21 shows the relationship (correlation) of EPS, DPS & BVPS to MVPS along with the significance of such relationship.

Table 4.20

Summary of the Financial Performance of PFL

Year	MVPS (a)	EPS (b)	DPS (c)	BVPS (d)
2004/05	100	17.62	-	128.80
2005/06	137	9.72	10	83.14
2006/07	127	13.14	-	130
2007/08	699	19.01	20	141.68
2008/09	285	13.54	10	122.41
Total	1348	73.03	40	606.03
Mean	269.60	14.61	8	121.21
SD	224.19	3.34	7.48	20.02
CV	83.16	22.86	93.50	16.52

Source: Table 4.3 and Excel Software

Table 4.21
Relationship of BVPS, EPS and DPS with MVPS

Variables	r	r²	t-cal	t-table	Remarks
r _{ab}	0.59	0.348	1.266	3.182	Not Significance
r _{ac}	0.88	0.774	3.209	3.182	Significance
r _{ad}	0.50	0.25	1	3.182	Not Significance

Source: Annex (1, 2 & 3)

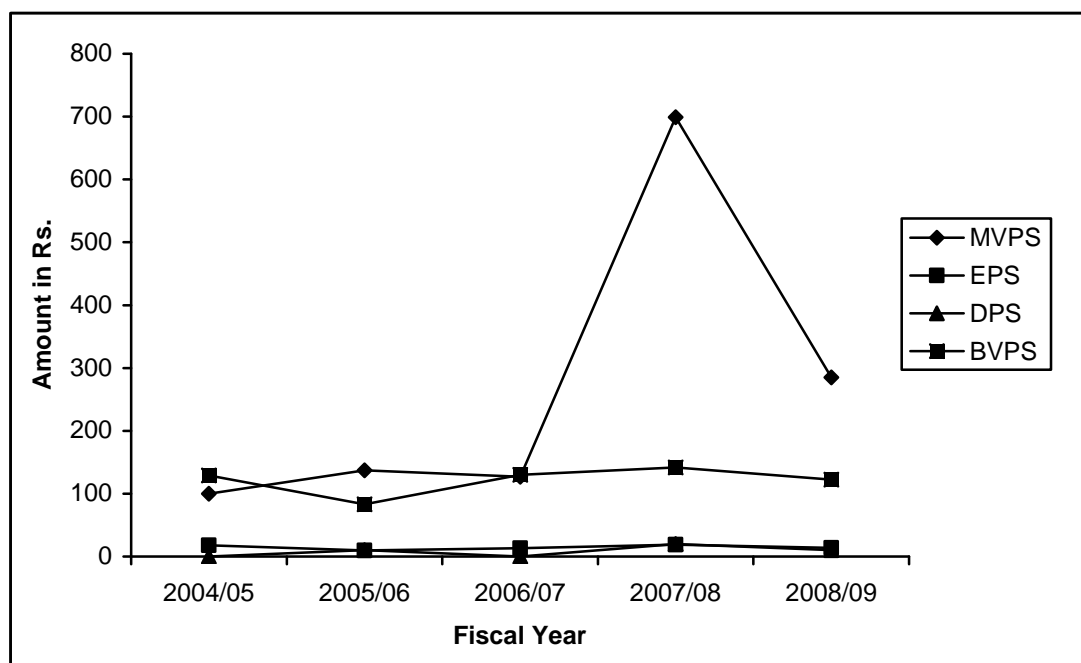
It is revealed from above tables and figure 4.10 that the PFL has not consistent performance over the five Years period. DPS is more volatile with 93.50% of CV. In comparison to DPS, EPS, BVPS & MVPS are volatile in decreasing rate with 22.86% CV of EPS, 16.52% CV of BVPS and relatively very low degree of volatility i.e. 83.16% CV of MVPS. The simple correlation analysis revealed that the MVPS is positively correlated with of the independent variables BVPS which indicates that on increasing BVPS, MVPS also increases and vice versa and MVPS is negative correlated with EPS and DPS. There is low degree of correlation of MVPS with BVPS. The coefficient of determination shows that the 25% of changes in the MVPS is explained by BVPS, 77.4% of changes in the MVPS are explained by DPS and this ratio to EPS is 34.80%. The simple correlation of coefficients of EPS, DPS and BVPS with MVPS are not significant at 95% confidence limit.

The comparison of PFL with industrial Benchmark gives the following information:

For MVPS of PFL, mean, level of risk is less & CV is greater than the industrial average meaning that MVPS does not seem good. For DPS, seems not satisfactory at all. The mean of BVPS is less however SD and CV are lesser. The level of risk and volatility seems lower than the industrial benchmark. Talking about the EPS, mean, SD and CV are lesser than industrial benchmark. The level of risk seems rather satisfactory. Thus, in overall, the PFL does not have satisfactory performance than industrial benchmark.

The linear relationship of EPS, DPS and BVPS to MVPS of PFL are presented in figure 4.9.

Figure 4.9
Relation of MVPS with EPS, DPS & BVPS of PFL



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

MVPS on EPS

$$MVPS = -313.46 + 39.91 \text{ EPS}$$

The regression constant -313.46 implies that when EPS is zero, MVPS is -313.46. The constant for EPS 39.91 implies that when EPS increases by Rs1, MVPS increases by Rs.39.91 and vice versa. The simple correlation coefficient is 0.59.

MVPS on DPS

$$MVPS = 57.71 + 26.49 \text{ DPS}$$

The regression constant 57.71 implies that when DPS is zero, MVPS is 57.71. The constant for DPS -26.49 implies that when DPS increases by Rs.1, MVPS increases by Rs.26.49 and vice versa. The simple correlation coefficient is 0.88.

MVPS on BVPS

$$MVPS = -414.59 + 5.64 \text{ BVPS}$$

The regression constant -414.59 implies that when BVPS is zero, MVPS is -414.59 the constant for BVPS 5.64 implies that when BVPS increases by Rs.1, MVPS increases by Rs.5.64 and vice versa. The simple correlation coefficient is 0.50.

4.3 Price Situations of the Stocks of Listed Companies

Under this topic, we examine the pricing status of common stock i.e. whether common stocks are overpriced or under priced or equilibrium priced. The pricing status of stocks of particular firm is evaluated by comparing the required rate of return with actual realized rate of return. This chapter presents calculations of actual rate of return that a particular security has provided during the study period and its corresponding required rate of return. Comparison between the actual realized rate of return and required rate of return gives the way by which classification of stocks-whether overpriced or under priced, is possible. The greater the beta of a security, greater will be the risk and the greater the expected return required. Likewise, the lower the beta, lower will be the risk, the more valuable it becomes and the lower the expected return required.

Thus, in conclusion, it was found that the 3 banks taken as sample, 2 were under priced & one is over priced. Like wise, statuses of stocks of 3 insurance companies are over priced. Similarly, 3 finance companies taken as sample, 3 of them are over priced during the study period. In this way, stocks of two sampled companies are under priced and seven over priced during the study period. Some of the sampled companies' shares were not found reasonably priced during the study period. Stocks of one bank NABIL and one finance company PFL are aggressive and other is defensive.

