CHAPTER-I
INTRODUCTION

1.1 General Background

Present world economy has been more competitive and complicated. In this situation stock markets (capital market) have been a global phenomenon regardless of the size of the economy of any particular nation. The main role of the capital market is to allocate the economy's capital stock among various firms and industries involving in trading, investment and production dimensions. Capital market mobilizes unproductive saving to productive investment; it plays very important role in the advancement of growing economy. Thus the stock market is a place where shares of listed companies are traded or transferred from one hand to another at a fair market price through the organized brokerage system. Principally stock market refers to the secondary market for securities where as primary market refers to the market for new issues. In secondary market, to make transactions, primary role is performed by the brokers, in exchange they receive commissions. Therefore they are the backbone of stock market growth and its operation. The major function of stock market is to provide ready and continuous market for the purchase and sales of securities at a competitive price there by, imparting future market ability and liquidity to then securities prices play an important role by providing the scare recourse and investors can choose among the securities that represent ownership of firms activities (performance) under assumption that securities present at any firm "fully reflect" all available information.

Securities are financial assets that form the part of an investor's wealth. Common stocks, preferred stocks, bonds, convertibles, warrants, options, rights, etc. are examples of securities. Security is not an age-old investment alternative in our country. The history of corporate securities in Nepal dates back to 1936 A.D. when Biratnagar Jute Mill issued 8,000 ordinary shares of Rs.100 each for the first time. A year later, Nepal Bank Ltd too issued ordinary shares of the same par value. Biratnagar Jute Mill was also the first corporate body to issue debentures of Rs.500 each in early 1936. Yet other significant developments related to capital markets were – 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 *(Shrestha, Poudel & Bhandari;2003: 21).*

The number of commercial banks has been growing considerably in Nepal after the introduction of liberalized financial policy by the Government in early 1980's. And this has reached to a greater height after reestablishment of democracy in 1990. Today, there are 26 commercial banks operating in Nepal. However, in 1984, there were only two commercial banks. Despite many of these banks are foreign based joint venture companies. Common stocks have been issued to the general public and are the major source of their capital funds.

In Nepalese context capital market as developing one in comparison to other big and developed capital market characterized basically as a low trading volume, absence of professional brokers, limited movement of stock price. After the restoration of democracy (in 1990) by the interim government because of worldwide whim of privatization and economic changes have been brought in the country as following the economic doctrine of these developed countries where the economic are based on stock market development, according to this change stock market also get new life blood i.e. reformulation by separating security exchange centre (sec) into two distinct entitles Security Exchange Board(SEBO) and Nepal Stock exchange limited (NEPSE).

Nepal Stock Exchange, a solely organized securities exchange market in Nepal, was established in 1993. It has been named for Securities Exchange Center which had been established with the objective of facilitating and promoting the growth of capital market. Nepal Stock Exchange now has objectives of imparting free marketability and providing liquidity to the government and corporate securities by facilitating transactions in trading floor through market intermediaries. It is the place where securities are traded upon. Amongst the listed companies, commercial banks are the most performing ones. Common stock transactions of this sector hold major portion of total transaction. The difference between market price and paid up price of common stock of commercial banks are higher than that of any other companies. Fluctuation in prices of commercial banks' stocks usually gets major issues in stock market. In this regard, it is important to understand what factors really affect the market price of common stock of commercial banks.

SEBO was established as an apex regulator of the securities market in Nepal by HMG/N on June 7, 1993, under the Securities Exchange Act, 1983. It is solely responsible for framing policies and programs required in securities market, registering, monitoring, licensing, supervising and conducting research and various studies in the field of securities and on behalf of the investors. It is a board consisting of seven

members including a Chairman. SEBO, in order to implement its policies and programs effectively, has two departments, six divisions and ten sections in the organizational structure. The main object of SEBO is to regularize and manage the securities market and protect investors' rights *(http//www.sebonp.com)*.

After lending peace or including Maoist n government the price of stock highly volatile in increasing rate. Trading system of the stock market is also hanged. It is performed by the electronic device (computerized), thus the stock market in Nepal is burning issue.

A simple economic phenomenon is that the price determined by the interaction of demand and supply also remains effective in case of common stock pricing. The forces of supply and demand interact to determine a stock market prices. Prices move in the 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. But the question arises what are the factors that actually affect the demand and supply of common stock. What are the financial and non-financial factors and to what extent do affect the market price?

Despite of several efforts to promote the capital market, our capital market is still passing through infancy. The listing of securities in the secondary market is limited to only securities of a few companies. Till the date of this study, the numbers of companies listed in NEPSE are 226. Among them, the most traded ones and so called reliable in the public image are of financial sectors, especially, commercial banking sector, which comprises of 21 listed banks *(http//www.nepalstock.com).* Study of market efficiency and the investors' behavior provides some idea regarding the level of advancement of security market. Although overall economy and capital market is still considered to be young, the explosive growth of new stock listing and volume of shares in Nepal Stock Exchange (NEPSE) has attracted considerable interest from the investors. In this context, it is interesting to investigate the efficiency of market and the investors' rationality, formation of price, slacking of price, which may provide an empirical explanation to identify the situation of Nepalese stock market.

1.2 A Brief Profile of the Sampled Commercial Banks

1.2.1 Standard Chartered Bank Nepal Limited (SCBNL)

Standard Chartered Bank Nepal Limited has been in operation in Nepal since 1987 when it was initially registered as a joint-venture operation. Today the Bank is an integral part of Standard Chartered Group who has 75% ownership in the company with 25% shares owned by the Nepalese public. The Bank enjoys the status the largest international bank currently operating in Nepal.

An integral part of the only international banking Group currently operating in Nepal, the Bank enjoys an impeccable reputation of a leading financial institution in the country. With 16 points of representation (13 Branches) and 9 ATMs across the Kingdom and with over 300 local staff, Standard Chartered Bank Nepal Ltd. is in a position to service its customers through a large domestic network. In addition to which the global network of Standard Chartered Group gives the Bank the unique opportunity to provide truly international banking in Nepal.

Standard Chartered Bank Nepal Limited offers a full range of banking products and services in Wholesale and Consumer banking, catering to a wide range of customers from individuals, to mid-market local corporate to multinationals and large public sector companies, as well as embassies, aid agencies, airlines, hotels and government corporations.

The Bank has been the pioneer in introducing 'customer focused' products and services in the country and aspires to continue to be a leader in introducing new products and highest level of service delivery. It is the first Bank in Nepal that has implemented the Anti-Money Laundering policy and applied the 'Know Your Customer' procedure on all the customer accounts.

Details of ownership capital

Particulars	Rs. (in million)
Authorized Capital	1000
Issued Capital	1000
Paid up Capital	620.78
Par value of share = Rs. 100 each	

(Source: http//www.standardchartered.com/np)

1.2.2 Himalayan Bank Limited (HBL)

Himalayan Bank was established in 1993 in joint venture with Habib Bank Limited of Pakistan. Despite the cut-throat competition in the Nepalese Banking sector, Himalayan Bank has been able to maintain a lead in the primary banking activities- Loans and Deposits.

Legacy of Himalayan lives on in an institution that's known throughout Nepal for its innovative approaches to merchandising and customer service. Products such as Premium Savings Account, HBL Proprietary Card and Millionaire Deposit Scheme besides services such as ATMs and Tele-banking were first introduced by HBL. Other financial institutions in the country have been following our lead by introducing similar products and services. Therefore, we stand for the innovations that we bring about in this country to help our Customers besides modernizing the banking sector. With the highest deposit base and loan portfolio amongst private sector banks and extending guarantees to correspondent banks covering exposure of other local banks under our credit standing with foreign correspondent banks, we believe we obviously lead the banking sector of Nepal. The most recent rating of HBL by Bankers' Almanac as country's number 1 Bank easily confirms our claim.

All Branches of HBL are integrated into Globus (developed by Temenos), the single Banking software where the Bank has made substantial investments. This has helped the Bank provide services like 'Any Branch Banking Facility', Internet Banking and SMS Banking. Living up to the expectations and aspirations of the Customers and other stakeholders of being innovative, HBL very recently introduced several new products and services. Millionaire Deposit Scheme, Small Business Enterprises Loan, Pre-paid Visa Card, International Travel Quota Credit Card, Consumer Finance through Credit Card and online TOEFL, SAT, IELTS, etc. fee payment facility are some of the products and services. HBL also has a dedicated offsite 'Disaster Recovery Management System'. Looking at the number of Nepalese workers abroad and their need for formal money transfer channel; HBL has developed exclusive and proprietary online money transfer software- Himal Remit TM. By deputing our own staff with technical tie-ups with local exchange houses and banks, in the Middle East and Gulf region, HBL is the biggest inward remittance handling Bank in Nepal. All this only reflects that HBL has an outside-in rather than inside-out approach where Customers' needs and wants stand first.

Details of ownership capital

Particulars	Rs. (in million)
Authorized Capital	2000
Issued Capital	1013.51
Paid up Capital	1013.51
Par value of share = Rs. 100 each	

(Source: *http//www.hbl.com.np)*

1.2.3 Everest Bank Limited (EBL)

Everest Bank Limited (EBL) started its operations in 1994 with joint venture partner (holding 20% equity in the bank) of Punjab National Bank (PNB) a view and objective of extending professionalized and efficient banking services to various segments of the society. The bank is providing customer-friendly services through its Branch Network and over 250 correspondent banks across the globe. All the branches of the bank are connected through Anywhere Branch Banking System (ABBS),which enables customers to do all their transactions from any branches other than where they have their account. With an aim to help Nepalese citizens working abroad, the bank has entered into arrangements with banks and finance companies in different countries which enable quick remittance of funds by the Nepalese citizens in countries like UAE, Kuwait, Bahrain, Qatar, Saudi Arabia, Malaysia, Singapore and UK. The bank has been focusing on expanding its operations outside Nepal and has identified some of the emerging economies which offer large business potential. Bank has also set up its representative offices at New Delhi (India) to support Nepalese citizen remitting money and advising banking related services.

The bank has been conferred with "Bank of the Year 2006, Nepal" by the banker, a publication of financial times, London. The bank was bestowed with the "NICCI Excellence award" by Nepal India chamber of commerce for its spectacular performance under finance sector. Recognizing the value of offerings a complete range of services, we have pioneered in extending various customer friendly products such as Home Loan, Education Loan, EBL Flexi Loan, EBL Property Plus (Future Lease Rental), Home Equity Loan, Vehicle Loan, Loan Against Share, Loan Against Life Insurance Policy and Loan for Professionals. EBL was one of the first banks to introduce Any Branch Banking System (ABBS) in Nepal. EBL has introduced Mobile Vehicle Banking system to serve

the segment deprived of proper banking facilities through its Birtamod Branch, which is the first of its kind.

Details of ownership capital

Particulars	Rs. (in million)
Authorized Capital	1000
Issued Capital	843.20
Paid up Capital	831.40
Par value of share = Rs. 100 each	

(Sources: www.everestbankltd.com)

1.2.4 NABIL Bank Limited (NABIL)

NABIL Bank Limited, the first foreign joint venture bank of Nepal, started operations in July 1984. NABIL was incorporated with the objective of extending international standard modern banking services to various sectors of the society. Pursuing its objective, NABIL provides a full range of commercial banking services through its 30 points of representation across the kingdom and over 170 reputed correspondent banks across the globe.

Nabil, as a pioneer in introducing many innovative products and marketing concepts in the domestic banking sector, represents a milestone in the banking history of Nepal as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business. Operations of the bank including day-to-day operations and risk management are managed by highly qualified and experienced management team. Bank is fully equipped with modern technology which includes ATMs, credit cards, state-of-art, world-renowned software from Infosys Technologies System, Bangalore, India, Internet banking system and Tele-banking system.

Details of ownership capital

Particulars	Rs. (in million)
Authorized Capital	500
Issued Capital	491.65
Paid-up Capital	491.65
Par value of share = Rs. 100 each	

(Source: www.nabilbank.com)

1.3 Statement of problems

In Nepalese market several new practices are emerged. During this period a number of initial public offering were made. Many new stocks have been listed in NEPSE. By now a newly established banking industry are emerged as the largest partner in stock market. Similarly the trend of stock price is being fluctuated sometimes the stock price becomes too very high because of poor performance of the listed companies. Decrease in share price due to the lack of perfect information about investment.

Investors purchase the stocks of the commercial banks either in the primary market or in the secondary market. Most of these investors are not aware of the financial strength of the companies and they do not analyze companies' financial performances as well before investing their funds through secondary market. The market price of common stocks does not seem to be in accordance with the financial indicators. Instead, there has been major influence of rumors rather than strength of the companies in determination of the market prices of shares. Market price per share (MPS) of foreign joint venture commercial banks has been found to be higher than MPS of other banks other sectors too. Moreover, it will not be inappropriate to say that the overall NEPSE is depended upon the MPS of such companies.

Generally, the trend is that the MPS of public quoted companies is above their book value. The market value is determined by the supply and demand functions. However, in the efficient market, MPS fully reflect all the historical information's publicly available. Now the question of efficiency of the Nepalese share market arises. Higher amount of share prices may be the outcome of the inefficient market behavior. Many commercial banks do not provide timely financial statement or annual report to the investors. The dubious and hazardous movement of the share prices has no sound fundamental backing of analysis and relationship to past results revealed in limited calculated dividend yield, net worth, and price multiplies. The investors conclude that there has been foul play using inside information. The reaction is based on the assumption of strong form of the market efficiency. The security exchange act strictly prohibits the misuse of inside information but the regulating authorities can make no advance notice of how there is the use of inside information. It denotes that every investor should be well aware of the degree of risks in which they are investing or going to invest their saving funds. There are very few practices of analyzing these aspects in the Nepalese context. Most of the investors are investing their funds haphazardly without considering risk involved in their investments. That's why, the major issues might be whether the MPS of listed companies are really representing the financial indicators i.e. NWPS, DPS, EPS.

The main problem in the stock market is the lack of knowledge for its regular Tory framework and market operations. Proper attitudes and knowledge of decision makers are very much necessary foot an effective policy framework. Fundamental requirement go missing when they have little knowledge about the issues. There is various causes that make fluctuation of stock price mainly two factors economic and non-economic factors are remarkable. The Nepalese stock market is suffering from a low trading volume because of professional brokers, early stage of growth, limited movement of share price and information available make confused which stocks is bad and which stock is good. The fluctuation of stock market price is mainly due to unfair stock market practices that went undetected for long period in Nepal stock market.

The main concern of the problem is to understand the trend of prices movement of stock in the organized market places where the trading actually takes place. Moreover, to understand the cause of changes in the market price of stock. So the study will be focused on the following problem related to the subject chosen:

- What is the trend of stock price movement of the commercial banks?
- Is there any specific relationship of MPS with fundamental financial indicators i.e. DPS & EPS or is the trend of MPS running in accordance with these financial?
- Are the common stocks of commercial banks equilibrium priced?
- What is cause of the fluctuation in stock price?
- What is position of commercial bank listed in stock market?

1.4 Objectives of the study

The objectives of the study are as follows.

- To study the trend of stock price movement with various financial indicators of sampled commercial banks in the market.
- To examine and evaluate the relationship of MPS with various financial indicators like EPS, NWPS, DPS.
- To evaluate return and risk proportion of investment on stock of sampled commercial banks.
- To identify if the stocks of the sampled bank are overpriced, under-priced or equilibrium priced
- To provide suggestions on the basis of findings.

1.5 Significance of the study

Today's growing number of the interested investors and the individual organization, growing investment bankers etc. All are eager to know about the behavior of the capital market in Nepal. So, this study is conducted to give up confidence to the investors and interested parties. In reality, the Nepalese stock market is suffering from a low trading volume absence of growth, limited movement of share price and information available to the investors. The investors are not fully informed. The investors are confused either stock is overpriced or under-priced. The market research is expected to be very useful for further researchers. The research will be helpful to the Nepalese government for making polices. It gives emphasis to invest in new concept in today's age. The significance of the study to different people and sector can be presented as follows:

Significance to investors: The study will be able to provide the data and other kinds of information about the financial performance of individual banks as well as the whole commercial banking sector, which will be of great significance to prospective as well as existing investors in making investment decisions.