The main reason behind the under valuation of the stocks of the sampled companies is that the price of the stock had approached the highest point without having any concrete financial causes yielding remarkable price appreciation during the study period. However, NEPSE index did not follow the same pattern and also the rate of return on Treasury bill issued by NRB rapidly decrease forcing it to limit within a lower level. In this way, Capital gain and market risk premium is minimum. Therefore, actual returns of some sampled companies are significantly higher than required return. If our stock market really appraises financial information bidding practice and signaling effects surely discouraged which eventually reflects real actual

return. In addition to it, too short study period is another reason of such irrelevant result. Nevertheless, this study has focused the existing status of stocks of Nepalese companies.

4.4 Findings from Secondary Data Analysis

The analysis of secondary data of 9 private companies gives the following results:

- For NABIL, MVPS is positively correlated with EPS, DPS & BVPS. Except DPS, EPS and BVPS of these relationships are significant at 95% confidence limit. MVPS, EPS and BVPS are less volatile except DPS. In overall, NABIL has very good performance in the last five Years
- For BOK, MVPS is positively correlated with EPS and DPS. However, the relationship is not significant at 95% confidence limit with EPS and DPS but significant with BVPS. DPS and MVPS as well as BVPS are less volatile than EPS. It is revealed from analysis that BOK has good performance in last five Years
- For KBL, MVPS is positively correlated with all of the independent variables (i.e. DPS, BVPS & EPS); however, the degree of correlation shows insignificant at 95% confidence limit except in EPS. The volatility of MVPS is higher than that of EPS, DPS & BVPS which has a good performance. In overall, KBL does not have good performance in the last five Years
- While analyzing the NL& GI, MVPS is positively correlated with EPS, DPS and BVPS .The degree of correlation is high however these relationships are not significant at 95% confidence limit. DPS is a bit more volatile than BVPS, MVPS & EPS. NL& GI in overall have satisfactory performance.
- For PICL, there exists of negatively correlation of MVPS with EPS DPS & BVPS. The t-test explains that these results do not show significance at 95% confidence limit. The performance of MVPS and EPS are good. BVPS is a bit more volatile where as DPS is more volatile which is not good. In overall, the good performance of PICL is lacked by lower mean of independent variables in the last five Years period.
- The analysis of NECO shows that there exists high degree of negatively correlation in the performance of last five Years with DPS & BVPS and negative correlation with EPS, Which shows different results that is the degree of correlation of DPS the independent variable is significant at 95%

confidence limit. Talking about volatility, DPS is more volatile, EPS and MVPS have higher rate of volatility than BVPS which has relatively low degree of inconsistency. In overall, the NECO do not reach the industrial benchmark because of lower mean of independent variables.

- MVPS has positively correlation with EPS, DPS & BVPS of KFL. However, these degrees of correlation are not significant at 95% confidence limit. BVPS has good performance and EPS and MVPS are less volatile than DPS. In overall, the KFL does not reach the industrial benchmark because of lower mean of independent variables.
- For UFL, MVPS has high degree of correlation with DPS, EPS & BVPS. But, t-test analysis shows that neither of them is significant at 95% confidence limit. MVPS consistent and good where as DPS, EPS and BVPS have higher volatility respectively. In overall, the UFL does not have satisfactory performance than industrial benchmark.
- PFL shows that, there exists low degree positively correlation of MVPS with BVPS the independent variables and negative correlation with EPS & DPS. However, these relationships are not significant at 95% confidence limit. MVPS has very low where as DPS has higher degree of volatility. EPS and BVPS have got a bit higher inconsistency. In overall, the PFL does not have satisfactory performance than industrial benchmark.
- Pricing status analysis of the stocks of sampled companies has shown that NABIL and BOK were under priced during the study period because actual returns were remarkably higher than required returns. But KBL, NL&GI, PIC, NECO, KFL, UFL and PFL were over priced during the study period because actual returns were lesser than required returns. Treasury bill's discount rate is decreasing rapidly because of high liquidity available in the market. Present situation of our country has heavily prohibited new investment opportunity, which ultimately supports to increase the degree of liquidity. This discount rate is considered as the risk free rate. In the same way, few companies among the listed companies in NEPSE are performing satisfactorily. Therefore, NEPSE index is declining rapidly, which eventually yield lower rate of market return. Thus, these all are the key reasons due to which required return is significantly lower during the study period.

4.5 Major Findings from Primary Data Analysis

On the other hand, the analysis of primary data reveals the following results:

- MVPS is significantly affected by company's performance such as earnings, cash dividends payment, book value, risk associated with the company and growth rate at 95 % confidence limit.
- When looking at, the other relevant factors to share price such as interest rate, retention ratio, and cost of equity etc., these factors do not affect significantly whereas stock dividend significantly affects the share price at 95% confidence limit.
- Similarly, the political, economic and environmental factors such as instability of government, strike and demonstrations, cease-fire, national economy, tax rate, etc. significantly affect the share price whereas global economy insignificantly affect the share price at 95% confidence limit.
- From other factors, gold prices, value of US\$ exchange rate, seasonal factors like summer and winter, day of the week, change in management have insignificant impact on the share price.
- Similarly, size of the company, demand and supply, rumors and whims etc significantly affect the share price.
- While analyzing the response of capital market is not well developed in Nepal, Listed companies are not serious about shareholder's interests and NEPSE and SEBO are not able to protect share holders interest has shown significant implication at 95% confidence limit.

CHAPTER V

SUMMARY CONCLUSIONS & RECOMMENDATIONS

This is the final chapter that involves summary, conclusions and recommendations of the research work. The facts and findings from primary and secondary data analysis are presented in this chapter. Besides summarizing and concluding research, recommendations are made to concerned persons and organizations.

5.1 Summary

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

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

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

After the restoration of democracy in 1990, HMG/N initiated privatization and economic liberalization, the industrial development as well as the capital market development process took a pace. However, with the initiation of Maoist armed revolution, the industrial and capital market development process got a break. The nation has been paralyzed in terms of economic development due to the lack of peace and security. Most of the government investment has been concentrated to maintain security only. Similarly, lack of political stability and Royal take over of February 1; has added fuel in this issue.

Nepalese capital market is still in primary stage. Most of the citizens are not aware of the basic knowledge regarding security market. As a result they have not been able to make investment and if even invested; are being exploited in the absence of proper knowledge. In spite of poor condition of the security market in Nepal, government of Nepal has not given priority in its current tenth five-year plan. Government has not been able to create basic infrastructures, sound policies and laws and their effective implementation, for the capital market development. As a result, there is not transparency in the performance of the listed companies and the capital market due to which capital market is struggling to mature.

This phenomenon, in Nepalese context, is the primary focus of this study. The study will primarily look into the major financial performance indicators, which are generally considered important for investors like EPS, DPS & BVPS, efforts will be made to analyze the stock price in relation to these indicators. The researcher has tried to explore the determinants of share price of listed companies in NEPSE.