- **Significance to interest parties and researchers:** study will be of great use to the various parties involved in the trading of shares of commercial banking sector. Furthermore, this study has opened up ample space for interested groups and researchers to conduct various detailed studies on this or related topics.
- **Significance to general public:** The study will be of great importance to the general public as well in order to gain some useful information regarding the price formation mechanism and the consequences of some relevant factors on prices of common stock.
- **Significance to policy maker and controller:** The study has tried to trace out the various factors that form or help in formation of prices of common stocks of commercial banks. Thus, I think, this study will also helpful for policy makers and concerned regulating bodies to have a glimpse on the mechanism of share price formation in the secondary market. Consequently more outstanding and investment friendly rules and regulations could be brought forwarded on behalf of the general investors.

1.6 Limitation of the study

Due to various reasons this research work is not able to study the whole Nepalese capital market in details. For the sake of ease this tries to study its subject matter by concentrating on some important variables and ignoring others. That is why this research is also not free from limitations. The major limitation of the study is presented below:

- The core of this study will be based on the secondary sources of information. Hence any incorrectness in the key information like NEPSE index gathered from the secondary sources might affect the accuracy of the outcomes of study.
- The study has been designed (to concentrate on some of the banking sector, which is a part of total capital market). So the conclusion cannot be generalized on the total market.
- For the purpose of the study only common stock or ordinary stock will be taken.
- To conduct the study five years data based in fiscal year 2003/04 to 2007/08 has been taken.
- There might be various techniques and method to perform the study on stock price movement but the study will be focus only the correlation and regression analysis risk and return, MPS, DPS and EPS, sensitivity analysis and some ratio analysis.
- The study will be done for the particular fulfillment for MBS degree in management. So it is not a comprehensive study.
- The constraint of time and financial resources do contribute to the limitation of study.

1.7 Organization of the Study

The entire study has been designed into five main chapters. They are:

- Introduction
- Review of literature
- Research methodology
- Presentation and analysis of data
- Summary, conclusion, recommendations

The first introduction chapter includes; statement of problem, objectives of the study, need and significance of the study, limitations of the study and organization of study.

The second chapter review of literature is done to know that research had been done in the related topic in previous days and what is to be done at present or in future. This chapter has been divided into two main aspects: (i) Conceptual framework and (ii) Review of related materials i.e. review of books, review of thesis, review of newspapers, magazines, journals etc.

Research methodology is mentioned in the third chapter. It includes research design, population and sampling, sources of data, procedure of data collection and tools used for analysis.

Presentation and analysis of data have been made in the fourth chapter. The data collected from various sources have been tabulated in their sequential order and data have been described, analyzed and projected with statistical tool.

The fifth chapter consists of brief summary, conclusions and recommendation of the study. Lastly, essential appendices and bibliography have been presented at the end of the study.

CHAPTER –TWO
REVIEW OF LITERATUER

2.1 Introduction

The review of the study is a crucial aspect of planning of the study. This chapter highlights upon the existing literature, journal and research studies about related study. Several books, reports, research paper, report and article published in journal and newspapers are reviewed while preparing the review. It is divided into two part, conceptual frame work and review of different studies.

2.2 Conceptual Framework

Before getting into the core subject matter of the stock price movement in the market, it is essential to be familiar with the general concepts of the share and other related matters sub section will be explaining the conceptual matters of the capital market.

2.2.1 Security Market

Security markets exist in order to bring together buyers and sellers of securities, meaning that they are mechanisms created to facilitate the exchange of financial assets. There are many ways in which security markets can be distinguished. One way has already been mentioned primary and secondary markets. Here the key distinction is whether or not the securities are being offered for sale by the issuer. Interestingly, the primary market itself can be subdivided into seasoned new issue refers to the offering of an additional amount of an already existing security, whereas an unseasoned new issue involves the initial offering of a security to the public. Unseasoned new issues are often referred as initial public offering or IPO's. *(Sharpe, Alexander & Jeffery, 2000: 9-10)*

A security market is financial market can be defined as a mechanism for bringing together buyer and sellers of financial assets in order to facilitate trading. One of it main function is "price discovery that is to cause security price to reflect correctly available more information the more quickly and accurately price discovery is achieved, the more efficiently financial markets will direct capita to its most productive opportunities, there by trading to greater improvement in public welfare.

a. Primary market and secondary market
b. Money and Capital market

Primary Market

A primary market is the place, where corporation and government issue new securities. All securities, whether in money or capital markets are initially issued in the primary market. This is the only market in which the company or government is directly involved in the transaction and receive direct benefits from issue that is the company actually receives the proceeds from the sale of securities. The term 'primary market' is used to denote the market for the original sale of securities by an issuer to the public. *(Bhattarai, 2005:7)*

Secondary market

Secondary market is the market for the existing securities second hand securities are bought and sold in the secondary market. Its main function is to provide liquidity to the purchasers of securities. The secondary market is not keeping pace with the growth of the primary market. *(Bhattarai & Thapa; 2006:4)*

Organized securities exchanges are the physical locations where trading of securities is done under a set of rules and regulations. Investors usually purchase securities in the secondary market by calling securities brokers. In the secondary market investors buy and sell securities themselves, the issuer never gets any cash flow from the trades. Nepal Stock Exchange (NEPSE) is an example of organized stock exchange and this is the only stock exchange in Nepal. Similarly, the New York Stock Exchange (NYSE), Tokyo Stock Exchange, American Stock Exchange (AMEX), Bombay Stock Exchange (BSE) are the example of organized stock exchanges.*(bhattrai:2007:16)*

Function performed by securities market

- One of the most important functions performed by a securities market is to maintain active trading. It facilities the immediate buying and selling of securities by the investors. It provides liquidity to the asset.
- It also facilitates the price discovery process. It is possible through the demand and supply of security from the investors.
- It aids new financing indirectly by providing facilities to resell the securities.

Over the counter market (OTC) exchange is not an organized but an intangible market for the purchaser and seller of securities not listed by the organized exchanges. It is not formal exchange like organized stock exchanges. It neither requires membership for

trading of securities nor listing of securities for trading, meaning that formal listing of securities are not necessary in the OTC market. A sophisticated telecommunication network links active traders in the market. The prices at which securities are treaded over the counter are determined by competitive bids and negotiation. *(Bhattrai; 2007:22)*

Money market:

Money market refers to that financial market in which securities with a short term (one year or less) and highly liquid debt securities are traded. Thus money market comprises the securities that have short maturity period (life span), easily marketable, liquid and even lower risk in comparison to other securities. *(Bhattarai & Thapa, 2006:4)*

Capital market

Capital market refers to the financial market in which long-term securities are traded. Specifically speaking, securities having life spans of more than one year are traded in the capital market. Long term financial instrument such as stocks issued by corporation are basically traded in capital market. *(Bhattarai & Thapa, 2006:4)*

2.2.2 Financial intermediaries:

Financial intermediaries (financial institution) are organizations that issue financial claims against themselves and use the proceeds to purchase primarily the financial assets of others.

2.2.3 Market price of shares

The market price of any asset, indeed, depends on the future earning power of the asset or the value of an asset depends on the future cash flows that the asset is expected to generate. *(Pradhan, 1996: 2)*

2.2.4 Buying and selling of stock

Various people are likely to be involved, when a stock is sold and bought. Although it is possible for two investors to trade with each other directly, usually the brokers, dealers and markets provide the service. When buying or selling the common stock the investor places an order involving a round lot or both. Generally round lot means that the order is for 1000 shares multiple of 100 shares. An odd lot orders generally are for 1 to 99 shares. *(Sharpe, Alexander & Bailey, 1996:21)*

2.2.5 Market Size

Relative's market capitalization and the number of listed companies can measure stock market size. The market capitalization ratio is determined by dividing the value of all share listed on a national exchange by the host country's gross domestic product. *(World Bank, 1995)*

2.2.6 Market Liquidity

Liquidity or the ability to buy and sell securities is indicated by the two measures. One is the total value of share traded on the stock exchange dividend by GDP. The second measure of liquidity is the turnover ratio, the value of total shares traded divided by market capitalization. *(World Bank, 1995)*

2.2.7 Common Stock

Common stocks represent ownership capital in a company. The holders who own the shares of common stocks are called shareholders or stockholders. They are the legal owners of a company. Common stocks represent the permanent and vital source of capital since they do not have a maturity date. Shareholders are entitled to receive dividends as return for their capital contribution to the company. The amount and the rate of dividend is fixed by the company's Board of Directors. Common stock is therefore known as the variable income security. Being the owners of the company, stockholders bear the maximum risk of ownership. They are entitled to dividends after the claims of others fixed income securities are satisfied. Similarly, at the time of liquidation of a company, they are the ultimate claimers on assets that are left after settling various outsiders. *(Pandey, 1995: 905)*

The commons 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 firms, and the holders are the owners who share all the profits and losses of the business. They enjoy all earnings after meeting the obligations of interest on debts and dividends on preferred stocks. Thus, they enjoy all net benefits of the business by assuming the risk of losing their capital *(Pradhan, 1996: 132-133)*

2.2.8 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 investors noted on it such a stock certificate is usually registered, with the name, address, holding of the investor included on the portion's books. Dividend payment, voting material, annual and quarterly reports and other mailing are sent directly to the investors, taking into account the size of his or her holding. *(Sharpe, Alexander & Jeffery, 2000: 12-14)*

Shares of stock held by investors 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 to the owner. Frequently a register will make sure that this canceling and issuing of certificates have been done properly. Usually banks and trust companies act as transfer agent and registers. Many stockholders have chosen to avoid these rather cumbersome procedures. Instead depository arrangement are used which substitute computerized records for embossed certificates. However the above mentioned process may not go exactly to the Nepalese practice but in the theoretical ground these are the procedures to be followed when executing the shares transaction. *(Weston and Copeland: 1992:792)*

2.2.9 Earning per share (EPS)

Accounting earnings that represent the difference between revenues and expense, including the expenses associated with non-equity source of fund (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. *(Sharp, Alexander and Bailey, 2001: 622)*

2.2.10 Retained Earnings

The balance account which indicates the total amount of earnings the firm has not paid out as dividend throughout its history; these earnings have been reinvested in the firm as retained earnings. *(Sharp, Alexander and bailey, 2001:622)*

2.2.11 Dividend per Share (DPS)

The percentage of earnings the firm pays in cash to its shareholders is known as dividend. The dividend, of course reduce the amount of earnings retained in the firm and affect the total amount of internal financing. *(Horne, 2000: 305)*

Nothing is more important than dividends to stockholders. They buy shares of firm with the hope of sharing profits earned by firms. The sole motive of stockholders is to receive return on their investment; nothing pleases them more than knowing the firm's earning and more profits mean more dividends coming in. *(Pradhan, 1996:375-376)*

Krishman opines that of two stocks with identical earnings record and prospect but the one paying a large dividend than the other, the former will undoubtedly command a higher price merely because stockholders prefer present to future values. Stockholders often act upon the principle that a bird in the hand worth more than two in the bush and for this reason, that are willing to pay a premium for the stock in with the higher dividend rate .*(Pandey,1995:681)*

2.2.12 Net Worth per Share (NWPS)/ Book value per share

A corporation will generate income, much of which is paid out to creditors (as interest) and to shareholders (as dividend). Any remainder is added to the amount shown as cumulative retained earrings on the corporation's books. The sum of cumulative retained earnings and other entries (such as common stocks and capital contributed in excess of the par value) under shareholders' equity is the book value of the equity. The book value per share is obtained by dividing the book value of the equity by the number of shares outstanding. *(Sharpe, Alexander & Bailey; 2001: 506)*

The book value of equity reflects the historical costs of brick and meter-the physical assets of the company. A well run company with strong management and an organization that functions efficiently should have a market value greater than the historical value of its physical assets. *(Weston and Copeland: 1992:695)*

Book value is generally considered to be relatively unimportant in determination of the value of company. Since it represents only the historical investments made in the company-investments that may have little relating to current values of price. *(Weston and Copeland; 1992:1113)*

2.2.13 Market Price per Share (MPS)

The market price of any asset, indeed, depends on the future earning power of the asset or the value of an asset depends on the future cash flows that the asset is expected to generate. *(Pradhan: 1996:20)*

Once the shares, issued in the primary market, are listed in the stock exchange, investors are able to buy and sell the shares among themselves with the help of brokerage firm. Generally, the prices of shares are determined by demand and supply preferences. Due to the market imperfection and uncertainty, shareholders may give a higher value to the near dividends and capita gains. Thus, payment of dividend may significantly affect the market price of share. Higher dividends increase the value of share and lower dividends reduce the value. *(Pandey: 1995:681)*

2.2.14 Stock valuation

Financial managers use different analytical techniques for valuing common stock. The stockholder expert's regular earnings in the form of dividends and capital gain by upward movement of the stock price. To maximize the stock price valuation model can be used as important tools. Mainly three basic models can be used to valuation of stock. *(Pike & Neale, 1996:76).*

Stock Valuation Model

Net Assets Value Model

$$NW = TA - (CL + LTD)$$

Dividend Value Model

$$Po = \sum_{t=1}^{n} \frac{D_1}{(1+k_e)}$$

Earning Valuation Model

$$P_o = P/E \times EPS$$

Source: - Richard Pike & Neale (1996). Corporate finance and investment decision strategy India.

Where,

NW = Net worth

TA = Total Assets

CL = Current liabilities

Po = Value of stock today

LTD = Long Term Debt

Do = Dividend expected in nth year

K_e = Cost of equity capital

T = 1, 2, 3….n year

P/E = price earning ratio

EPS = Earning per share

2.2.15 Capital Assets Pricing Model (CAPM) or (SML)

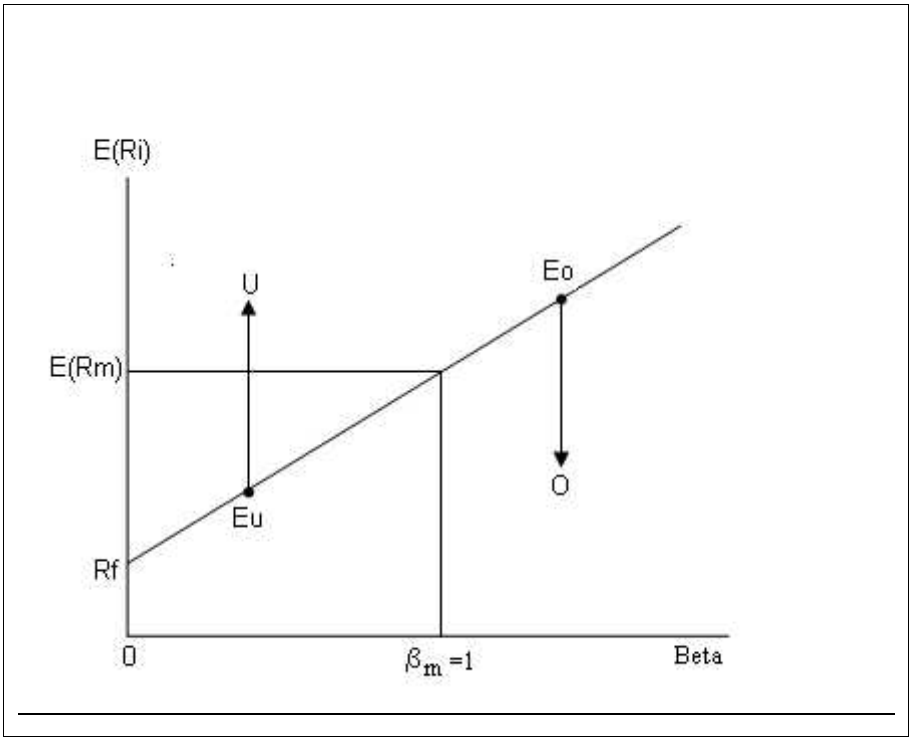
Sharpe & Linter developed, 'The capital assets pricing Model' (CAPM). This model provides the intellectual basis for a number of the current practices in the investment."The capital assets pricing model specifies the relationship between risk and required rate of return on assets when they are held in well diversified". *(Bhattarai & Thapa 2006:177)*

CAPM is based on the following assumptions.