Second chapter is based on the literature survey on the area of the study on which conceptual review and review of related studies. Due to many limitation or restriction researchers have taken three commercial banks, three finance companies & three insurance companies. The study is based on secondary data from the fiscal year 2004/05 to 2008/09. The data are collected from annual reports of concerned banks, finance companies, insurance companies and other related companies, financial statement, official records, periodicals, journals and bulletins, various published reports and relevant unpublished master's thesis.

For the fulfillments of the objectives of the study many analyses have been done. Both financial as well as statistical tools have been used to analyze and interpret the facts and information. Financial & statistical tools are used to reckoning and secondary data were compiled, processed, tabulated and graphed for better presentation. From which various finding have shown in above chapter from that finding conclusion have been drawn which are presented as below;

5.2 Conclusion

The corporate environment plays vital roles on improving the capital market of the nation. People invested in companies through primary market. They represent there fractional ownership of the company through their investment proportions. In general

demand and supply set the prices of securities are influenced by various factors. One of the major factors is corporate performance. The company alone cannot do any super performance. Adequate knowledge and information regarding the capital market is lacking in Nepalese investors. This is precisely the reason why the concerned companies cheat them and the NEPSE shows rather irrational behavior. Most of the listed companies do not provide sufficient and timely information to NEPSE as well as their shareholders. And even the supplied information does not have similarity among NEPSE, Annual Report and their particular websites.

Meaning that they try to attract potential investors by providing exaggerated information regarding their performances. From the secondary data analysis it is revealed that, pricing behavior differs 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 MVPS. It means that there may be other major factors influencing and determining the share price significantly.

Whereas analysis of primary data (from view point of respondents) summarizes, company performance (EPS, book value, DPS, risk), information disclosed, timely AGM, other political and economic factors such as political stability, national economy, peace, strikes/bandhas, demand and supply situation of the share, cease-fire etc. are the some important factors having significance influence on the share price. Similarly, other relevant factors, interest rate, tax rate, seasonal factors, day of the week effect, gold price, global economy, value of US\$, cost of equity, market liquidity, size of the firm and change in management do not have significant effect. Due to poor rules and regulations as well as effective regularity mechanism, on the one hand, shareholders are not confident enough to invest in the share whereas on the other hand, capital market has not been growing as per expectation. Similarly, lack of political stability, peace and Maoist revolution has constrained the smooth development of security market.

To arrive at concrete conclusion, pricing status of the common stocks of sampled companies has also been tested which strongly concluded that NABIL and BOK are under priced during the study period, but KBL, NL&GI, PIC, NECO, KFL, UFL and PFL were over priced. If stocks are under priced, their demand in stock market heavily mounts up. Insufficient supply of stocks caused price to rise. At present, this

situation is prevailing in Nepalese stock market due to which equity price of banking sector has approached to maximum point without having any concrete financial reason.

The study concludes that the Nepalese stock market is in infancy stage. There is a gap between the theory and practice of investment in Nepalese stock market due to lack of proper study/analysis of stock market. Professionalism is lacking. 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 cannot undermine the truth that with the presence of peace and political stability, the capital market gets far better soon.

Thus, it can be concluded that three financial indicators EPS, DPS and BVPS heavily determine the stock price. Other extraneous factors also caused share price to fluctuate. Investors must look after all factors, which explicitly or implicitly affect equity price so that they can arrive at rational decision.

5.3 Recommendations

Based on the research, the researcher recommends;

Perfect markets require that all information concerning future risks and returns of securities be 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. Similarly, NEPSE can expand its service to regional and local level so that it gives the equal opportunity to all the potential investors. The existing manual method of security trading should be replaced with computerized method to ensure the accuracy and systematic. Investors should be provided with investment guidelines and relevant information through media. It should monitor the activities of brokers as well as listed companies.

To Investors - 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. 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.

To Brokers - Brokers are suggested not only to look at their 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 SEBO/N NEPSE - Perfect markets require that all information concerning future risks and returns of securities be 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. Similarly, NEPSE can expand its service to regional and local level so that it gives the equal opportunity to all the potential investors. The existing manual method of security trading should be replaced with computerized method to ensure the accuracy and systematic. Investors should be provided with investment guidelines and relevant information through media. It should monitor the activities of brokers as well as listed companies.

To Listed Companies - 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. They should not provide gimmicks to attract the potential investors.

To Government - 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.

Similarly, it should encourage independent rating agencies so that the investors will have a confident picture of financial health and future prospects of organizations/instruments. NEPSE should be given authority to take immediate action for wrongdoer companies. Government should encourage the concerned body to organize programs, seminars time to time to create awareness among the investors.

To Further researcher - Research is an ongoing process. Study of security is a vast field of study. Through this research, the researcher has tried to explore the factors affecting share price of commercial banks, which I believe is more specific, the further researcher can focus their study towards more specific factors. Similarly, they can even carry out research based on primary source. The other relevant factors for example can be impact of CEO charisma, Research, inflation, oil/energy prices etc that affect the share price.

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Appendix -1

i. Simple Correlation and Regression Analysis Between Market Price Per Share and Earning Per Share of NABIL

Year	Market Price Per Share (MPS) (X)	Earning Per Share (EPS) (Y)	X ²	Y ²	XY
2004/05	15.05	10.549	226.5025	111.2814	158.762045
2005/06	22.40	12.921	501.7600	166.9522	289.43040
2006/07	50.50	13.708	2550.2500	187.9093	692.25400
2007/08	52.75	10.831	2782.625	117.3106	571.33525
2008/09	48.99	10.676	2400.0201	113.9770	523.01724
N = 5	189.69	58.685	8461.0951	697.4304	22347.9934

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 22347.9934 - 189.69 \times 58.685}{\sqrt{5 \times 8461.0951 - 189.69^2} \times \sqrt{5 \times 697.4304 - 58.685^2}} = 0.08$$

$$r^2 = 0.01$$

Regression Equation of MVPS and EPS by Using the Method of t-Test of NABIL

$$\bar{X} = \frac{\sum X}{N} = \frac{18969}{5} = 3793.8 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{586.85}{5} = 117.37$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 | 2234799.34 - 18969 | 586.85}{5 | 69743.04 - f 586.85^2} = 9.73$$

$$a = \bar{X} - b\bar{Y} = 3793.8 - 9.73 | 117.37 = 1141.55$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.08\sqrt{5-2}}{\sqrt{1-0.08^2}} = 0.139$$

ii Simple Correlation and Regression Analysis Between Market Price Per Share and Earning Per Share of BOK

Year	M	EP	X ²	Y ²	XY
VPS (X)	S (Y)				
2004/05	430	30.1	184900	906.01	12943
2005/06	850	43.67	722500	1907.07	37119.5
2006/07	1375	43.5	1890625	1892.25	59812.5
2007/08	2350	59.94	5522500	3592.80	140859
2008/09	1825	54.68	3330625	2989.90	99791
N = 5	6830	231.89	11651150	11288.03	350525