- All investors focus on a single holding period, and they seek to maximize the expected utility of their wealth by choosing among alternative portfolios on the basis of each portfolio's expected return and standard deviation.
- All investors can borrow and lend an unlimited amount at a given risk free rate of interest, and there are no restriction on short sales of any assets.
- All investors have identical estimates of the expected returns, variances, and co-variance among all assets; that is, investors have homogenous expectations.
- All assets are perfectly divisible and perfectly liquid.
- There are no transaction costs.
- There are no taxes.
- All investors are price takers (that is, all investors assume that their own buying and selling activity will not affect stock price.)
- The quantities of all assets are given and fixed.

Figure-2.1

The Capital Assets pricing Model or SML



(Sources: Bhattarai & Thapa 2006:199)

2.2.16 the General Awareness of Risk

Some of the sources of uncertainty that contribute risk of investment are citing below:- *(Francis, 1991).*

Interest Risk

Interest rate risk is destined as the potential variability of return caused by changes in the market interest rates. More succinctly, value of securities move inversely with changes in the market rate of interest. In more general terms, if market interest rise, then investments' values and market prices will fall, and vice versa. The variability of return that results in interests risk. This interest rate risk affects the price of bonds, stock, real estates, gold, puts, and calls future contracts and other investment as well.

Purchasing Power Risk

Purchasing power of risk is the variability of return and investor/suffers because of inflation. Economists measure the rate of inflation by using a price index. The consumer price index (CPI) or simply price index (PI) is popular coinage to the changes in the concept. Rate of inflation directly affects rate return, hence the changes in the purchasing power cause the price of securities move that result the risk.

Bull- Bear market Risk

As its name suggests, bull-bear market arises from the variability in market returns resulting from alternating bull and bear market forces. When a security index rises fairly, consistently from a low point, called a trough, for a period of time, this upward trend is called a bull market. The bull market ends when the market index reaches a peak and starts a downward trend. The period during which the market declines to the next through is called a bear market. It is inferential to quote that bear market is followed by bull markets that usually rise more than enough to compensate for the bear market losses. But, the alternating bull and bear market forces create a perennial source of investment risk.

Management Risk

Though many top executives earn princely salaries, occupy luxurious offices, and wield enormous power within their organization, they are mortal and capable of making a mistake or a poor decision. Further more, errors made by business managers can harm those who invested in their firms. Hence, it also is capable of poring risk to investment.

Default Risk

Default risk is that portion of an investment total that results from changes in the financial integrity of the investment. For instance, when a company that issues securities moves either further away from bankruptcy closer to item these changes in the firms financial integrity will be reflected in the market price of its securities. The variability of return that investor's experiences as results of changes in the creditworthiness of a firm in which they invested is their default risk.

Liquidity Risk

Liquidity risk is that portion of an asset's total variability of return, which results from price discount given or sales commission paid in order to sell the assets without delay. Perfectly liquid assets are highly marketable and suffer no liquidity price discount costs. Illiquidity assets are not readily marketable either price discounts must be given or sales commission must be paid or both of these costs must be incurred by the seller, in order to find a new investor for an illiquid asset.

Call ability Risk

Call ability risk is that portion a security's total variability of return that derives from the possibility that the issue may be called call ability risk command a risk premium that comes in the form of a slightly higher average rate of return.

Convertibility Risk

Convertibility risk is that part of the total variability of return from a convertible bond or convertible preferred stock that reflects the possibility that the investment may be converted into the issuer's common stock at a time or under terms harmful to the investor's best interest.

Political Risk

Political risk arises from the exploitation of a politically weak group for the benefit of a politically strong group, with the efforts of various groups to improve their relative positions increasing the variability of return for the affected assets.

Regardless of whither the changes that cause political risk are sought by political or by economic interests, the resulting variability of return is called political risk if it is accomplished through legislative, judicial or administrative branches of the government.

Industry Risk

Industry risk is that portion of an investment's total variability of return caused by events that affect the products and firms that make up an industry. The stage of the industry's life cycle, international tariffs and /order quotes on the products produced by an industry product-or industry –related taxes, industry wide labor union problems, environment restrictions, raw material availability, and similar factors interact and affect all the firms in an industry simultaneously. As a result of these commonalties, the price of the securities issued by competing firms tends to rise and fall together.

Total Risk

The uncertainties discussed above are the major sources of investment risk, but by no means do they make up an exhaustive list. If all the uncertainties could be listed, they would add up to total risk, or total variability of return.

2.3 Theories of stock price movement

There are two approaches to explain share price fluctuation. Market efficiency is the basis for both approaches. Conventional approach has considered that market is inefficient, which includes technical analysis theories and fundamental analysis of theory. Contrary approach was argued the market is efficient under which there are forms of efficient market hypothesis. "Prior to development of the efficient market theory, investors were generally divided into two group fundamentalists and technician". based on incorporation of various type of information set with spend and accuracy in price stock there are three forms of efficient market theories such as weakly efficient market or random walk , semi- strongly efficient and strongly efficient market theory.*(Reilly: 1986:347)*

2.3.1Technical Analysis Theory

Technical theory involves study of the past volume and price date of the stock to predict future price fluctuations. This approach studies various graph and chat of the past share price and deduce form the analysis about the future price movement of seeking to interpret past pattern on the assumption that history trends to repeat it self. *(Alexander, Sharpe & Bailey, 2000:682).*

Main assumption of the technical theories is:-

- Price is determined by the interaction of demand and supply.
- Demands and supplies are governed by various factors, both rational and irrational.
- Series of price content trends that persist for appreciable length of time.
- The changes in trend caused by shifts in demand and supply are detectible in the analysis of past price and volume data.
- The patterns trend to repeat it self.

Technical analysis discerns past pattern or trend, which they believe to repeat in the future and recommended for the timely holding and disposing mechanism which is profitable or that recommended for short-term speculation based in its forecast of profitable patterns, "the technicians usually attempts on predict short-term price movements and thus makes recommendations concerning the timely of purchase and sales of either specific stocks or groups of stocks" *(Sharp and Alexander, 2000: 683)*
Typically, the technical analysts record historical financial data on charts, study these charts in search of patterns that they find meaningful, an endeavor to use the patterns to predict future prices. Some charts are used to predict movements of market index and, still others are used to predict the function of both individual assets and the market. *(Francis, 1991:522)*

2.3.2 Fundamental Analysis Theory

Fundamental analysis theory claims that at any point of time an individual stock has an intrinsic value, which is equal to present value of future cash flows from security discounted at appropriate risk, adjusted discount rate." the value of common stock is simply the present value of all future income which the owner of share will received". The actual price should reflect the intrinsic value if the stock. Good anticipation if cash flows and capitalization rates corresponding to future time period. but in practice first, it is not known in advance what a stocks income woo be in the future period, and second, it is not clear what the appropriate discount rate should be for a particular stock, so fundamentalists attempt to reach best estimate of the intrinsic value of share by studying companies sales, profit, dividends, management competent, and numerous other economic and industrial factors, which determine its future income and prospect of business opportunities. *(Francis; 1986:425)*

Since, in world if uncertainty, the anticipation of values cannot be known exactly, there will be disagreement on the option about the estimation among the market participations, then actual prices fluctuate closely around the economic value of share because too far than true value is profitable for the participants and they do not miss to exploit it situation. Over the time, with continuous generation of new information related to company's coming prospect the instructive value of changes. As a result price stocks just too new intrinsic value, the actual of securities therefore is considered to be function of a set of anticipation. Price changes as anticipation changes which in turn change as a result of new information. *(Francis: 1986:426)*

In this simplest form, fundamental analysis begin with the assertion that the true value of any financial assets equals the present value of all cash flows. , the owner of the asset expects to forecast the timing and size of these cash flows and then converts the cash flows to their equivalent present value using an appropriate discount rate. *(Alexander, Sharpe & Bailey, 2000:12)*

2.3.3 Efficient Market Theory

Market efficient may be defined in the context of number of areas for instance organizational efficiency, investment efficiency allocation efficient, informational efficiency and so on. The world "efficiency" as applied to securities market has unfortunately been used to represent a variety of logically distinct concept. In particular it may mean (a) Exchange efficiency (b) production efficiency (c) information efficiency. however, in this study it is concerned only with informational efficiency in pricing of stock efficient market theory contend that in tree and perfect competitive market, stock price always reflects all available information and adjust instantaneously every influx of new information is an efficient markets security prices. About the assumption of the efficient market theory asserts that, first it is east to determined sufficient conditions for the capital market efficiency. for example, consider a market which (i) there is no transactions cost in trading securities (ii) all information are cost less available to all market participants and (iii) all agree in the implications if current information for the current prices and distribution if future prices of each security. In such a market the current price of a security obviously "fully reflects" all available information. *(Francis and Taylor; 1986:327)*

An efficient market is an assumed perfect market in which there are many small investors, each having the same information and expectations with respect to others. There are no restrictions on investment, no taxes, and no transaction costs; and all investors are rational view securities similarly, and are risk-averse, preferring higher returns and lower risk. *(Gitman, 2000: 265-66)*

In an efficient market, a security's price would correctly reflect the important of variable for that security and would represent an unbiased estimate of his investment value. *(Cheney & Moses. 1992: 746)* The efficient market hypothesis suggests that investors cannot expect to outperform the market consistently on a risk-adjusted basis over an extended period of time. This hypothesis is based on the premise that security prices reflect all available information concerning a firm and that security prices change

rapidly in response to new information. Market efficiency also implies that as new information become available, the market quickly analyzes it, and any necessary price adjustments occur rapidly.

The requirements for a securities market to be efficient are:

- A large number of rational, profits – maximizing investor exist who actively participate in the market by analyzing, valuing, and trading stocks. These investors are price takers; that is, one participant alone connote affect the price of a security.
- Information is free of cost and widely available to market participants at approximately the same time.
- Information is generated in random fashion such that announcements are basically independent of one another.
- Investors react quickly and accurately to the new information, causing stock prices to adjust accordingly. *(Charles, 1998: 425)*

An efficient market is an assumed perfect market in which there are many small investors, each having the same information and expectations with respect to others. There are no restrictions on investment, no taxes, and no transaction costs; and all investors are rational view securities similarly, and are risk-averse, preferring higher returns and lower risk. *(Gitman, 2000: 265-66)*

2.3.4 The Random Walk Theory

The weakly efficient hypothesis stipulates that historical price and volume data for securities contain no information, which can be used to earn a trading profit above what could be attained with naïve buy-and-hold investment strategy. *(Francis, 1991:543)* The past prices have no meaningful information to predict future course of price fluctuations, which can be used to earn above average return. The movements of future prices are independent from past prices, so the series of price changes are in random phenomenon.

If the price changes could be used to predict future prices changes, investors could make easy profits. But in competitive markets easy profits don't last. As investors try to take advantage of the information in past prices, prices adjust immediately until the superior profits from studying past prices will be reflected in today's stock price, not tomorrow's. Patterns in prices will no longer exist and prices changes in one period will

be independent of changes in the next. In other words, the share price will follow a random walk. *(Brealey & Myers, 2000: 357-58)*

The weak form says that the current prices of stocks already fully reflect all the information that is contained in the historical sequence of prices. Therefore, there is no benefit-as far as forecasting the future is concerned in examining the historical sequence of prices. This weak form of efficient market hypothesis is popularly known as the random-walk theory. *(Fisher & Jordon, 2000:540)*

Of the two hypotheses independence is much more important assumption which means that the previous price changes following the current change will not be influenced by the sequence of preceding price changes. Mathematically, independence means that.

$$p_r \bullet X_t \mathrm{X} X / X_{t\mathrm{Z}1}, X_{t\mathrm{Z}2} \ldots\ldots\ldots X_{t\mathrm{Z}n}{}' P_r \mathrm{X} f X_t \mathrm{X} X \mathrm{A}$$

Where left hand side of the equation is the conditional probability that the price will take the value of X conditional upon knowledge of previous changes X(t-1), X(t-2) ……X(t-n).

The stock market is always subjected to a steady inflow of information, much of which will have an effect on the set of anticipations that constitute price of a particular security. Some of the information has whole market-wide impact such as change in monetary and fiscal policy on security prices. Some other information has an influence upon a group of stock price i.e. industry – wide impact. And still some information such as announcement of dividend, bonus shares may have an influence on the price of a particular security i.e. company –side impact. *(King, 1996:136)*

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

If the random walk hypothesis holds, the weak form of efficient market hypothesis must hold (though no vice-versa). Thus, evidence supporting the random walk model is evidence supporting weak from of efficiency. If prices follow a random walk, price changes overtime are random (independent). The price change fro today is unrelated to the price change on pervious days. Any new information arrived randomly in the market results in the random changes in the prices. Random walk theory that involves random selection of securities is represented as the modern approach to investment decision. *(Elton & Gruber, 1991:404)*

2.4 Review from Journals and Articles

Quality standard coverage of reporting, developing minimum return on investment strategy and index. In order the downtrend in share markets, various reformative measures are urgently necessary to curb in unfair share market practices through the development of comprehensive and transparent stock exchange guidelines by the concerned authorities. The existing company management has to reorient its positive attitude towards investors and shareholders by improving the quality of timely reporting and providing the expected return to win the losing confidence of shareholders. Investors should be self-conscious in the selection of brokers for trading in securities and organize themselves to be active to protect their rights. All these will help in the revival if share market it makes it more active by attracting the investing public. *(The Rising Nepal Apr. 22 .2003)*

Investment in share has traditionally been done by rating the institutions in the basis of price earning ratio or dividend. Hardly do investors compare current assets with liabilities or take a look at the debt equity ratio. Unless investors begin analyzing the intricate financial details of corporate institutions before making investment decision, the market cannot develop smoothly.

Share investment has traditionally been guided by the investor's returns. Most earnings of investor here have been in the form of dividends rather the capital gains, through high dividend are often seen, in corporate finance theory as a wasteful use of scares capital. With the commercial bank becoming the only potential investment destination with other stock market participants hardly making profit and even if they did failing to meet investor's expectations demand for share of commercial banks outpaced supply and their prices boomed.

Now the latest slums on the secondary market, despite a pretty good performance by commercial banks, make it more apparent that investment in the past was dine in whim, Even officials at the stock exchange and the securities board, refuting investors allegations of the market manipulation and insiders trading of last February, discreetly claimed that the Nepalese stock market is in a nascent stage and that, investment are made more on an impulse, rather than through market study and credit rating. *(Business age, June 2003:25)*

Capital market is a crucial element in the national economy. Its role in reinvigorating and boosting the economy activity in the country holds significant. The strategic plan released by securities board can, to a treat extent, energize the investors, dealers by increasing investor in it. Security market experiences both boom and boast soon after the beginning of securities trading through brokers' 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. *(Business age 2004: 12)*

"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 earning ratio. these two number 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 be derived by dividing total net profit after tax by total number of shares and price earning ratio by dividing market price per share by EPS. Lower the P/E ratio higher the change of profit with capital gain and others. *(Business age, 2004:20)*

In 2005, Pramod Kumar Bhattarai has made his sincere effort to explain about the trend occurring in the share market of Nepal. He expressed his view that the trend which has occur can repeat but not with the same pattern. The securities analysts, who analyze securities presenting the past data on the charts, graphs, figures etc. and forecast whether the price will fall or rise, agree to this theory and say the share prices once turned bearish definitely turn to be bullish sometime in near future. further, this article suggest that the market price is a function of demand and supply of stocks and the commanding forces behind the demand might be various factors like political, economic, financial, national,

international events as well as the information disclosed buy the companies. The various factors make the people either invent in the securities or disinvest. *(Bhattarai, 2005:24)*

Atma Ram Ghimire in his journal *'New Business Age' (November 2007)* entitled. "One year Genesis of Nepal's Share Market" *(Ghimire, 2007:47-48)* has pointed out "The shares are becoming precious, good yield items now. Observe study and go get now because it will be always too late in future. He has concluded that the growth of Nepalese share market in general is very positive and the share market in last one year has achieved momentum. Share market is able to improve in the required area, the good ones will stay in the market and they get good price. In his report, he has provided some terms of the growth of share market in such way:

- Increasing number of investors
- Transaction amount and numbers
- Automation in floor trading and settlement
- Online trading from broker premises
- Availability of financial resources
- Partial information flow
- Media coverage and reporting

This will be helpful to understand dimension gradually and this will increase the rationality in investors decision and hence the marker efficiency as well.