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 350525 - 6830 \times 231.89}{\sqrt{5 \times 11651150 - 6830^2} \times \sqrt{5 \times 11288.03 - 6830^2}} = 0.96$$

$$r^2 = 0.92$$

Regression Equation of MVPS and EPS by Using the Method of t-Test of BOK

$$\bar{X} = \frac{\sum X}{N} = \frac{6830}{5} = 1366 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{231.89}{5} = 46.38$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 350525 - 6830 \times 231.89}{5 \times 11288.03 - f \sum Y^2} = 63.29$$

$$a = \bar{X} - b\bar{Y} = 1366 - 63.29 \mid 46.38 = -1569.55$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.96\sqrt{5-2}}{\sqrt{1-0.96^2}} = 5.938$$

iii. Simple Correlation and Regression Analysis Between Market Price Per Share and Earning Per Share of KBL

Year	MV PS (X)	E PS (Y)	X ²	Y ²	XY
2004	369	17	1361	309	6487
2005	443	16	1962	275	7349
2006	830	22	6889	515	1884
2007	1005	16	1010	267	1643
2008	700	22	4900	485	1542
2009	700	22	4900	485	1542
N = 5	3347	95	2521335	1852	64537.1
	.7	.26	.335	.66	7.1

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 64537.1 - 3347 \times 95.26}{\sqrt{5 \times 2521.335 - 3347^2} \times \sqrt{5 \times 1852.66 - 95.26^2}} = 0.24$$

$$r^2 = 0.06$$

Regression Equation of MVPS and EPS by Using the Method of t-Test of KBL

$$\bar{X} = \frac{\sum X}{N} = \frac{3347}{5} = 669.4 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{95.26}{5} = 19.05$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 64537.1 - 3347 \times 95.26}{5 \times 1852.66 - f 95.26^2} = 20.39$$

$$a = \bar{X} - b\bar{Y} = 669.4 - 20.39 \mid 19.05 = 280.94$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.24\sqrt{5-2}}{\sqrt{1-0.24^2}} = 0.428$$

iv. **Simple Correlation and Regression Analysis Between Market Price Per Share and Earning Per Share of NL&GI**

Year	MV PS (X)	E PS (Y)	X ²	Y ²	XY
2004/05	431	40	185	1621	1735
2005/06	304	34	924	1213	1058
2006/07	0	1.	0	2.59	0
2007/08	0	-	0	670.	0
2008/09	0	10	0	108.	0
N = 5	735	61	278	3616	2794
	.735	.21	.177	.36	4.69

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

$$= \frac{5 \times 2794.69 - 735 \times 61.21}{\sqrt{5 \times 278.177 - (735)^2} \times \sqrt{5 \times 3616.36 - (61.21)^2}} = 0.86$$

$$r^2 = 0.74$$

Regression Equation of MVPS and EPS by Using the Method of t-Test of NL&GI

$$\bar{X} = \frac{\sum X}{N} = \frac{735}{5} = 147 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{61.21}{5} = 12.24$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 27944.69 - 735 \times 61.21}{5 \times 3616.36 - f 61.21^2} = 6.61$$

$$a = \bar{X} - b\bar{Y} = 147 - 6.61 \mid 12.24 = 66.11$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-f}} = \frac{0.86\sqrt{5-2}}{\sqrt{1-0.86^2}} = 2.919$$

v. **Simple Correlation and Regression Analysis Between Market Price Per Share and Earning Per Share of PICL**

J r	Yea	J MV PS (X)	J EP S (Y)	J X ²	J Y ²	J XY
J /05	2004	J 210	J 46. 68	J 441 00	J 2179 .02	J 9802 .8
J /06	2005	J 200	J 43. 54	J 400 00	J 1895 .73	J 8708
J /07	2006	J 260	J 18. 43	J 676 00	J 339. 66	J 4791 .8
J /08	2007	J 300	J 16. 51	J 900 00	J 272. 58	J 4953
J /09	2008	J 190	J 13. 38	J 361 00	J 179. 02	J 2452 .2
J 5	N =	J 116 0	J 138 .54	J 277 800	J 4866 .02	J 3079 7.8

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 30797.8 - 1160 \times 138.54}{\sqrt{5 \times 277800 - f 1160^2} \times \sqrt{5 \times 4866.02 - f 138.54^2}} = -0.45$$

$$r^2 = 0.203$$

Regression Equation of MVPS and EPS by Using the Method of t-Test of PICL

$$\bar{X} = \frac{\sum X}{N} = \frac{1160}{5} = 232 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{138.54}{5} = 27.71$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 30797.8 - 1160 \times 138.54}{5 \times 4866.02 - f \sum Y^2} = -1.31$$

$$a = \bar{X} - b\bar{Y} = 232 - (-1.31) \mid 27.71 = 268.24$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-f}} = \frac{-0.45\sqrt{5-2}}{\sqrt{1-0.45}} = -0.873$$

$$|t| = 0.873$$

vi. Simple Correlation and Regression Analysis Between Market Price Per Share and Earning Per Share of NECO

Year	MV PS (X)	E PS (Y)	X ²	Y ²	XY
2004/05	110	3.01	12100	9.06	331.1
2005/06	90	0.54	8100	0.29	48.6
2006/07	121	-10.03	14641	100.60	-1213.6
2007/08	121	2.97	14641	8.82	359.37
2008/09	121	7.23	14641	52.27	874.83
N = 5	563	3.72	64123	171.05	400.27

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 400.27 - 563 \times 3.72}{\sqrt{5 \times 64123 - 563^2} \times \sqrt{5 \times 171.05 - 3.72^2}} = -0.05$$

$$r^2 = 0.003$$

Regression Equation of MVPS and EPS by Using the Method of t-Test of NECO

$$\bar{X} = \frac{\sum X}{N} = \frac{563}{5} = 112.6 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{3.72}{5} = 0.74$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y \bar{Y}} = \frac{5 \times 400.27 - 563 \times 3.72}{5 \times 171.05 - 5 \times 112.6 \times 0.74} = -0.11$$

$$a = \bar{X} - b\bar{Y} = 112.6 - (-0.11) \times 0.74 = 112.68$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-fr^2}} = \frac{0.05\sqrt{5-2}}{\sqrt{1-0.05^2}} = -0.087$$

vii. Simple Correlation and Regression Analysis Between Market Price Per Share and Earning Per Share of Kathmandu Finance

Year	M VPS (X)	EP S (Y)	X ²	Y ²	XY
2004/05	135	17.97	18225	322.92	2425.95
2005/06	147	26.3	21609	691.69	3866.1
2006/07	203	20.04	41209	401.60	4068.12
2007/08	285	25.57	81225	653.82	7287.45
2008/09	326	23.54	106276	554.13	7674.04
N = 5	1096	113.42	268544	2624.17	25321.7

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 25321.7 - 1096 \times 113.42}{\sqrt{5 \times 268544 - 1096^2} \times \sqrt{5 \times 2624.17 - 113.42^2}} = 0.38$$

$$r^2 = 0.144$$

Regression Equation of MVPS and EPS by Using the Method of t-Test of Kathmandu Finance

$$\bar{X} = \frac{\sum X}{N} = \frac{1096}{5} = 219.2 \qquad \bar{Y} = \frac{\sum Y}{N} = \frac{113.42}{5} = 22.68$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 25321.7 - 1096 \times 113.42}{5 \times 2624.17 - f \sum Y^2} = 8.96$$

$$a = \bar{X} - b\bar{Y} = 219.2 - 8.96 \times 22.68 = 16.03$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.38\sqrt{5-2}}{\sqrt{1-0.38^2}} = 0.712$$

viii. Simple Correlation and Regression Analysis Between Market Price Per Share and Earning Per Share of UFL