2.5 Review from unpublished thesis

Mukti Aryal (2000) conducted his thesis on "The General Behavior of Stock Market" with the following objectives:

- To discuss theoretically the movements of the stock market price changes of an individual common stock market as a whole.
- To develop the empirical probability distribution of successive price changes of an individual common stock market as a whole.
- To examine whether the successive price changes of stock market are independent of each other or not.

Major findings of his study:

- On the basis of run tests and serial correlation, it seems that the independent assumption of random walk model in stock market prices is rejected by the collected sample data of 21 companies at least as a description of price behavior in Nepal Stock Exchange. The stock price changes are dependent on each other.
- The random walk model of security speculative price behavior has been refuted at least in the Nepalese context, which clarifies that the knowledge of the past becomes useful in predicting the future movements of stock market prices.
- The security, in the past were incorrectly priced either over or under valued as actual market prices of securities do not reflect their intrinsic value. In other words, in the case of sample securities, they are incorrectly adjusted those past information to the present market prices.
- There exists frequent persistence than reaction in the general stock market climate because of the investors' irrational behavior that causes the irrational movement of prices of stock.
- The general stock market of Nepal for the initial period appeared to be inefficient in incorporating the possible appearance of information into the successive price changes. Therefore, the investing publics are not aware of the information available publicly, appropriate in adjusting with the actual market price.

Prabhat Kumar Poudyal (2002) has conducted the thesis on "share Price Behavior of Joint Venture Bank in Nepal".

Main objectives of his thesis wear as follows:

- To analyze the market share price behavior of the Nepalese Stock Market.
- To examine how safe or risky to invest on joint venture banks share.
- To analyze the sensitivity of the share in relation to the market
- To test whether or not the share in banking companies are blue chips in our context.
- To test whether the Nepalese Stock Market is efficient or not.

Major finding of the study of Mr. Poudel were as follows:

He writes Nepal Stock Exchange operates in a week form of efficient market hypothesis, indicating that the market prices move randomly. The investors whole deciding their investment and purchases neglect actual potential of the firm and semi professional advices are functioning at its high. The market values per share don't accommodate all the available historical information because if the in equilibrium in the stock market is observed.

Again, **Jas Bahadur Gurung (2003)** conducted his thesis on "Share Price Behavior of Listed Companies in Nepal" applying statistical tools like percentage, correlation coefficient, bar graphs and line charts for analytical purpose. The main objectives of his study were.

- To provide the conceptual glimpses of capital market.
- To evaluate the trend of trading turnover.
- To analyze the trends in paid up value and market capitalization.
- To analyze the behavior of NEPSE index.
- To analyze the share price behavior of listed companies.
- To identify the market behavior in Nepal.

The major findings of the study are:

- The correlation coefficient of 0.97 between the number of traded and listed companies is significant where as it is negative in trading group and perfectly positive in the case of banking group.
- During the study, the number of transactions in banking group is the highest, It is lower in other whereas groups. Hence, the investment on banking group is highly attractive and liquid.
- The prices of shares are fluctuating during the study period.
- The capital market in Nepal was bullish in the initial periods but it turned bearish in the successive year. In the initial period, share prices, trading turnovers, market index as well as earnings have positively moved except market capitalization, but they have negatively moved in the subsequent years. Thus, now the capital market is passing through the bearish trend in Nepal. There is a lack of investor's opportunities and the economy is passing through the recession year by year.

Wagle (2004) has conducted his thesis on "A study on share price behaviour of some selected banking and finance companies" with the following objectives.

- To fine out the relationship of MPS with various fundamental financial indicators like DPS, EPS and BVPS.
- To identify the pricing status of stocks of the sampled companies.
- To study and explore the signaling and informational factors impact on share price due to the major events occurred in the country with the help of NEPSE index.
- To fine out the awareness of the Nepalese investors regarding the stock market and price of stock as well as investment return to maximize their wealth.

As per his study he has concluded that the degree of interrelationship of MPS with different financials indicators varies from one institution to another. There is in uniformity in the relationship with different financial indicators. However net worth per share has most positive relationship with MPS of the sampled companies under co-rellation coefficient. From the study most of the financial institution has negative relationship with major financial indicators in accordance to combined effect of these major financial indicators.

Poudel, Resham Lal. (2005). has conducted the study on the "Share price behavior of listed companies in the Nepal". Its basic objective is to test the share price behavior of listed companies in Nepal or to test the random walk model in Nepalese context over the period 16th July 2003 to 16th July 2004 following a descriptive and analytical research design with the help of secondary data. The sample of the study comprises 21 companies representing from each sector listed in NEPSE. He has used serial correlation and runs test to compute the data.

The overall study shows that the stock market performance is more or less stable position. The serial correlation analysis found that most of the coefficients of the sample are departed from the actual zero and runs test performed also suggests that there is significant difference between expected number of runs and actual numbers of runs. It concluded that the Nepalese stock market is not efficient in pricing shares or in Nepalese context random walk model does not hold true. It has also concluded that as serial coefficient and run test of successive price changes was dependant, it implies that the investors can predict the future price changes.

Subedi, (2005) studied "stock price behavior in Nepal" the main objectives of the study were to identify the relationship between stock price and other variables.

The basic objectives of this research are as follows:

- To analyze the effect of book value to stock price in securities market.
- To evaluate the effect of earnings to stock price in securities market and to show the relationship effect of market variables in securities market.
- To analyze the effect of dividend to stock price in Nepalese stock market.
- To analyze the listing if new companies and volume if share treaded.
- To access the effect and efficient qualitative factor in the option if employees if a grade listed companies.

Form the above Objectives she also concludes that following findings:

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

Giri, (2006) has conduct "a study on behavior of share pricing of listed commercial bank" by taking 10 sample commercial bank. She used statistical tools, financial tools and financial parameter. The objectives of her studies were,

- Analyze the share price behavior of listed commercial bank.
- To examine the risk involved in the common stock investment of those listed commercial bank.
- To provide glimpse of Nepalese stock market.

Finding of her study, that weakly efficient market hypothesis doesn't offer a satisfactory explanation to these speculative price series. The information of the past price changes is helping in predicating future change. So sufficient opportunities are available to institution and individual investors to make higher expected profit in future. Most of

the stock seemed to be risky then the average stock. She found that most of the bank are offering cash dividend every year. According to her it is not applicable in the other type of non banking industries.

Similarly, **Ojha, Ram Chandra (2007),** conducted a research on "Determinants of Stock Price Fluctuation in Nepal" to find out the major determinants of Stock price fluctuation in Nepal.

Major findings were:

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

Research methodology:

- Samples covered the periods 1999/00 to 2005/6.
- Used secondary as well as primary data.
- Statistical tools such as correlation analysis, regression analysis, coefficient of determinants, test statistic were used.

Weaknesses:

- Were unable to find out the actual determinants of share price fluctuation.

Khanal (2008) has performed his research on "Behaviour of securities market in Nepal". With following objectives.

- To analyze the behaviour of stock price of secondary market in Nepal.
- To examine the trend of securities market and volume of stock traded on the secondary market,
- To measure composition of sector and their market capitalization of listed companies on NEPSE.
- To analyze the investors view regarding the decision on stock investment.

In this study, the researcher not only pointed out the behavior of stock price of secondary market in Nepal but also the trend of securities market and volume of stock traded on the secondary market. According to this study the number of companies and paid up value of the securities listed with the exchange has been increased, this has

adversely affected the liquidity and supply of securities in the stock market. He recommended for the privatization of large and ineffective government corporations for the development of Nepalese stock market. But he failed to give precise and clear picture regarding the behavior of stock price of secondary market in Nepal.

2.6 Research Gap

There have been several researches done before in the topic stock market and stock market prices. All of those researches have much useful finding sand their limitations. after reviewing some thesis and other related sources, it is found that various studies were done on the topic of share price and its determinants, some of the studies were conducted based on financial performance, some were based on dividend policy, some are based on share price behavior. Similarly few Nepalese writers have written article directly based on share price movement. Therefore there is a gap of time period which is fulfilled by this study.

These researches are helpful in different areas. The findings of previous researches are equally important. The main focus of the research will be to analyze the trend of share price movement (growth and down falls of the factors) of commercial banks in secondary market of Nepal. Usually the price of common stock in primary Market is par value but in secondary market may be any price i.e. more, less or equal to par value. It is tried to carry out the distinct from other previous studies in terms of sample size, nature of the sample firms and methodology used, the study has covered four commercial banks. Latest five years data has been taken too analyzed. New aspect of this study may be that it has attempted to analyze the major quantitative determinants of share price of the selected commercial banks, by relating year end MPS, DPS, EPS, NWPS with various financial indicators, also considering previous studies. This topic will help to those investors who want to know and invest about share price movement of commercial banks.

CHAPTER – III
RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is the way to solve systematically about the research problem. Methodology states the method with which data have been extracted and discussed the tool of that have been used in interpretation of such data to fulfill the stipulated objectives. This chapter deals about the research methodology by which the collection data are analyzed with different tools to get results.

3.2 Research Design

This study is carried out to get the empirical result of the stock price movements. To conduct the study, analytical and descriptive research approach is dropped for the readily available historical data. All the data used in this study are secondary in nature. Though the research tried to concert on quite a specified subject area, but could not ignore some other relevant area of study, which may give further support to the research. Moreover some subject matters are so interrelated that ignoring one may halt the whole research. Thus, this study is much diversified within the topic of market efficiency and Nepalese investors' behavior. It is historical data to develop a generalization. It is descriptive and analytical as well as in the sense that it tries to find some fact about the Nepalese stock market and the Nepalese investors.

Descriptive research is essentially a fact finding approach relative largely to present and abstracting generalization by the cross-sectional study of the current situation.

Analytical approach is followed to parametric and nonparametric test of data. It is the process of micro-analysis and appraisal of the data.

3.3 Nature and Source of Data

The data used in this study are secondary as they have been collected from concerned authorities. For any research work, information is considered the life blood. Thus it is the major task to gather the information and data collection. To fulfill the objectives of the study secondary data have been used. The data used in this study consist

of daily closing price of each of the listed commercial banks in NEPSE. Secondary data have been taken mainly from the following sources:

- Published and unpublished document and annual reports of the company.
- The year ended annual report data sheet showing MPS, EPS, DPS, balance sheet, profit and loss account etc.
- Journals, government and non-government publication. Other supportive book and website of related topic.
- Previous thesis and studies relevant to this study.

3.4 Population and Sample

Till the latest date of this research study, 226 companies are listed in NEPSE. Until now, there are 26 commercial banks operating in Nepal out of which 21 commercial banks are in trading lists. And only four commercial banks have been selected for our study purpose keeping many factors into account. While choosing the banks, random as well as convenient sampling method has been applied. Duration coverage is 5 yrs 03/04 to 07/08 .The respective names and the dates of establishment of the sampled commercial banks are as follows:

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

3.5 Method of Data Analysis

Different financial, statistical, and managerial tools will be used for the analysis of data. Some inferences and generalizations might also be made in the course of preparation of report as demanded by the situation.

3.5.1 Financial Tools:

Financial tools are those instruments and techniques that help in analysis of financial position of the enterprise. Various financial tools have been used in the study, which helps to indicate the position of the company as targeted in the objective of the study.

3.5.1.1 Ratio Analysis

The most important tools of analysis of financial statements are the ratio analysis. It is an expression if the quantitative relationship between two numbers. It helps to diagnose financial health of the enterprise.

Dividend payout ratio

This ratio depicts the percentage of profit distributed it the shareholders as dividend. In other words, it is the ratio between DPS and EPS.

$$dividend\ payout\ ratio = \frac{dividend\ per\ share\ (DPS)}{earning\ per\ share\ (EPS)}$$

Return on equity (ROE)

This ratio states the earning power of common shareholders book value of investment, which is calculated as:

$$Return\ on\ equity\ (ROE) = \frac{net\ profit\ available\ to\ common\ stock\ holders}{total\ shareholders\ equity}$$

Book value per share

This ratio shows the total net worth available to each common stockholder after deducting the outsider's fund. It is obtained as follows:

$$Book\ value\ per\ share\ (BVPS) = \frac{total\ net\ worth}{no\ of\ common\ stock\ outstanding}$$

3.5.2 Statistical Tools

3.5.2.1 Karl Pearson's Coefficient of Correlation

It is a kind of statistical tool used for measuring the intensity or magnitude of linear relationship between the two variables. Also known as Pearsonian correlation coefficient between two variables (say X and Y), denoted by 'r_{xy}' or simply 'r' can be obtained as:

$$r = \frac{\sum XY - \sum X \sum Y}{\sqrt{\left[n \sum X^2 - \left(\sum X\right)^2\right]\left[n \sum Y^2 - \left(\sum Y\right)^2\right]}}$$

Where,

n = number of observations in series X and Y

The value of correlation coefficient, 'r', always lies between '-1' to '+1'.

If r = +1, it can be stated that there is perfect positive relationship between variables X and Y.

If r = -1, it can similarly be stated that there lies perfect negative relationship between the given two variables.

If r = 0, it states that there is no correlations at all between the two study variables.

(Gupta; 1982: E-10-8 – E-10-15).

3.5.2.2 Coefficient of Determination

The coefficient of determination between the two variables is a measure of linear relationship between them and it indicates the amount of one variable which is associated with or accounted for another variable. It gives the percentage variation in the dependent variable that is accounted for by the independent variable. Moreover, it gives the ratio of the explained variance to the total variance and it is given by square of the correlation coefficient, i.e., 'r^2'.Thus,

$$r2\ \mathrm{X} \frac{\exp lained \quad \mathrm{var} iance}{total \quad \mathrm{var} iance}$$

3.5.2.3 The Expected Rate of Return

The expected rate of return is computed in the base of the expected cash receipts over the holding period and the expected ending or selling price (Weston & Brigham, 1990: P.146). The expected return on an investment is the mean value of the summation of the possibility distribution of its possible returns (Cheney and Mosses, 1992: P.34). It can be expressed as an equation.

$$E\ frt\ \mathrm{AX}\ \overset{r}{\underset{t\ \mathrm{X1}}{}}\ Pt\ .rt$$

Where,

rt = Possible returns of each event

Pt = Probability of the return for that event

t = Different

In case of single holding period the expected rate of return can be computed by cash dividends paid during the together with an appreciation in market price, or capital gain realized at the end of the year.

$$Efr = \frac{Dividend + Ending\ Price - Begning\ Price}{Begning\ Price}$$

Here, Ending price and Beginning price indicates the cost of investment and the return realizes from that investment at the end of holding period. The nature of investment should be in revenue type of expenditure. The investors expect a regular payment of dividends over the Holding period with less chance of risk and price variations. The high expected rate of return is appreciated by investors to invest such type of business and vice versa. Therefore, the investor decisions are larger influenced by the nature of investors.

3.5.2.4 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:

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

3.5.2.5 Risk of Common Stock

Stock returns may be riskier or more volatile, but this concept is a difficult one to express simply. In finance a concept from statistics called standard deviation is borrowed to measure the risk on return summary measure about the average spread of observations around the mean. It is the square root of the variance. The standard deviation and the variance are equally acceptable and conceptually equivalent quantitative measures of an asset's total risk. It is computed as:

3.5.2.6 Standard Deviation

It is quantitative measure of risk of assists. It provides more information about the risk of the assist. The standard deviation of a distribution is the square root of the variance of returns around the mean. The following formula is calculated to the standard deviation, using historical returns:

$$\text{Standard Deviation } (\sigma) = \frac{\sum (Rj - \overline{Rj})^2}{n}$$

3.5.2.7 Coefficients of Variation

The risk per unit of expected return can be measured by coefficient of variation, which is computed as follows:

$$CV_j = \frac{\sigma_j}{R_j}$$

Where,

CV_j = coefficient of variation.

R_j = expected realized rate of return

σ_j = standard deviation of stock j.

3.5.2.8 Return on Market

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

$$Annual\ \ Market\ \ \text{Return} = \frac{Ending\ \ NEPSE\ \ Index - Begning\ \ NEPSE\ \ Index}{Begning\ \ NEPSE\ \ Index}$$

$$Average\ \ Market\ \ \text{Return} = \frac{\sum Rm}{n}$$

Where,

R_m = Summation of annual market returns

n = Number of observations

3.5.2.9 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:

$$Standard\ \ Deviation = \sigma_m = \sqrt{\frac{\sum (Rm - \overline{Rm})^2}{n}}$$

3.5.2.10 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:

$$Cov(R_j, Rm) = \frac{(R_j - \overline{R_j})(Rm - \overline{Rm})}{n}$$

If two variables are independent, their covariance is zero.

3.5.2.11 Beta Coefficient

Beta coefficient may be used for ranking the systematic risk of different assets. Beta coefficient of stock j is denoted by $_j$. It is functionally related to the correlation and the covariance between the security and the market portfolio. It is computed as:

$$_j = \frac{\text{cov}(R_j R_m)}{\text{var}(R_m)}$$

Where,

$COV(R_{j,} R_m)$ = covariance of returns of the j^{th} asset with the market

$Var(R_m)$ = variance of returns for the market portfolio

Individual stocks can be classified as aggressive or defensive or average on the basis of beta coefficients.

Beta coefficients	Stock classification	Degree of risk
Less than 1	Defensive stock	Less risky than the market
Exactly 1	Average stock	Equally risky as the market
Greater than 1	Aggressive stock	More risky than the market

CHAPTER - IV

PRESENTATION AND ANALYSIS OF DATA

4.1 Data Presentation and Analysis

In this chapter, the data collected from various sources have been presented and analyzed to measure the various dimensions of problems of the study and in major findings of the study are presented systematically.

4.2 Major Financial Indicators of Sample Commercial Banks

In order to find whether the trend of the market price of share run in accordance to the key performance indicator in terms of per share as EPS, DPS and BVPS or NWPS, have been used as follows. These data have also been represented in respective trend diagrams for individual's banks. All these data have been extracted from respective annual reports of the banks.

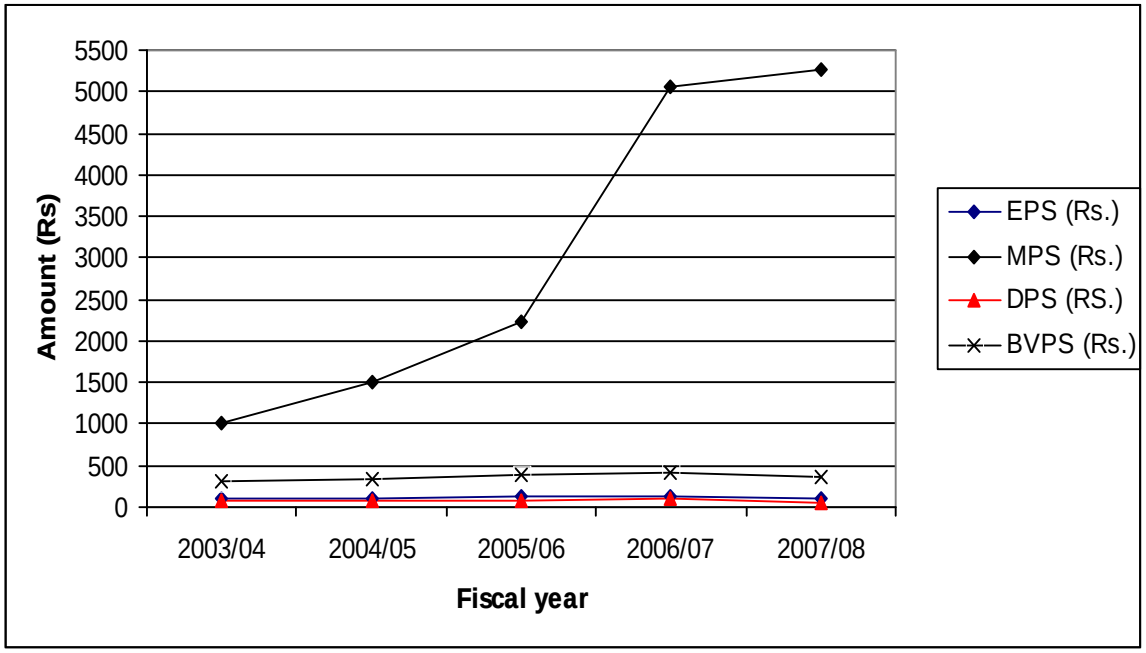
4.2.1 Major indicator of NABIL Bank (NABIL)

Table: 4.1

fiscal year	EPS (Rs.)	MPS (Rs.)	DPS (RS.)	BVPS (Rs.)
2003/04	92.61	1000	65	301
2004/05	105.49	1505	70	337
2005/06	129.21	2240	85	381
2006/07	137.08	5050	100	418
2007/08	108.31	5275	60	354

Sources: www.nabilbank.com

Figure no: 4.1



The table no 4.1 depicted above portrays the absolute figures of EPS, BVPS, DPS and MPS of NABIL from the year 2003/04 to 2007/08 as given by the key five years indicators, annual report of NABIL. The market price per share of the bank showed a sharply increasing trend as compared to trend of BVPS, DPS, and EPS for the same bank. The trend of BVPS, DPS and EPS of NABIL also showed a slightly increasing trend for the given period except 2007/08. However, the rate of trend is quite lower then that of MPS as observed from the figure 1 above. Using this trend analysis, we can thus state that there lies some role of these factors in forming the price off the common stocks.

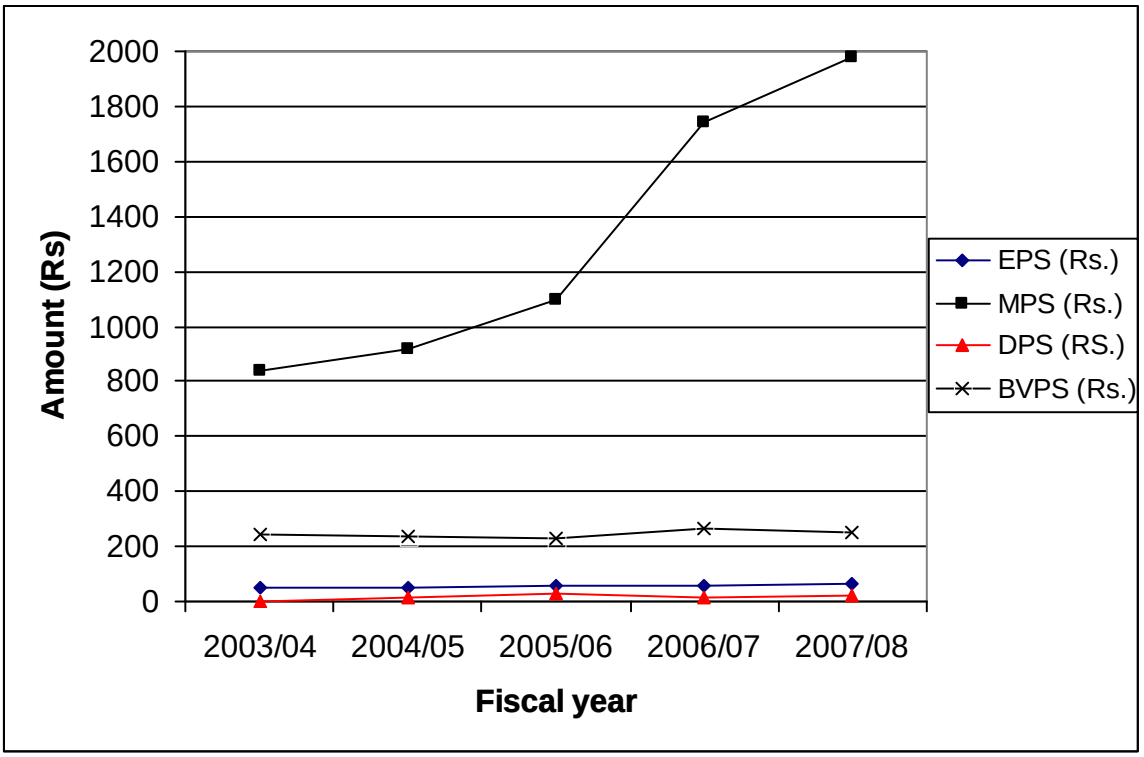
4.2.2 Major indicator of Himalayan Bank Limited (HBL)

Table: 4.2

fiscal year	EPS (Rs.)	MPS (Rs.)	DPS (RS.)	BVPS (Rs.)
2003/04	49.05	840	0.00	246.93
2004/05	47.91	920	11.58	239.59
2005/06	59.24	1100	30	228.72
2006/07	60.66	1740	15	264.74
2007/08	62.71	1980	25	247.95

Sources: www.hblbankltd.com

Figure no: 4.2



Similarly, the table no. 4.2 depicted above indicates the five years data of MPS, EPS, DPS, and BVPS of HBL. Despite of fall in the mid years date of MPS, the trend of MPS obtained from the figure 2 above is of slightly upward slope. This indicates that tie price of the bank is increasing over the period. However, the rate was quite sluggish. BVPS, EPS and DPS of the bank showed an almost horizontal trend as reflect by the figure 2 above. Using the figure of above it can be said that the trend of MPS as slightly running in accordance to the trends of EPS, DPS and BVPS of the bank.

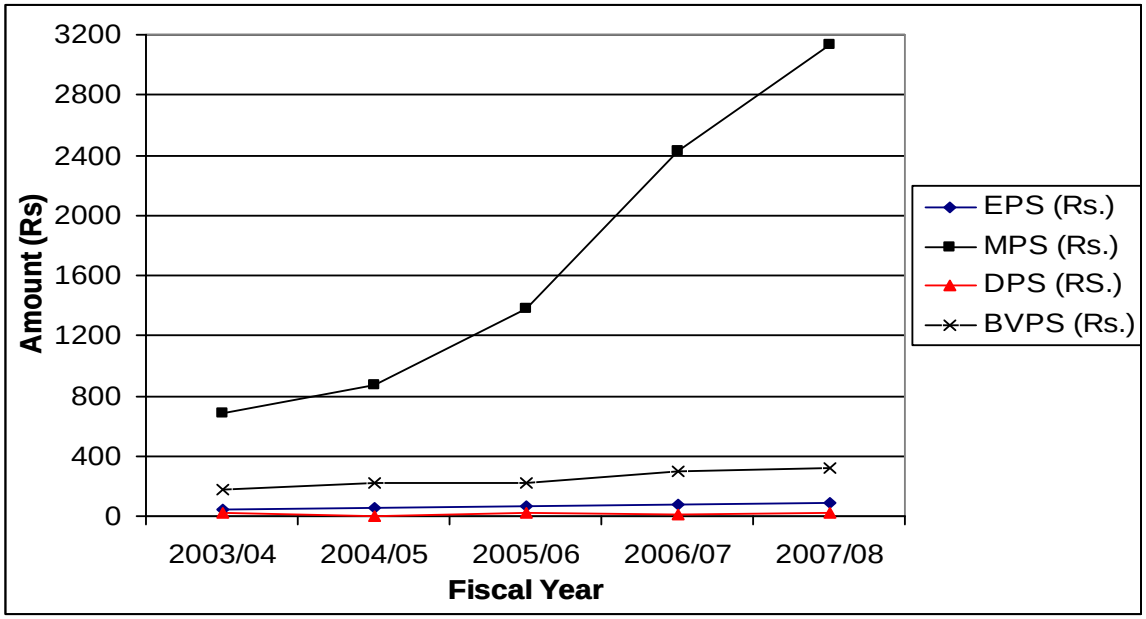
4.2.3 Major indicator of Everest Bank Limited (EBL)

Table: 4.3

fiscal year	EPS (Rs.)	MPS (Rs.)	DPS (RS.)	BVPS (Rs.)
2003/04	45.58	680	20	171.52
2004/05	54.22	870	0	219.87
2005/06	62.78	1379	25	217.67
2006/07	78.42	2430	10	292.75
2007/08	91.82	3132	20	321.77

Sources: www.everestbakltd.com

Figure no: 4.3



The table no 4.3 depicted above portrays the absolute figures of EPS, BVPS, DPS and MPS of EBL from years 2003/04 to 2007/08 as given by the key year's indicators, annual report of EBL. The market price per shares of the bank showed a sharply increasing trend as compared to the trends of BVPS, DPS and EPS for the same bank. The trend of BVPS, DPS and EPS of EBL also shows a slightly increasing trend for the given period. However, the rate of trend is quite lower than that of MPS as observed from figure 3 above. Using this trend analysis, we can thus state that the trend of MPS is running to some extent in accordance to the trend of BVPS, EPS and DPS of the bank. However the degree cannot be stated using this figure only.

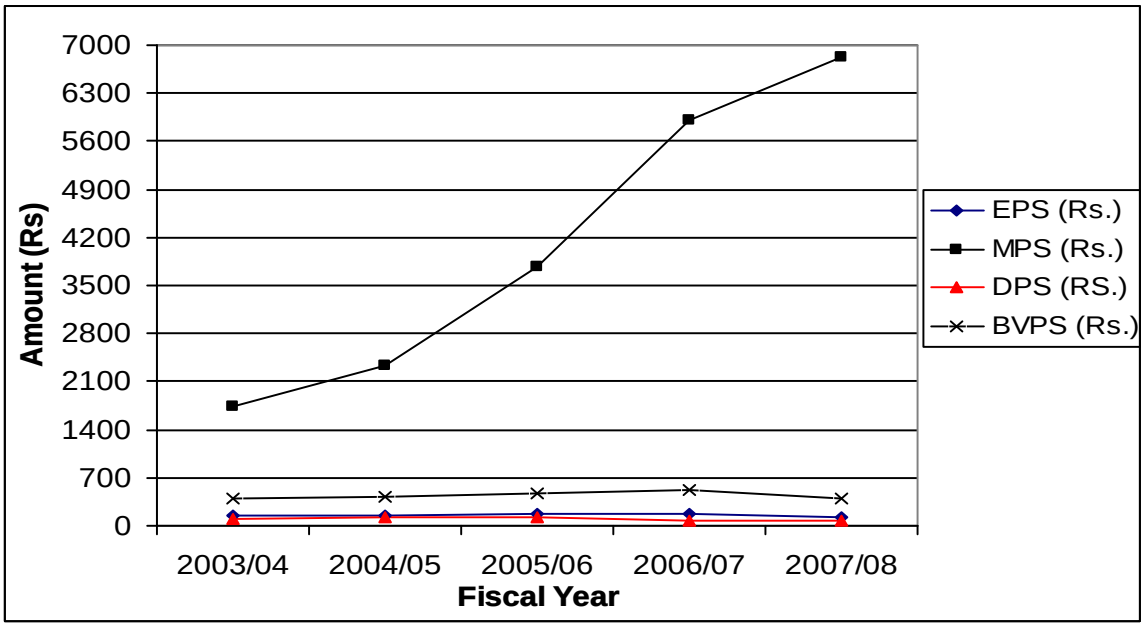
4.2.4 Major indicator of standard chartered bank Nepal limited (SCBNL)

Table: 4.4

Fiscal year	EPS (Rs.)	MPS (Rs.)	DPS (RS.)	BVPS (Rs.)
2003/04	143.55	1745	110	399.25
2004/05	143.14	2345	120	422.38
2005/06	175.84	3775	130	468.22
2006/07	167.37	5900	80	512.18
2007/08	131.92	6830	80	401.52