J r	Yea	J MV PS (X)	J EP S (Y)	J X ²	J Y ²	J XY
J /05	2004	J 130	J 30. 7	J 169 00	J 942. 49	J 3991
J /06	2005	J 195	J 28. 28	J 380 25	J 799. 76	J 5514 .6
J /07	2006	J 200	J 34. 24	J 400 00	J 1172 .38	J 6848
J /08	2007	J 283	J 29. 18	J 800 89	J 851. 47	J 8257 .94
J /09	2008	J 335	J 13. 77	J 112 225	J 189. 61	J 4612 .95
J 5	N =	J 114 3	J 136 .17	J 287 239	J 3955 .71	J 2922 4.5

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 29224.5 - 1143 \times 136.17}{\sqrt{5 \times 287239 - f 1143^2} \times \sqrt{5 \times 3955.71 - f 136.17^2}} = -0.75$$

$$r^2 = 0.56$$

Regression Equation of MVPS and EPS by Using the Method of t-Test of UFL

$$\bar{X} = \frac{\sum X}{N} = \frac{1143}{5} = 228.6 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{136.17}{5} = 27.23$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 29224.5 - 1143 \times 136.17}{5 \times 3955.71 - f \sum Y^2} = -7.70$$

$$a = \bar{X} - b\bar{Y} = 228.6 - (-7.70) \mid 27.23 = 438.28$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-f}} = \frac{0.75\sqrt{5-2}}{\sqrt{1-0.75}} = -1.964$$

$$|t| = 1.964$$

ix. Simple Correlation and Regression Analysis Between Market Price Per Share and Earning Per Share of People Finance

Year	MV PS (X)	E PS (Y)	X ²	Y ²	XY
2004/05	100	17.62	10000	310.46	1762
2005/06	137	9.72	18769	94.48	1331.64
2006/07	127	13.14	16129	172.66	1668.78
2007/08	699	19.01	188601	361.38	13288
2008/09	285	13.54	81225	183.33	3858
N = 5	1348	73.03	614724	1122.31	21909.3

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 21909.3 - 1348 \times 73.03}{\sqrt{5 \times 614724 - 1348^2} \sqrt{5 \times 1122.31 - 73.03^2}} = 0.59$$

$$r^2 = 0.348$$

Regression Equation of MVPS and EPS by Using the Method of t-Test of People Finance

$$\bar{X} = \frac{\sum X}{N} = \frac{1348}{5} = 269.6$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{73.03}{5} = 14.61$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 21909.3 - 1348 \times 73.03}{5 \times 1122.31 - f \times 73.03^2} = 39.91$$

$$a = \bar{X} - b\bar{Y} = 269.6 - 39.91 \times 14.61 = -313.46$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.59\sqrt{5-2}}{\sqrt{1-0.59^2}} = 1.266$$

Appendix -2

i. Simple Correlation and Regression Analysis Between Market Price Per Share and Dividend Per Share of NABIL

Year	MV PS (X)	D PS (Y)	X ²	Y ²	XY
2004/05	150 5	7 0	22650 25	49 00	1053 0
2005/06	224 0	8 5	50176 00	72 25	1904 00
2006/07	505 0	1 40	25502 500	19 600	7070 00
2007/08	527 5	1 00	27826 25	10 000	5275 00
2008/09	489 9	8 5	24000 201	72 25	4164 15
N = 5	189 69	4 80	84610 951	48 950	1946 665

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 1946665 - 18969 \times 480}{\sqrt{5 \times 359822961 - f 18969^2} \times \sqrt{5 \times 23400 - f 480^2}} = 0.66$$

$$r^2 = 0.43$$

Regression Equation of MVPS and DPS by Using the Method of t-Test of NABIL

$$\bar{X} = \frac{\sum X}{N} = \frac{18969}{5} = 3793.8 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{480}{5} = 96$$

$$b = \frac{\sum XY - \frac{\sum X \sum Y}{N}}{\sum Y^2 - \frac{(\sum Y)^2}{N}} = \frac{5 \times 1946665 - 18969 \times 480}{5 \times 48950 - \frac{480^2}{5}} = 43.78$$

$$a = \bar{X} - b\bar{Y} = 3793.8 - 43.78 \times 96 = -408.83$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.66\sqrt{5-2}}{\sqrt{1-0.66^2}} = 1.522$$

ii. **Simple Correlation and Regression Analysis Between Market Price Per Share and Dividend Per Share of BOK**

J r	Yea	J M VPS (X)	J DP S (Y)	J X ²	J Y ²	J XY
4/05	200	430	15	184900	225	6450
5/06	200	850	48	722500	2304	40800
6/07	200	1375	20	1890625	400	27500
7/08	200	2350	42.11	5522500	1773.25	98958.5
8/09	200	1825	47.37	3330625	2243.92	86450.3
5	N =	6830	172.48	11651150	6946.17	260159

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

$$= \frac{5 \times 260159 - 6830 \times 172.48}{\sqrt{5 \times 11651150 - 6830^2} \times \sqrt{5 \times 6946.17 - 172.48^2}} = 0.51$$

$$r^2 = 0.26$$

Regression Equation of MVPS and DPS by Using the Method of t-Test of BOK

$$\bar{X} = \frac{\sum X}{N} = \frac{6830}{5} = 1366 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{172.48}{5} = 34.5$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 260.159 - 6830 \times 172.48}{5 \times 6946.17 - 5 \times 172.48^2} = 24.64$$

$$a = \bar{X} - b\bar{Y} = 1366 - 24.64 \times 34.5 = 515.84$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.51\sqrt{5-2}}{\sqrt{1-0.51^2}} = 1.027$$

iii. Simple Correlation and Regression Analysis Between Market Price Per Share and Dividend Per Share of KBL

Year	M	D	X ²	Y ²	XY
	VPS (X)	PS (Y)			
2004/05	369	0	136161	0	0
2005/06	443	0.21	196249	443.10	9325.15
2006/07	830	0.21	688900	443.10	17471.5
2007/08	1005	0.10	1010025	110.88	10582.65
2008/09	700	0.10	490000	111.94	7406
N = 5	3347	0.63	2521335	1109.02	44785.3

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

$$= \frac{5 \times 44785.3 - 3347 \times 63.21}{\sqrt{5 \times 2521335 - (3347)^2} \times \sqrt{5 \times 1109.02 - (63.21)^2}} = 0.37$$

$$r^2 = 0.137$$

Regression Equation of MVPS and DPS by Using the Method of t-Test of KBL

$$\bar{X} = \frac{\sum X}{N} = \frac{3347}{5} = 669.4 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{63.21}{5} = 12.64$$

$$b = \frac{\sum XY - \frac{\sum X \sum Y}{N}}{\sum Y^2 - \frac{(\sum Y)^2}{N}} = \frac{5 \times 44785.3 - 3347 \times 63.21}{5 \times 1109.02 - \frac{63.21^2}{5}} = 7.98$$

$$a = \bar{X} - b\bar{Y} = 669.4 - 7.98 \times 12.64 = 568.56$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.37\sqrt{5-2}}{\sqrt{1-0.37^2}} = 0.69$$

iv. Simple Correlation and Regression Analysis Between Market Price Per Share and Dividend Per Share of NL&GI