Sources: www.standardchartered.com.np

Figure no: 4.4



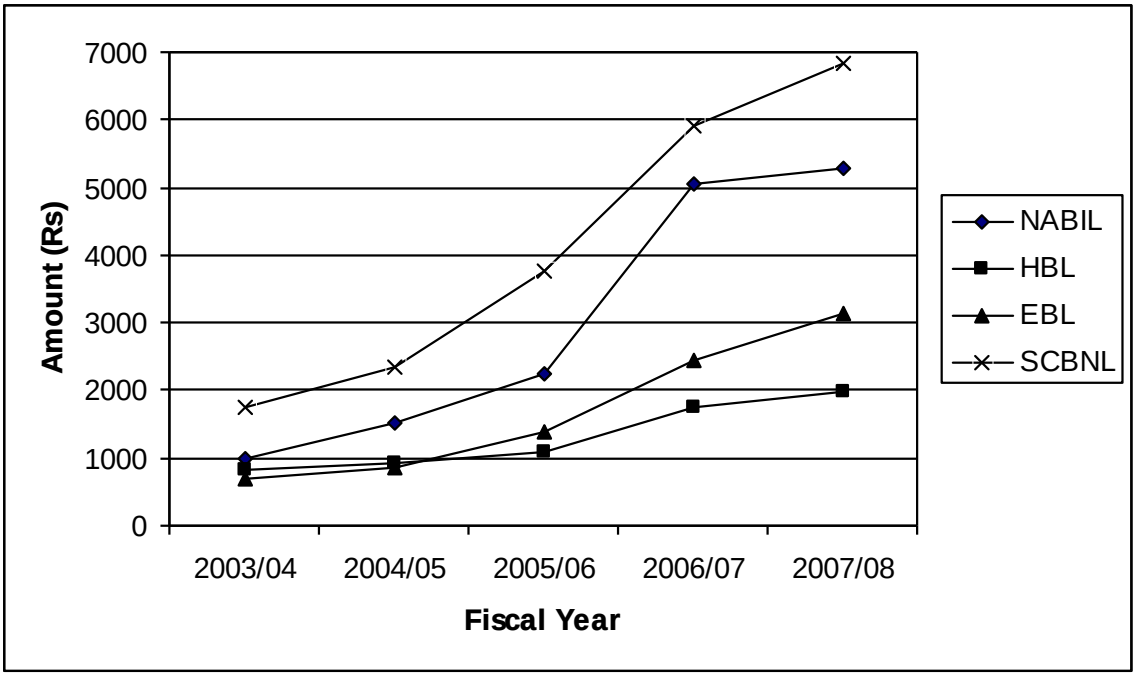
The table no 4.4 depicted above portrays the absolute figures of EPS, BVPS, DPS and MPS of SCBNL from years 2003/04 to 2007/08 as given by the key year's indicators, annual report of SCBNL. The market price per shares of the bank showed a sharply increasing trend as compared to the trends of BVPS, DPS and EPS for the same bank. The trend of BVPS, DPS and EPS of SCBNL also shows a slightly increasing trend and slightly decrease in year 2007/08 for the given period. However, the rate of trend is quite lower than that of MPS as observed from figure 4 above. Using this trend analysis, we can thus state that the trend of MPS is running to some extent in accordance to the trend of BVPS, EPS and DPS of the bank. However the degree cannot be stated using this figure only.

4.3 Presentation of the trend of MPS of sampled banks

Table no 4.5

Fiscal year	NABIL	HBL	EBL	SCBNL
2003/04	1000	840	680	1745
2004/05	1505	920	870	2345
2005/06	2240	1100	1379	3775
2006/07	5050	1740	2430	5900
2007/08	5275	1980	3132	6830

Figure no: 4.5



On the basis of table no 4.5 depicted above, the market price of common stock of SCBNL remained highest for the period showing a highest increase trend as reflect by figure 4.5. The market prices of EBL were remained lowest in the earlier years of the study. However, they were found to be increasing at a higher rate in the last years, thus, the trend of the market price of EBL over the five year period also remained steeply upwards. Likewise, the market prices of NABIL were also showed an increasing trend. However the market price of HBL showed an almost horizontal trend. The market price of the share of common stocks of SCBNL occupy the leading position in the market, where as that of NABIL remained at the second highest position out of the sampled commercial banks. The prices of EBL were also higher but the seemed fluctuating over the years. in earlier years, HBL had lower market price but due to continuous strive of the bank management to did better, the share price gained momentum and started to increase at a very faster rate, in this way, the market price of common stocks of all commercial banks were found to be increasing giving the trend upward or positively sloped.

4.4 Correlation Analysis

Correlation analysis is performed in order to detect the relationship and to detect if there is any role of the various factors in forming the price of common stocks of sampled commercial banks.

In this analysis product moment method had been used to find out the relationship between EPS and MPS, DPS and MPS, and BVPS and MPS. Generally, the correlation analysis is used to describe the degree to which one variable is related to another. Hence, in statistics, it is used in order to depict the co-variation between two or more variables. It helps to determine that whether 1) a positive or a negative relationship exists. 2) The relationship is significant or in significant and 3) establish causes and effects relation if any. The statistical tools, correlation analysis is preferred in this study to identify the relationship between EPS, DPS, BVPS and MPS whether the relationship is significant or not.

For the purpose of decision making under correlation, decision-making based on following interpretation terms:

1) When, r = +1, there is perfect positive correlation.
2) When, r = -1, there is perfect negative correlation.
3) When, r = 0, there is no correlation.
4) When, 'r' lies between 0.7 and 0.999, (-0.7 to -0.999), there is a high degree of Positive (or negative) correlation.
5) When 'r' lies between 0.5 and 0.699, there is a moderate degree of correlation.
6) When 'r' is less than 0.5 there is low degree of correlation.

4.4.1 Correlation between EPS, DPS and BVPS of MPS of NABIL

4.4.1.1 Correlation between EPS and MPS

The above correlation between EPS and MPS of NABIL revealed the solution of the question: was there any relation between the EPS of NABIL and its MPS? In other words, was more MPS means more EPS in it? If there is any relationship between these two variables, what sort of relationship exists: positive or negative?

Table: 4.6

Fiscal year	EPS (X)	MPS (Y)	x X $\int X$ Z $\bar{X}$	y X $\int Y$ Z $\bar{Y}$	x^2	y^2	xy
2003/04	92.61	1000	-21.93	-2014	480.92	4056196	44167.02
2004/05	105.49	1505	-9.05	-1509	81.90	2277081	13656.45
2005/06	129.21	2240	14.67	-774	215.21	599076	-11354.58
2006/07	137.08	5050	22.54	2036	508.05	4145296	45891.44
2007/08	108.31	5275	-6.20	2261	38.81	5112121	-14086.03
Total	**572.70**	**15070**	**00**	**00**	**1324.89**	**16189770**	**78274.30**

Where,

X= EPS

Y= MPS

r XCorrelation

$$\bar{X} \text{ X} \frac{X}{N} \text{ X} \frac{572.70}{5} \text{ X} 114.54$$

$$\bar{Y} \text{ X} \frac{Y}{N} \text{ X} \frac{15070}{5} \text{ X} 3014$$

$$r \text{ X} \frac{XY}{\sqrt{X^2 \quad y^2}} \quad \text{X} \frac{78274.30}{\sqrt{1324.89 \mid 16189770}} \text{ X} 0.53$$

Decision:

From the above computation and table the conclusion can be drawn that there was moderate degree of positive correlation between EPS of NABIL and its MPS.

4.4.1.2 Correlation between DPS and MPS

The above correlation between DPS and MPS of NABIL revealed the solution of the question: was there any relation between the DPS of NABIL and its MPS? In other words, was more MPS means more DPS in it? If there is any relationship between these two variables, what sort of relationship exists: positive or negative?

Table 4.7

Fiscal year	DPS (X)	MPS (Y)	$x = X - \bar{X}$	$y = Y - \bar{Y}$	x^2	y^2	xy
2003/04	65	1000	-11	-2014	121	4056196	22154
2004/05	70	1505	-6	-1509	36	2277081	9054
2005/06	85	2240	9	-774	81	599076	-6966
2006/07	100	5050	24	2036	576	4145296	48864
2007/08	60	5275	-16	2261	225	5112121	-36176
Total	**380**	**15070**		**00**	**1070**	**16189770**	**36930**

Where,

X=DPS

Y= MPS

$$\bar{X} = \frac{X}{N} = \frac{380}{5} = 76$$

$$\bar{Y} = \frac{Y}{N} = \frac{15070}{5} = 3014$$

$$r = \frac{XY}{\sqrt{X^2 \quad y^2}} = \frac{36930}{\sqrt{1070 \mid 16189770}} = 0.28$$

Decision:

From the above computation and table 4.7, it can drawn the conclusion that there was lower degree of positive correlation between DPS of NABIL and its MPS.

4.4.1.3 Correlation between BVPS and MPS

The above correlation between BVPS and MPS of NABIL revealed the solution of the question: was there any relation between the BVPS of NABIL and its MPS? In other words, was more MPS means more BVPS in it? If there is any relationship between these two variables, what sort of relationship exists: positive or negative?

Table no: 4.8

Fiscal year	BVPS (X)	MPS (Y)	x X$\int$X Z$\bar{X}$	y X$\int$Y Z$\bar{Y}$	x^2	y^2	xy
2003/04	301	1000	-57.20	-2014	3271.84	4056196	115200.80
2004/05	337	1505	-21.20	-1509	449.44	2277081	31990.80
2005/06	381	2240	22.80	-774	519.84	599076	-17647.20
2006/07	418	5050	59.80	2036	3576.04	4145296	121752.80
2007/08	354	5275	-4.20	2261	17.64	5112121	-9496.20
Total	**1791**	**15070**		**00**	**7834.80**	**16189770**	**241801**

Where,

X= BVPS

Y= MPS

$$\bar{X} \text{ X} \frac{X}{N} \quad \text{X} \frac{1791}{5} \text{X} 358.20$$

$$\bar{Y} \text{ X} \frac{Y}{N} \quad \text{X} \frac{15070}{5} \text{X} 3014$$

$$r \text{ X} \frac{XY}{\sqrt{X^2 \quad y^2}} \quad \text{X} \frac{241801}{\sqrt{7834.80 \mid 16189770}} \text{X} 0.68$$

Decision:

From above computation and table, it can draw the conclusion that there was moderate degree of positive correlation between BVPS of NABIL and its MPS.

4.4.2 Correlation between EPS, DPS and BVPS of MPS of HBL

4.4.2.1 Correlation between EPS and MPS

The correlation between EPS and MPS of HBL revealed the solution of the question: was there any relation between the EPS of HBL and its MPS? In other words, was more MPS means more EPS in it? If there is any relationship between these two variables, what sort of relationship exists: positive or negative?

Table no: 4.9

Fiscal year	EPS (X)	MPS (Y)	$x = X - \bar{X}$	$y = Y - \bar{Y}$	x^2	y^2	xy
2003/04	49.05	840	-6.87	-476	47.20	226576	3270.12
2004/05	47.91	920	-8.01	-396	64.16	156816	3171.96
2005/06	59.24	1100	3.32	-216	11.02	46656	717.12
2006/07	60.66	1740	4.74	424	22.47	179776	2009.76
2007/08	62.71	1980	6.82	664	46.51	440896	4528.48
Total	**279.60**	**6580**	**00**	**00**	**191.36**	**1050720**	**13697.44**

Where,

X= EPS

Y= MPS

$$\bar{X} = \frac{X}{N} = \frac{279.60}{5} = 55.92$$

$$\bar{Y} = \frac{Y}{N} = \frac{6580}{5} = 1316$$

$$r = \frac{XY}{\sqrt{X^2 \quad y^2}} = \frac{13697.44}{\sqrt{191.36 \mid 1050720}} = .96$$

Decision:

From the above computation and table, the conclusion can be drawn that there was high degree of positive correlation between EPS of HBL and its MPS. That reveals more MPS means more EPS.

4.4.2.2 Correlation between DPS and MPS

The above correlation between DPS and MPS of HBL revealed the solution of the question: was there any relation between the DPS of HBL and its MPS? In other words, was more MPS means more DPS in it? If there is any relationship between these two variables, what sort of relationship exists: positive or negative?

Table: 4.10

Fiscal year	DPS (X)	MPS (Y)	x X∫X Z$\bar{X}$	y X∫Y Z$\bar{Y}$	x^2	y^2	xy
2003/04	0.00	840	-16.32	-476	266.21	226576	7766.42
2004/05	11.58	920	-4.74	-396	22.43	156816	1875.46
2005/06	30	1100	13.68	-216	187.25	46656	-2955.74
2006/07	15	1740	-1.32	424	1.73	179776	557.98
2007/08	25	1980	8.68	664	75.41	440896	5766.18
Total	**81.58**	**6580**	**00**	**00**	**553.03**	**1050720**	**13010.28**

Where,

X = DPS

Y= MPS

$$\bar{X} \text{ X} \frac{X}{N} \quad \text{X} \frac{81.58}{5} \text{X16.32}$$

$$\bar{Y} \text{ X} \frac{Y}{N} \quad \text{X} \frac{6580}{5} \text{X1316}$$

$$r \text{ X} \frac{XY}{\sqrt{X^2 \quad y^2}} \quad \text{X} \frac{13010.28}{\sqrt{553.03 \mid 1050720}} \text{X0.54}$$

Decision:

From the above computation and table 4.10, it can draw the conclusion that there was moderate degree of positive correlation between DPS of HBL and its MPS.

4.4.2.3 Correlation between BVPS and MPS

The above correlation between BVPS and MPS of HBL revealed the solution of the question: was there any relation between the BVPS of HBL and its MPS? In other words, was more MPS means more BVPS in it? If there is any relationship between these two variables, what sort of relationship exists: positive or negative?

Table: 4.11

Fiscal year	BVPS (X)	MPS (Y)	x X∫X Z$\bar{X}$	y X∫Y Z$\bar{Y}$	x^2	y^2	xy
2003/04	246.93	840	1.34	-476	1.81	226576	-639.74
2004/05	239.59	920	-5.99	-396	35.95	156816	2374.42
2005/06	228.72	1100	-16.87	-216	284.46	46656	3643.06
2006/07	264.74	1740	19.15	424	366.88	179776	8121.30
2007/08	247.95	1980	2.36	664	5.59	440896	1569.70
Total	**1227.93**	**6580**	**00**	**00**	**694.69**	**1050720**	**15068.74**

Where,

X= BVPS

Y= MPS

$$\bar{X} \text{ X} \frac{X}{N} \quad \text{X} \frac{1227.93}{5} \text{X} 245.59$$

$$\bar{Y} \text{ X} \frac{Y}{N} \quad \text{X} \frac{6580}{5} \text{X} 1316$$

$$r \text{ X} \frac{XY}{\sqrt{X^2 \quad y^2}} \quad \text{X} \frac{15068.74}{\sqrt{694.69 \mid 1050720}} \text{X} 0.56$$

Decision:

From above computation and table, it can draw the conclusion that there was moderate degree of positive correlation between BVPS of HBL and its MPS.

4.4.3 Correlation between EPS, DPS and BVPS of MPS of EBL

4.4.3.1 Correlation between EPS and MPS

The correlation between EPS and MPS of EBL revealed the solution of the question: was there any relation between the EPS of EBL and its MPS? In other words, was more MPS means more EPS in it? If there is any relationship between these two variables, what sort of relationship exists: positive or negative?

Table: 4.12

Fiscal year	EPS (X)	MPS (Y)	x X fX Z $\bar{X}$ A	y X fY Z $\bar{Y}$ A	x^2	y^2	xy
2003/04	45.58	680	-20.98	-1018.20	440.33	1036731.24	21365.91
2004/05	54.22	870	-12.34	-828.20	152.37	68591524	10223.30
2005/06	62.78	1379	-3.78	319.20	14.32	101888.64	1207.85
2006/07	78.42	2430	11.86	731.80	140.56	535531.24	8676.22
2007/08	91.82	3132	25.26	1433.80	637.87	2055782.44	36212.05
Total	**332.82**	**8491**	**00**	**00**	**1385.45**	**4415848.80**	**77685.33**

Where,

X= EPS

Y= MPS

$$\bar{X} \text{ X} \frac{X}{N} \quad \text{X} \frac{332.82}{5} \text{X} 66.56$$

$$\bar{Y} \text{ X} \frac{Y}{N} \quad \text{X} \frac{8491}{5} \text{X} 1698.20$$

$$r \text{ X} \frac{XY}{\sqrt{X^2 \quad y^2}} \quad \text{X} \frac{77685.33}{\sqrt{1385.45 \mid 4415848.80}} \text{X} 0.99$$

Decision:

From the above computation and table, the conclusion can be drawn that there was high degree of positive correlation between EPS of EBL and its MPS. That reveals more MPS means more EPS.

4.4.3.2 Correlation between DPS and MPS

The above correlation between DPS and MPS of EBL revealed the solution of the question: was there any relation between the DPS of EBL and its MPS? In other words, was more MPS means more DPS in it? If there is any relationship between these two variables, what sort of relationship exists: positive or negative?

Table: 4.13

Fiscal year	DPS (X)	MPS (Y)	x X∫X Z$\bar{X}$	y X∫Y Z$\bar{Y}$	x^2	y^2	xy
2003/04	20	680	5	-1018.20	25	1036731.24	-5091
2004/05	0	870	-15	-828.20	225	68591524	12423
2005/06	25	1379	10	319.20	100	101888.64	-3192
2006/07	10	2430	-5	731.80	25	535531.24	-3659
2007/08	20	3132	5	1433.80	25	2055782.44	7169
Total	**75**	**8491**	**00**	**00**	**400**	**4415848.80**	**7650**

Where,

X=DPS

Y= MPS

$$\bar{X} \text{ X} \frac{X}{N} \quad \text{X} \frac{75}{5} \text{X15}$$

$$\bar{Y} \text{ X} \frac{Y}{N} \quad \text{X} \frac{8491}{5} \text{X1698.20}$$

$$r \text{ X} \frac{XY}{\sqrt{X^2 \quad y^2}} \quad \text{X} \frac{7650}{\sqrt{400 \mid 4415848.80}} \text{X0.18}$$

Decision:

From the above computation and table, it can draw the conclusion that there was lower degree of positive correlation between DPS of EBL and its MPS.

4.4.3.3 Correlation between BVPS and MPS

The above correlation between BVPS and MPS of EBL revealed the solution of the question: was there any relation between the BVPS of EBL and its MPS? In other words, was more MPS means more BVPS in it? If there is any relationship between these two variables, what sort of relationship exists: positive or negative?

Table: 4.14

Fiscal year	BVPS (X)	MPS (Y)	x X ∫X Z $\bar{X}$	y X ∫Y Z $\bar{Y}$	x^2	y^2	xy
2003/04	171.52	680	-73.20	-1018.20	5358.24	1036731.24	74532.24
2004/05	219.87	870	-24.85	-828.20	617.52	68591524	20580.77
2005/06	217.67	1379	-27.05	319.20	731.70	101888.64	8634.36
2006/07	292.75	2430	48.03	731.80	2306.88	535531.24	35148.35
2007/08	321.77	3132	77.05	1433.80	5936.70	2055782.44	110474.29
Total	**1223.58**	**8491**	**00**	**00**	**14951.04**	**4415848.80**	**249370.01**

Where,

X= BVPS

Y= MPS

$$\bar{X} \text{ X} \frac{X}{N} \quad \text{X} \frac{1223.58}{5} \text{X} 244.72$$

$$\bar{Y} \text{ X} \frac{Y}{N} \quad \text{X} \frac{8491}{5} \text{X} 1698.20$$

$$r \text{ X} \frac{XY}{\sqrt{X^2 \quad y^2}} \quad \text{X} \frac{249370.01}{\sqrt{14951.04 \mid 4415848.80}} \text{X} 0.97$$

Decision:

From above computation and table, it can drawn the conclusion that there was high degree of positive correlation between BVPS of EBL and its MPS. That reveals more MPS means more BVPS.

4.4.4 Correlation between EPS, DPS and BVPS of MPS of SCBNL

4.4.4.1 Correlation between EPS and MPS

The above correlation between EPS and MPS of SCBNL revealed the solution of the question: was there any relation between the EPS of SCBNL and its MPS? In other words, was more MPS means more EPS in it? If there is any relationship between these two variables, what sort of relationship exists: positive or negative?

Table: 4.15

Fiscal year	EPS (X)	MPS (Y)	x X $\int X$ Z $\bar{X}$	y X $\int Y$ Z $\bar{Y}$	x^2	y^2	xy
2003/04	143.55	1745	-8.81	-2374	77.69	5635876	20924.44
2004/05	143.14	2345	-9.22	-1774	85.08	3147076	16363.38
2005/06	175.84	3775	23.48	-344	551.12	118336	-8075.74
2006/07	167.37	5900	15.01	1781	225.18	3171961	26725.69
2007/08	131.92	6830	-20.44	2711	417.96	7349521	-55423.68
Total	**761.82**	**20595**	**00**	**00**	**1357.03**	**19422770**	**514.09**

Where,

X=EPS

Y= MPS

$$\bar{X} \text{ X} \frac{X}{N} \text{ X} \frac{761.82}{5} \text{X152.36}$$

$$\bar{Y} \text{ X} \frac{Y}{N} \text{ X} \frac{20595}{5} \text{X4119}$$

$$r \text{ X} \frac{XY}{\sqrt{X^2 \quad y^2}} \text{X} \frac{514.09}{\sqrt{1357.03 \mid 19422770}} \text{X0.0032}$$

Decision:

From the above computation and table the conclusion can be drawn that there was slight degree of positive correlation between EPS of SCBNL and its MPS.

4.4.4.2 Correlation between DPS and MPS

The above correlation between DPS and MPS of SCBNL revealed the solution of the question: was there any relation between the DPS of SCBNL and its MPS? In other words, was more MPS means more DPS in it? If there is any relationship between these two variables, what sort of relationship exists: positive or negative?

Table: 4.16

Fiscal year	DPS (X)	MPS (Y)	x X fX Z $\bar{X}$ A	y X fY Z $\bar{Y}$ A	x^2	y^2	xy
2003/04	110	1745	6	-2374	36	5635876	-14244
2004/05	120	2345	16	-1774	256	3147076	-28384
2005/06	130	3775	26	-344	676	118336	-8944
2006/07	80	5900	-24	1781	576	3171961	-42744
2007/08	80	6830	-80	2711	576	7349521	-65064
Total	**520**	**20595**	**00**	**00**	**2120**	**19422770**	**-159380**

Where,

X=DPS

Y= MPS

$$\bar{X} \text{ X} \frac{X}{N} \quad \text{X}$$

$$\bar{Y} \text{ X} \frac{Y}{N} \quad \text{X} \frac{20595}{5} \text{X} 4119$$

$$r \text{ X} \frac{XY}{\sqrt{X^2 \quad y^2}} \text{X} \frac{\text{Z}159380}{\sqrt{2120 \mid 19422770}} \text{XZ} 0.78$$

Decision:

From the above computation and table, it can draw the conclusion that there was high degree of negative correlation between DPS of SCBNL and its MPS.

4.4.4.3 Correlation between BVPS and MPS

The above correlation between BVPS and MPS of SCBNL revealed the solution of the question: was there any relation between the BVPS of SCBNL and its MPS? In other words, was more MPS means more BVPS in it? If there is any relationship between these two variables, what sort of relationship exists: positive or negative?

Table: 4.17

Fiscal year	BVPS (X)	MPS (Y)	x X ∫X Z $\bar{X}$ Þ	y X ∫Y Z $\bar{Y}$ Þ	x^2	y^2	xy
2003/04	399.25	1745	-41.45	-2374	1717.94	5635876	98397.55
2004/05	422.38	2345	-18.32	-1774	335.55	3147076	32496.13
2005/06	468.22	3775	27.52	-344	757.46	118336	-9467.57
2006/07	512.18	5900	71.42	1781	5100.82	3171961	127199.02
2007/08	401.52	6830	-39.18	2711	1535.72	7349521	-106216.98
Total	**2203.49**	**20595**	**00**	**00**	**9447.49**	**19422770**	**142408.15**

Where,

X= BVPS

Y= MPS

$$\bar{X} \text{ X} \frac{X}{N} \text{ X} \frac{2203.49}{5} \text{ X} 440.70$$

$$\bar{Y} \text{ X} \frac{Y}{N} \text{ X} \frac{20595}{5} \text{ X} 4119$$

$$r \text{ X} \frac{XY}{\sqrt{X^2 \quad y^2}} \text{ X} \frac{142408.15}{\sqrt{9447.49 \mid 19422770}} \text{ X} 0.33$$

Decision:

From above computation and table, it can draw the conclusion that there was moderate degree of positive correlation between BVPS of SCBNL and its MPS.

4.5 Regression Equation of MPS(Y) on EPS, DPS and BVPS of Commercial Banks

In this section, the regression equation of MPS (Y) as a dependent variable on independent variable (X) such as EPS, DPS and BVPS have been calculated and the regression coefficient of y on x have been interpreted accordingly. For the sake of ease of calculation and interpretation, only simple regression equation has used in terms of the following equation:

$Y \text{ X} a \Gamma bx$.....(1)

Where,

$a = \bar{Y} - b\bar{X}$.....(2)

$$b = b_{YX} = \frac{n \sum XY - \sum X \sum Y}{n \sum X^2 - (\sum X)^2}$$

We have direct method to fine the values of 'a' and 'b' as given by equation2 and replaced the obtained values individually for each bank and for each newer term.

Functionally,

MPS = f (EPS)..... (i)

MPS = f (DPS)..... (ii)

MPS = f (BVPS)..... (iii)

MPS = f (other factor)..... (iv)

The above functional equations: (i), (ii), (iii), and (iv) indicate that mps is function of EPS, DPS, BVPS and other factor. All the three above equation have been functionally calculated, tested and interpreted. However, other factor that determined the MPS has not been incorporated in this research study due to several limitation of our study mentioned in the limitation of the study in the introduction chapter.

4.5.1 Regression equation of MPS(Y) on BVPS

Table: 4.18 (NABIL)

Year	MPS (Y)	BVPS (X)	XY	X^2
2003/04	1000	301	301000	1000000
2004/05	1505	337	507185	2265025
2005/06	2240	381	853440	5017600
2006/07	5050	418	2110900	25502500
2007/08	5275	354	1867350	27825625
n= 5	$\sum Y$ **=15070**	$\sum X$ **=1791**	$\sum XY$ **=5639875**	$\sum X^2$ **=649371**

$$\bar{X} = \frac{\sum X}{N} = \frac{1791}{5} = 358.20$$

$$\bar{Y} = \frac{\sum Y}{N} = \frac{15070}{5} = 3014$$

b= 30.86

a= -8040.05

Correlation coefficient (r) =0.68

Coefficient of determination $X(r^2)$ =0.46

Thus the regression equation of the Y on X i.e. MPS on BVPS for the bank is

Y= -8040.05 + 30.86X..... (3)

The constant term if the line 'a' was obtained as -8040.05. The regression coefficient of MPS on BVPS of NABIL for the five year period given 'b' was obtained +30.86. It indicated that a unit increase in BVPS of NABIL caused to increase the market price on average by Rs 30.86. Since the coefficient of determination was found to be 0.46, it indicated that 46% of the change in independent variable (BVPS) is reflected and explained in the dependent variables (MPS) in case of NABIL and the rest is determined by other unexpected variables.

Table: 4.19 (HBL)

year	MPS (Y)	BVPS (X)	XY	X^2
2003/04	840	246.93	207421.20	60974.42
2004/05	920	239.59	220422.80	57403.37
2005/06	1100	228.72	251592	52312.84
2006/07	1740	264.74	460647.60	70087.27
2007/08	1980	247.95	490941	61479.20
n= 5	Y =6580	X =1227.93	XY =1631024.60	X^2 =302257.10

$\bar{X}$ X$\frac{X}{N}$ X$\frac{1227.93}{5}$ X245.59

$\bar{Y}$ X$\frac{Y}{N}$ X$\frac{6580}{5}$ X1316

b = 21.69

a = -4018.85

Correlation coefficient (r) =0.56

Coefficient of determination $X(r^2)$ =0.31

Thus the regression equation of the Y on X i.e. MPS on BVPS for the bank is

Y= -4018.85+ 21.69X..... (4)

The constant term if the line 'a' was obtained as -4018.85. The regression coefficient of MPS on BVPS of NABIL for the five year period given 'b' was obtained +21.69. It indicated that a unit increase in BVPS of HBL caused to increase the market price on average by Rs 21.69. Since the coefficient of determination was found to be 0.31, it indicated that 31% of the change in independent variable (BVPS) is reflected and explained in the dependent variables (MPS) in case of HBL and the rest is determined by other unexpected variables.

Table: 4.20 (EBL)

Year	MPS (Y)	BVPS (X)	XY	X^2
2003/04	680	171.52	116633.60	29419.11
2004/05	870	219.87	191286.90	48342.82
2005/06	1379	217.67	300166.93	47380.23
2006/07	2430	292.75	711382.50	85702.56
2007/08	3132	321.77	1007783.64	103535.93
n= 5	Y **=8491**	X **=1223.58**	XY **=2327253.57**	X^2 **=314380.65**

$$\bar{X} \text{ X} \frac{X}{N} \text{ X} \frac{1223.58}{5} \text{ X} 244.72$$

$$\bar{Y} \text{ X} \frac{Y}{N} \text{ X} \frac{8491}{5} \text{ X} 1698.20$$

b = 16.68

a = -2383.73

Correlation coefficient (r) =0.97

Coefficient of determination $\text{X}(r^2)$ =0.94

Thus the regression equation of the Y on X i.e. MPS on BVPS for the bank is

Y= -2383.73 + 16.68X..... (5)

The constant term if the line 'a' was obtained as -2383.73. The regression coefficient of MPS on BVPS of EBL for the five year period given 'b' was obtained +16.68. It indicated that a unit increase in BVPS of EBL caused to increase the market price on average by Rs 16.68. Since the coefficient of determination was found to be 0.94, it indicated that 94% of the change in independent variable (BVPS) is reflected and explained in the dependent variables (MPS) in case of EBL and the rest is determined by other unexpected variables.

Table: 4.21 (SCBNL)

Year	MPS (Y)	BVPS (X)	XY	X^2
2003/04	1745	399.25	696691.25	159400.56
2004/05	2345	422.38	990481.10	178404.86
2005/06	3775	468.22	1767530.50	219229.97
2006/07	5900	512.18	3021508	262266.89
2007/08	6830	401.52	2742381.60	161218.31
n= 5	Y **=20595**	X **=2203.49**	XY **=9218592.45**	X^2 **=980520.59**

$$\bar{X} = \frac{X}{N} = \frac{2203.49}{5} = 440.70$$

$$\bar{Y} = \frac{Y}{N} = \frac{20595}{5} = 4119$$

b = 15.06

a = -6225.94

Correlation coefficient (r) =0.33

Coefficient of determination (r^2) =0.11

Thus the regression equation of the Y on X i.e. MPS on BVPS for the bank is

Y= -6225.94 + 15.06X..... (6)

The constant term if the line 'a' was obtained as -6225.94. The regression coefficient of MPS on BVPS of SCBNL for the five year period given 'b' was obtained +15.06. It indicated that a unit increase in BVPS of SCBNL caused to increase the market price on average by Rs 15.06. Since the coefficient of determination was found to be 0.11, it indicated that 11% of the change in independent variable (BVPS) is reflected and explained in the dependent variables (MPS) in case of SCBNL and the rest is determined by other unexpected variables.

4.5.2 Regression equation of MPS on EPS

Table: 4.22 (NABIL)

Year	MPS (Y)	EPS (X)	XY	X^2
2003/04	1000	92.61	92610	8576.61
2004/05	1505	105.49	158762.45	11128.14
2005/06	2240	129.21	289430.40	16695.22
2006/07	5050	137.08	692254	18790.93
2007/08	5275	108.31	571335.25	11731,06
n= 5	Y **=15070**	X **=572.70**	XY **=1804392.10**	X^2 **=66921.96**

$$\bar{X} = \frac{X}{N} = \frac{572.70}{5} = 114.54$$

$$\bar{Y} = \frac{Y}{N} = \frac{15070}{5} = 3014$$

b = 59.08

a =-3753.02

Correlation coefficient (r) =0.53

Coefficient of determination (r^2) =0.28

Thus the regression equation of the Y on X i.e. MPS on EPS for the bank is

Y= -3753.02 + 59.08X..... (7)

The constant term if the line 'a' was obtained as -3753.02. The regression coefficient of MPS on EPS of NABIL for the five year period given 'b' was obtained +59.08. It indicated that a unit increase in EPS of NABIL caused to increase the market price on average by Rs 59.08. Since the coefficient of determination was found to be 0.28, it indicated that 28% of the change in independent variable (EPS) is reflected and explained in the dependent variables (MPS) in case of NABIL and the rest is determined by other unexpected variables.