J	Year	J MVP S (X)	J DP S (Y)	J X ²	J Y ²	J X Y
J	2004/0	J	J	J	J	J
5		431	0	1	0	0
J	2005/0	J	J	J	J	J
6		304	0	92416	0	0
J	2006/0	J	J	J	J	J
7		0	0	0	0	0
J	2007/0	J	J	J	J	J
8		0	0	0	0	0
J	2008/0	J	J	J	J	J
9		0	0	0	0	0
J	N = 5	J	J	J	J	J
		735	0	27817	0	0

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 0 - 735 \times 0}{\sqrt{5 \times 278177 - f 735^2} \times \sqrt{5 \times 0 - f 0^2}} = 0$$

r² X0

Regression Equation of MVPS and DPS by Using the Method of t-Test of NL&GI

$$\bar{X} = \frac{\sum X}{N} = \frac{735}{5} = 147 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{0}{5} = 0$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 0 - 735 \times 0}{5 \times 0 - f \sum Y^2} = 0$$

$$a = \bar{X} - b\bar{Y} = 147 - 0 \mid 0 = 0$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-fr^2}} = \frac{0\sqrt{5-2}}{\sqrt{1-f0^2}} = 0$$

v. **Simple Correlation and Regression Analysis Between Market Price Per Share and Dividend Per Share of PICL**

Year	MV PS (X)	DP S (Y)	X ²	Y ²	XY
2004/05	210	0	44100	0	0
2005/06	200	0	40000	0	0
2006/07	260	5.7	67600	33.5	1500
2007/08	300	0	90000	0	0
2008/09	190	10.53	36100	110.88	2000
N = 5	1160	16.32	277800	144.41	3506.1

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 3506.1 - 1160 \times 16.32}{\sqrt{5 \times 277800 - f 1160^2} \times \sqrt{5 \times 144.41 - f 16.32^2}} = -0.31$$

$$r^2 = 0.096$$

Regression Equation of MVPS and DPS by Using the Method of t-Test of PICL

$$\bar{X} = \frac{\sum X}{N} = \frac{1160}{5} = 232 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{16.32}{5} = 3.26$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 3506.1 - 1160 \times 16.32}{5 \times 144.41 - 1160 \times 3.26} = -3.07$$

$$a = \bar{X} - b\bar{Y} = 232 - (-3.07)(3.26) = 242.02$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.31\sqrt{5-2}}{\sqrt{1-0.31^2}} = -0.565$$

$$|t| = 0.565$$

vi. **Simple Correlation and Regression Analysis Between Market Price Per Share and Dividend Per Share of NECO**

J	Year	J MVP S (X)	J DP S (Y)	J X ²	J Y ²	J X	J Y
5	2004/0	110	0	12100	0	0	0
6	2005/0	90	0	8100	0	0	0
7	2006/0	121	0	14641	0	0	0
8	2007/0	121	0	14641	0	0	0
9	2008/0	121	0	14641	0	0	0
	N = 5	563	0	64123	0	0	0

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

$$= \frac{5 \times 0 - 563 \times 0}{\sqrt{5 \times 64123 - (563)^2} \times \sqrt{5 \times 0 - (0)^2}} = 0$$

$$r^2 = 0$$

Regression Equation of MVPS and DPS by Using the Method of t-Test of NECO

$$\bar{X} = \frac{\sum X}{N} = \frac{563}{5} = 112.6 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{0}{5} = 0$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 0 - 563 \times 0}{5 \times 0 - f \times 0} = 0$$

$$a = \bar{X} - b\bar{Y} = 112.6 - 0 \times 0 = 112.6$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0\sqrt{5-2}}{\sqrt{1-0}} = 0$$

vii. Simple Correlation and Regression Analysis Between Market Price Per Share and Dividend Per Share of Kathmandu Finance

Year	MV PS (X)	D PS (Y)	X ²	Y ²	XY
2004/05	135	7.5	1822	56.	1013
		1	5	40	85
2005/06	147	5.5	2160	31.	821.
		9	9	25	73
2006/07	203	10.	4120	102	2056
		13	9	.62	.39
2007/08	285	11.	8122	124	3177
		15	5	.32	.75
2008/09	326	13.	1062	191	4515
		85	76	.24	.1
N =	109	48.	268.	506	1158
5	6	23	544	.41	4.8

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 11584.8 - 1096 \times 48.23}{\sqrt{5 \times 268544 - f 1096^2} \times \sqrt{5 \times 506.41 - f 48.23^2}} = 0.947$$

$$r^2 = 0.884$$

Regression Equation of MVPS and DPS by Using the Method of t-Test of Kathmandu Finance

$$\bar{X} = \frac{\sum X}{N} = \frac{1096}{5} = 219.2 \qquad \bar{Y} = \frac{\sum Y}{N} = \frac{48.23}{5} = 9.65$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 11584.8 - 1096 \times 48.23}{5 \times 506.41 - 5 \times 48.23^2} = 24.59$$

$$a = \bar{X} - b\bar{Y} = 219.2 - 24.59 \times 9.65 = -18.12$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.947\sqrt{5-2}}{\sqrt{1-0.947^2}} = 4.772$$

viii. Simple Correlation and Regression Analysis Between Market Price Per Share and Dividend Per Share of UFL

Year	MV PS (X)	DP S (Y)	X ²	Y ²	XY
2004/05	130	19.0 5	1690 0	362.9 0	2476. 5
2005/06	195	35.0 9	3802 5	1231. 31	6842. 55
2006/07	200	21.0 5	4000 0	443.1 0	4210
2007/08	283	21.0 5	8008 9	443.1 0	5957. 15
2008/09	335	10 25	1122 25	100	3350
N = 5	114 3	106. 24	2872 39	2580. 42	2283 6.2

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 22836.2 - 1143 \times 106.24}{\sqrt{5 \times 287239 - f 1143^2} \times \sqrt{5 \times 2580.42 - f 106.24^2}} = -0.50$$

$r^2 \times 0.25$

Regression Equation of MVPS and DPS by Using the Method of t-Test of UFL

$$\bar{X} = \frac{\sum X}{N} = \frac{1143}{5} = 228.6 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{106.24}{5} = 21.25$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 22836.2 - 1143 \times 106.24}{5 \times 2580.42 - f \sum Y^2} = -4.49$$

$$a = \bar{X} - b\bar{Y} = 228.6 - (-4.49) \mid 21.25 = 324$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-f}} = \frac{0.50\sqrt{5-2}}{\sqrt{1-f}} = -1$$

ix. Simple Correlation and Regression Analysis Between Market Price Per Share and Dividend Per Share of People Finance

Year	MV PS (X)	D PS (Y)	X ²	Y ²	XY
2004/05	100	0	10000	0	0
2005/06	137	10	18769	100	1370
2006/07	127	0	16129	0	0
2007/08	699	20	188601	400	13980
2008/09	285	10	81225	100	2850
N = 5	1348	40	614724	600	18200

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

$$= \frac{5 \times 18200 - 1348 \times 40}{\sqrt{5 \times 614724 - (1348)^2} \times \sqrt{5 \times 600 - (40)^2}} = 0.88$$

$$r^2 = 0.774$$

Regression Equation of MVPS and DPS by Using the Method of t-Test of People Finance

$$\bar{X} = \frac{\sum X}{N} = \frac{1348}{5} = 269.6 \qquad \bar{Y} = \frac{\sum Y}{N} = \frac{40}{5} = 8$$

$$b = \frac{\sum XY - \frac{\sum X \sum Y}{N}}{\sum Y^2 - \frac{(\sum Y)^2}{N}} = \frac{5 \times 18200 - 1348 \times 40}{5 \times 600 - \frac{40^2}{5}} = 26.49$$

$$a = \bar{X} - b\bar{Y} = 269.6 - 26.49 \times 8 = 57.71$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.88\sqrt{5-2}}{\sqrt{1-0.88^2}} = 3.209$$

Appendix -3

i. Simple Correlation and Regression Analysis Between Market Price Per Share and Book Value per Share of NABIL

Yea r	M VPS (X)	B VPS (Y)	X ²	Y ²	XY
2004/05	1505	337	2265025	113569	507185
2005/06	2240	381	5017600	145161	853440
2006/07	5050	418	25502500	174724	2110900
2007/08	5275	354	27825625	125316	1867350
2008/09	4899	324	24000201	104976	1587276
N = 5	18969	1814	84610951	663746	6926151

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

$$= \frac{5 \times 6926151 - 18969 \times 1814}{\sqrt{5 \times 84610951 - (18969)^2} \times \sqrt{5 \times 663746 - (1814)^2}} = 0.17$$

$$r^2 = 0.03$$

Regression Equation of MVPS and BVPS by Using the Method of t-Test of NABIL

$$\bar{X} = \frac{\sum X}{N} = \frac{18969}{5} = 3793.8 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{1814}{5} = 362.8$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum X^2 - f \sum X^2} = \frac{5 \times 6926151 - 18969 \times 1814}{5 \times 663746 - f 1814^2} = 7.85$$

$$a = \bar{Y} - b\bar{X} = 362.8 - 7.85 \times 3793.8 = -29710.05$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.17\sqrt{5-2}}{\sqrt{1-0.17^2}} = 0.29$$

ii. Simple Correlation and Regression Analysis Between Market Price Per Share and Book Value per Share of BOK

Year	Market Price (Y)	Book Value (X)	X ²	Y ²	XY
2004/05	430	213.6	184900	45624.96	91848
2005/06	850	230.67	722500	53208.65	196069.5
2006/07	1375	164.68	1890625	27119.50	226435
2007/08	2350	222.51	5522500	49510.70	522898.5
2008/09	1825	206.25	3330625	42529.06	376406.3
N = 5	6830	1037.71	11651150	218002.87	1413657

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

$$= \frac{5 \times 1413657 - 6830 \times 1037.71}{\sqrt{5 \times 11651150 - (6830)^2} \times \sqrt{5 \times 218002.87 - (1037.71)^2}} = -0.05$$

$r^2 = 0.003$

Regression Equation of MVPS and BVPS by Using the Method of t-Test of BOK

$$\bar{X} = \frac{\sum X}{N} = \frac{6830}{5} = 1366 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{1037.71}{5} = 207.54$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 1413657 - 6830 \times 1037.71}{5 \times 218002.87 - f \sum Y^2} = -1.46$$

$$a = \bar{X} - b\bar{Y} = 1366 - (-1.46) \mid 207.54 = 1669.66$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-f}} = \frac{-0.05\sqrt{5-2}}{\sqrt{1-0.05}} = -0.087$$

$$|t| = 0.087$$

iii. Simple Correlation and Regression Analysis Between Market Price Per Share and Book Value per Share of KBL

Year	MV PS (X)	BV PS (Y)	X ²	Y ²	XY
2004/05	369	141	1361 61	198 81	520 29
2005/06	443	149	1962 49	222 01	660 07
2006/07	830	137	6889 00	187 69	113 710
2007/08	1005	128	10100 25	163 84	128 640
2008/09	700	137	4900 00	187 69	959 00
N = 5	3347	692	2521335	96004	456286

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

$$= \frac{5 \times 456286 - 3347 \times 692}{\sqrt{5 \times 2521335 - 3347^2} \times \sqrt{5 \times 96004 - 692^2}} = 1.20$$

$$r^2 = 1.44$$

Regression Equation of MVPS and BVPS by Using the Method of t-Test of KBL

$$\bar{X} = \frac{\sum X}{N} = \frac{3347}{5} = 669.4 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{692}{5} = 138.4$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 456286 - 3347 \times 692}{5 \times 96004 - f \sum Y^2} = -30.01$$

$$a = \bar{X} - b\bar{Y} = 669.4 - (-30.01) \mid 138.4 = 4823.08$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-f}} = \frac{Z1.20\sqrt{5-2}}{\sqrt{1-fZ1.20^2}} = 0$$

iv. Simple Correlation and Regression Analysis Between Market Price Per Share and Book Value per Share of NL&GI

Year	MV PS (X)	BV PS (Y)	X ²	Y ²	XY
2004/05	431	100	158761	10000	43100
2005/06	304	250	92416	62500	76000
2006/07	0	102	0	10404	0
2007/08	0	76	0	5776	0
2008/09	0	91	0	8281	0
N = 5	735	619	278177	96961	119100

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

$$= \frac{5 \times 119100 - 735 \times 619}{\sqrt{5 \times 278177 - 735^2} \times \sqrt{5 \times 96961 - 619^2}} = 0.48$$

$$r^2 = 0.23$$

Regression Equation of MVPS and BVPS by Using the Method of t-Test of NL&GI

$$\bar{X} = \frac{\sum X}{N} = \frac{735}{5} = 147 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{619}{5} = 123.8$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 11900 - 735 \times 619}{5 \times 96961 - 5 \times 619^2} = 1.38$$

$$a = \bar{X} - b\bar{Y} = 147 - (1.38) \times 123.8 = -24.17$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.48\sqrt{5-2}}{\sqrt{1-0.48^2}} = 0.948$$

v. **Simple Correlation and Regression Analysis Between Market Price Per Share and Book Value per Share of PICL**

J r	Yea	J M VPS (X)	J BV PS (Y)	J X ²	J Y ²	J XY
	200		259	441	6755	545
4/05		210	.92	00	8.41	83.2
	200		303	400	9208	606
5/06		200	.46	00	7.97	92
	200		316	676	9991	821
6/07		260	.1	00	9.21	86
	200		167	900	2793	501
7/08		300	.13	00	2.44	39
	200		144	361	2081	274
8/09		190	.29	00	9.60	15.1
	N =	116	119	277	3083	275
5		0	0.9	800	1.63	015

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 275015 - 1160 \times 1190.9}{\sqrt{5 \times 277800 - f 1160^2} \times \sqrt{5 \times 308317.63 - f 1190.9^2}} = -0.09$$

$$r^2 \times 0.008$$

Regression Equation of MVPS and BVPS by Using the Method of t-Test of PICL

$$\bar{X} = \frac{\sum X}{N} = \frac{1160}{5} = 232 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{1190.9}{5} = 238.18$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 275015 - 1160 \times 1190.9}{5 \times 308317.63 - f \sum Y^2} = -0.05$$

$$a = \bar{X} - b\bar{Y} = 232 - (-0.05) \mid 238.18 = 244.30$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-fr^2}} = \frac{0.09\sqrt{5-2}}{\sqrt{1-f(0.09)^2}} = 0.157$$

vi. Simple Correlation and Regression Analysis Between Market Price Per Share and Book Value per Share of NECO

Yea	M	BV	X ²	Y ²	XY
r	VPS (X)	PS (Y)			
2004/05	110	5.98	100	.16	7.8
2005/06	90	0.31	00	.70	7.9
2006/07	121	5.37	641	.04	9.77
2007/08	121	3.84	641	.55	4.64
2008/09	121	5.24	641	.12	6.14
N = 5	563	0.84	123	4.55	6.25

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 83106.25 - 563 \times 750.84}{\sqrt{5 \times 64123 - f 563^2} \times \sqrt{5 \times 117914.55 - f 750.84^2}} = -0.74$$

$$r^2 = 0.548$$

Regression Equation of MVPS and BVPS by Using the Method of t-Test of NECO

$$\bar{X} = \frac{\sum X}{N} = \frac{563}{5} = 112.6 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{750.84}{5} = 150.17$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 83106.256 - 563 \times 750.84}{5 \times 117914.55 - f \sum Y^2} = -0.28$$

$$a = \bar{X} - b\bar{Y} = 112.6 - (-0.28) | 150.17 = 154.44$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-f}} = \frac{0.74\sqrt{5-2}}{\sqrt{1-f}} = -1.906$$

$$|t| = 1.906$$

vii. **Simple Correlation and Regression Analysis Between Market Price Per Share and Book Value per Share of Kathmandu Finance**

Year	M	B	X ²	Y ²	XY
	VPS (X)	VPS (Y)			
2004/05	13.5	14.5	182.25	21025	1957.5
2005/06	14.7	15.6	216.09	24336	2293.2
2006/07	20.3	17.531	412.09	30733.60	3558.793
2007/08	28.5	17.802	812.25	31691.12	5073.57
2008/09	32.6	16.172	1062.76	26153.36	5272.072
N = 5	109.6	81.605	2685.44	13393.07	18155.135

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

$$= \frac{5 \times 18155.135 - 109.6 \times 81.605}{\sqrt{5 \times 2685.44 - (109.6)^2} \times \sqrt{5 \times 13393.07 - (81.605)^2}} = 0.58$$

$$r^2 = 0.336$$

Regression Equation of MVPS and BVPS by Using the Method of t-Test of Kathmandu Finance

$$\bar{X} = \frac{\sum X}{N} = \frac{1096}{5} = 219.2 \qquad \bar{Y} = \frac{\sum Y}{N} = \frac{816.05}{5} = 163.21$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum X^2 - f \sum X^2} = \frac{5 \times 181551.35 - 1096 \times 816.05}{5 \times 268544 - f 1096^2} = 3.56$$

$$a = \bar{Y} - b\bar{X} = 163.21 - 3.56 \mid 219.2 = -361.32$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-f}} = \frac{0.58\sqrt{5-2}}{\sqrt{1-f}} = 0.336$$

viii. Simple Correlation and Regression Analysis Between Market Price Per Share and Book Value per Share of UFL

Year	M	B	X ²	Y ²	XY
	VPS (X)	VPS (Y)			
2004/05	130	152.69	16900	23314.24	19849.7
2005/06	195	134.41	38025	18066.05	26209.95
2006/07	200	167.51	40000	28059.60	33502
2007/08	283	167.39	80089	28019.41	47371.37
2008/09	335	134.96	11225	18214.20	45211.6
N = 5	1143	756.96	287239	115673.50	172144.62

$$r = \frac{N \sum XY - \sum X \sum Y}{\sqrt{N \sum X^2 - f \sum X^2} \sqrt{N \sum Y^2 - f \sum Y^2}}$$

$$= \frac{5 \times 172144.62 - 1143 \times 756.96}{\sqrt{5 \times 287239 - 1143^2} \times \sqrt{5 \times 115673.50 - 73756.96^2}} = \frac{1071795.50 - 1092091}{88.88 \times 273.28} = -0.17$$

$$r^2 = 0.029$$

Regression Equation of MVPS and BVPS by Using the Method of t-Test of UFL

$$\bar{X} = \frac{\sum X}{N} = \frac{1143}{5} = 228.6 \quad \bar{Y} = \frac{\sum Y}{N} = \frac{756.96}{5} = 151.39$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum Y^2 - f \sum Y^2} = \frac{5 \times 172144.62 - 1143 \times 756.93}{5 \times 115673.50 - f \sum Y^2} = -0.83$$

$$a = \bar{X} - b\bar{Y} = 228.6 - (-0.83) \times 151.39 = 354.75$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.17\sqrt{5-2}}{\sqrt{1-0.17^2}} = -0.299$$

$$|t| = 0.299$$

ix. Simple Correlation and Regression Analysis Between Market Price Per Share and Book Value per Share of People Finance

J r	Yea	J M VPS (X)	J BV PS (Y)	J X ²	J Y ²	J XY
4/05	200	100	12 8.8	100 00	1658 9.44	12880
5/06	200	137	83. 14	187 69	6912 .26	11390 .18
6/07	200	127	13 0	161 29	1690 0	16510
7/08	200	699	14 1.68	488 601	2007 3.22	99034 .32
8/09	200	285	12 2.41	812 25	1498 4.21	34886 .85
5	N =	134 8	60 6.03	614 724	7545 9.13	17470 1.35

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

$$= \frac{5 \times 17470.135 - 1348 \times 606.03}{\sqrt{5 \times 614724 - 1348^2} \times \sqrt{5 \times 75459.13 - 606.03^2}} = 0.50$$

$$r^2 = 0.25$$

Regression Equation of MVPS and BVPS by Using the Method of t-Test of People Finance

$$\bar{X} = \frac{\sum X}{N} = \frac{1348}{5} = 269.6 \qquad \bar{Y} = \frac{\sum Y}{N} = \frac{606.03}{5} = 121.21$$

$$b = \frac{N \sum XY - \sum X \sum Y}{N \sum X^2 - (\sum X)^2} = \frac{5 \times 174701.35 - 1348 \times 606.03}{5 \times 614724 - 1348^2} = 5.64$$

$$a = \bar{Y} - b\bar{X} = 121.21 - 5.64 \times 269.6 = -414.59$$

$$t\text{-Test} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.50\sqrt{5-2}}{\sqrt{1-0.50^2}} = 1$$