Table: 4.23 (HBL)

Year	MPS (Y)	EPS (X)	XY	X^2
2003/04	840	49.05	41202	2405.90
2004/05	920	47.91	44077.20	2295.37
2005/06	1100	59.24	65164	3509.38
2006/07	1740	60.66	105548.40	3679.64
2007/08	1980	62.71	124225.20	3936.31
n= 5	Y **=6580**	X **=279.60**	XY **=380215.80**	X^2 **=15826.60**

$$\bar{X} = \frac{X}{N} = \frac{279.60}{5} = 55.92$$

$$\bar{Y} = \frac{Y}{N} = \frac{6580}{5} = 1316$$

b = 64.08

a = -2267.35

Correlation coefficient (r) = 0.69

Coefficient of determination (r^2) = 0.48

Thus the regression equation of the Y on X i.e. MPS on EPS for the bank is

Y= -2267.35 + 64.08X..... (8)

The constant term if the line 'a' was obtained as -2267.35. The regression coefficient of MPS on EPS of NABIL for the five year period given 'b' was obtained +64.08. It indicated that a unit increase in EPS of HBL caused to increase the market price on average by Rs 64.08. Since the coefficient of determination was found to be 0.48, it indicated that 48% of the change in independent variable (EPS) is reflected and explained in the dependent variables (MPS) in case of HBL and the rest is determined by other unexpected variables.

Table: 4.24 (EBL)

Year	MPS (Y)	EPS (X)	XY	X^2
2003/04	680	45.58	30314.40	1987.38
2004/05	870	54.22	47171.40	2939.81
2005/06	1379	62.78	86573.62	3941.33
2006/07	2430	78.42	190560.60	6149.70
2007/08	3132	91.82	287580.24	8430.91
n= 5	Y **=8491**	X **=332.82**	XY **=642200.26**	X^2 **=23449.13**

$$\bar{X} = \frac{X}{N} = \frac{332.82}{5} = 66.56$$

$$\bar{Y} = \frac{Y}{N} = \frac{8491}{5} = 1698.20$$

b = 59.45

a = -2258.79

Correlation coefficient (r) = 0.99

Coefficient of determination (r^2) = 0.98

Thus the regression equation of the Y on X i.e. MPS on EPS for the bank is

Y= -2258.79 + 59.45X..... (9)

The constant term if the line 'a' was obtained as -2258.79. The regression coefficient of MPS on EPS of EBL for the five year period given 'b' was obtained +59.45. It indicated that a unit increase in EPS of EBL caused to increase the market price on average by Rs 59.45. Since the coefficient of determination was found to be .98, it indicated that 98% of the change in independent variable (EPS) is reflected and explained in the dependent variables (MPS) in case of EBL and the rest is determined by other unexpected variables.

Table: 4.25 (SCBNL)

Year	MPS (Y)	EPS (X)	XY	X^2
2003/04	1745	143.55	250494.75	20606.60
2004/05	2345	143.14	335663.30	20489.06
2005/06	3775	175.84	663796	30919.71
2006/07	5900	167.37	987438	28012.72
2007/08	6830	131.92	901013.60	17402.89
n= 5	Y **=20595**	X **=761.82**	XY **=3138450.65**	X^2 **=117430.98**

$$\bar{X} \text{ X} \frac{X}{N} \text{ X} \frac{761.82}{5} \text{ X} 152.36$$

$$\bar{Y} \text{ X} \frac{Y}{N} \text{ X} \frac{20595}{5} \text{ X} 4119$$

b = 0.38

a = 4061.27

Correlation coefficient (r) =0.0032

Coefficient of determination $\text{X}(r^2)$ =0.000010

Thus the regression equation of the Y on X i.e. MPS on EPS for the bank is

Y= 4061.27 + 0.38X..... (10)

The constant term if the line 'a' was obtained as 4061.27. The regression coefficient of MPS on EPS of SCBNL for the five year period given 'b' was obtained +0.38. It indicated that a unit increase in EPS of SCBNL caused to increase the market price on average by Rs 0.38. Since the coefficient of determination was found to be .000010, it indicated that 0.0010% of the change in independent variable (EPS) is reflected and explained in the dependent variables (MPS) in case of SCBNL and the rest is determined by other unexpected variables.

4.5.3 Regression lines of MPS on DPS

Table: 4.26 (NABIL)

year	MPS (Y)	DPS (X)	XY	X^2
2003/04	1000	65	65000	4225
2004/05	1505	70	105350	4900
2005/06	2240	85	190400	7225
2006/07	5050	100	505000	10000
2007/08	5275	60	316500	3600
n= 5	Y **=15070**	X **=380**	XY **=1182250**	X^2 **=29950**

$$\bar{X} = \frac{X}{N} = \frac{380}{5} = 76$$

$$\bar{Y} = \frac{Y}{N} = \frac{15070}{5} = 3014$$

b = 34.51

a = 391.24

Correlation coefficient (r) =0.28

Coefficient of determination (r^2) =0.078

Thus the regression equation of the Y on X i.e. MPS on DPS for the bank is

Y= 391.51 + 34.51X..... (11)

The constraint term if the line 'a' was obtained as 391.51. The regression coefficient of MPS on DPS of NABIL for the five year period given 'b' was obtained +34.51. It indicated that a unit increase in DPS of NABIL caused to increase the market price on average by Rs 34.51. Since the coefficient of determination was found to be 0.078, it indicated that 7.8% of the change in independent variable (DPS) is reflected and explained in the dependent variables (MPS) in case of NABIL and the rest is determined by other unexpected variables.

Table: 4.27 (HBL)

Year	MPS (Y)	DPS (X)	XY	X^2
2003/04	840	0.00	00	00
2004/05	920	11.58	10653.60	134.09
2005/06	1100	30	33000	900
2006/07	1740	15	26100	225
2007/08	1980	25	49500	625
n= 5	Y **=6580**	X **=81.58**	XY **=119253.60**	X^2 **=1884.09**

$$\bar{X} \text{ X} \frac{X}{N} \text{ X} \frac{81.56}{5} \text{ X16.32}$$

$$\bar{Y} \text{ X} \frac{Y}{N} \text{ X} \frac{6580}{5} \text{ X1316}$$

b = 21.51

a = 964.96

Correlation coefficient (r) =0.54

Coefficient of determination $\text{X}(r^2)$ =0.29

Thus the regression equation of the Y on X i.e. MPS on DPS for the bank is

Y= 964.96 + 21.51X..... (12)

The constant term if the line 'a' was obtained as 964.96. The regression coefficient of MPS on DPS of NABIL for the five year period given 'b' was obtained +21.51. It indicated that a unit increase in DPS of HBL caused to increase the market price on average by Rs 21.51. Since the coefficient of determination was found to be 0.29, it indicated that 0.29% of the change in independent variable (DPS) is reflected and explained in the dependent variables (MPS) in case of HBL and the rest is determined by other unexpected variables.

Table: 4.28 (EBL)

Year	MPS (Y)	DPS	XY	X^2
2003/04	680	20	13600	400
2004/05	870	0	00	00
2005/06	1379	25	34475	625
2006/07	2430	10	24300	100
2007/08	3132	20	62640	400
n= 5	Y **=8491**	X **=75**	XY **=135015**	X^2 **=1525**

$\bar{X}$ X$\frac{X}{N}$ X$\frac{75}{5}$ X15

$\bar{Y}$ X$\frac{Y}{N}$ X$\frac{8491}{5}$ X1698.20

b = 19.13

a = 1411.25

Correlation coefficient (r) = 0.18

Coefficient of determination X(r^2) = 0.032

Thus the regression equation of the Y on X i.e. MPS on DPS for the bank is

Y= 1411.25 + 19.13X..... (13)

The constant term if the line 'a' was obtained as 1411.25. The regression coefficient of MPS on DPS of EBL for the five year period given 'b' was obtained +19.13. It indicated that a unit increase in DPS of EBL caused to increase the market price on average by Rs 19.13. Since the coefficient of determination was found to be 0.032, it indicated that 3.2% of the change in independent variable (DPS) is reflected and explained in the dependent variables (MPS) in case of EBL and the rest is determined by other unexpected variables.

Table: 4.29 (SCBNL)

Year	MPS (Y)	DPS (X)	XY	X^2
2003/04	1745	110	191950	12100
2004/05	2345	120	281400	14400
2005/06	3775	130	490750	16900
2006/07	5900	80	472000	6400
2007/08	6830	80	546400	6400
n= 5	Y **=20595**	X **=520**	XY **=1982500**	X^2 **=56200**

$$\bar{X} = \frac{X}{N} = \frac{520}{5} = 104$$

$$\bar{Y} = \frac{Y}{N} = \frac{20595}{5} = 4119$$

b = -75.17

a = 11936.68

Correlation coefficient (r) = -0.78

Coefficient of determination (r^2) =0.61

Thus the regression equation of the Y on X i.e. MPS on DPS for the bank is

Y= 11936.68 – 75.17X..... (14)

The constant term if the line 'a' was obtained as 11936.68. The regression coefficient of MPS on DPS of SCBNL for the five year period given 'b' was obtained -75.17. It indicated that a unit increase in DPS of SCBNL caused to decrease the market price on average by Rs -75.17. Since the coefficient of determination was found to be 0.61, it indicated that 61% of the change in independent variable (DPS) is reflected and explained in the dependent variables (MPS) in case of SCBNL and the rest is determined by other unexpected variables.

4.6 Risk and Return Analysis

Risk measures the degree of volatility in the market price movement of individual securities. The higher the magnitude of fluctuations, higher will be degree of risk though it is difficult to measure risk, some statistical tools like standard deviation, coefficient of variation and beta coefficient are used to measure the risk involved in individual security. All these are calculated by using the formula described in research methodology chapter.

4.6.1 Standard Deviation

Standard deviation is a strong statistical device to measure the total risk involved in an investment, which consists of both market risk and diversifiable risk. Moreover it denotes the volatility of the expected rate of return. The calculated value of expected realized return and standard deviation of four different banks are presented in the following table.

Table: 4.30

Standard Deviation of Sampled Commercial Banks

Stock	Expected Realized Return $(\bar{R}_j)$	Standard Deviation (σ_j)	Ranking of riskiness based on Standard Deviation
NABIL	58.16%	39.84%	1
HBL	21.31%	20.87%	3
EBL	49.91%	18.22%	4
SCBNL	39.35%	21.53%	2

Based on the assumption of the standard deviation, investment in the common stocks of Nabil bank are more risky followed by Standard Chartered Bank, stock of Everest Bank could be considered as less risky than the other three banks, being the standard deviation lower than other. The common stock of Nabil Bank is associated with 39.84% of the highest risk, which indicates that the expected return can be deviated, by 39.84% in case of common stock investment than the other three sampled banks taken into study. It is shown the above calculation in the Appendix-A (I), A (II), A (III) and A (IV) respectively.

4.6.2 Coefficient of Variation

The standard deviation may not be appropriate measure of risk when the realized rates of returns are not same in all of the companies taken under consideration. Hence also the average realized rates of return are not same for the entire sample. Therefore, it is recommended to use the coefficient of variation to measure the risk involved in individual bank. The coefficient of variation measures the risk per unit of return. The coefficients of variation of the realized rates of return of the sampled banks are shown in the following table.

Table: 4.31

Coefficient of variation of Sample Commercial Banks

Stocks	Coefficient of Variation
NABIL Bank	0.3984
Himalayan Bank	0.9794
Everest Bank	0.3651
Standard Chartered Bank	0.5471

On the basis of coefficient of variation common stock of Himalayan Bank Limited seems to be most risky. The common stock of Everest Bank Limited seems to be less risky in comparison with other banks. The above calculation has been derived in the Appendix-A (I), A (II), A (III) and A (IV) respectively.

4.6.3 Beta Coefficient

Standard deviation measures the total risk of an investment and the coefficient of variation measures the risk per unit of return. But the beta coefficient measures the market sensitivity or systematic risk of an investment. As we know, systematic risk is that portion of risk which is directly associated with market phenomenon and cannot be reduced by diversification. The beta coefficient of an individual stock provides the clear picture about the tendency of movement of the stock with market. It measures the stock volatility relative to that of the average stock. An average stock is that which trends to move up or down with the general market as measured by some index. Here, capital NEPSE index is taken into consideration to measure the movements of the general market regarding the stocks of listed commercial banks. Higher beta indicates the greater reaction by individual common stock with the given movement in the market status. The following table shows the degree of riskiness of each stock of entire sample in relation to the general market.

Table: 4.32

Beta coefficient of Sampled Commercial Banks

Stocks	Beta Coefficient	Ranking of riskiness based on Beta Coefficient
Standard Chartered Bank	0.59	3
Himalayan Bank	0.90	2
Everest Bank	0.49	4
NABIL Bank	1.28	1

By analyzing the above table, we note that Nabil Bank is much-more sensitive to the market than the other three sampled banks because the coefficient of variation of these Banks is more than one. The stocks of Himalayan Bank, Everest Bank and Standard Chartered Bank have beta coefficient less than one and following these Nabil Bank with 1.28 and Himalayan Bank with 0.90 as their coefficient of beta. For example in the case of Nabil Bank , the calculated beta coefficient imply that one percent variation on the market rate of return leads to 1.28% variations in their realized rate of return. Hence highly sensitive stocks make quick response to the market change. The above calculation has been derived from Appendix- C (V)

4.7 Price Analysis

In this section the pricing of the shares of the sample companies were analyzed and interpreted. The result derived from the calculation by using security market line equation was presented in the below table, studying the period of 03/04 to 07/08.

Table: 4.33

Valuation of Stocks of Sampled Commercial Banks

Stocks	Required Rate of Return	Expected Rate of Return	Status of the Bank
Standard Chartered Bank	24.26%	39.35%	under valued
Himalayan Bank	34.70%	21.31%	over valued
Everest Bank	19.55%	49.91%	under valued
NABIL Bank	43.11%	58.16%	under valued

From the table No 4.33 it was found that the SCBNL, EBL and NABIL banks taken as samples were found under valued and HBL bank was found over valued. This shows that the market of the sampled banks was very much inefficient so there may be arbitrage opportunities. The detailed calculation of the values of shares is presented in Appendix – D (I)

4.8 Major Finding of the Study

The key financial performance indicators such as BVPS, EPS, and MPS of four sampled commercial banks for the past five year period were presented in respective table and were presented in respective trend diagrams.

Similarly, the five year market prices of the four sampled commercial banks were also individually compared with each other by presenting in a table and were shown in respective five year trend diagrams. On this course, the market price of SCBNL was found the highest of all in times giving an excessively increasing trend. The second highest position of market prices remained with the prices of NABIL, which also showed an upward trend. Likewise the price of EBL showed an almost horizontal and slightly increasing trend. It found that the market prices of all the commercial banks are at an increasing trend.

The correlation coefficients between EPS and MPS of NABIL, HBL, EBL and SCBNL were calculated as + 0.53, +0.96, +0.99, +0.0032 respectively.

The correlation coefficients between DPS and MPS of NABIL, HBL, EBL and SCBNL were obtained as +0.28, +0.54 +.18, -0.78 respectively.

Similarly, the correlation coefficients between BVPS and MPS of NABIL, HBL, EBL and SCBNL were obtained as +.68, +0.56, +0.97 and +0.33 respectively with reference to given five year data.

The regression equation line of the MPS dependent variable on BVPS independent variable for NABIL on the basis of past five year dada was obtained

Y=-8040.05+30.68X

Similarly, the regression equation line of the MPS dependent variable on BVPS independent variable for HBL on the basis of past five year dada was obtained

Y=-4018.85+21.69X

Similarly, the regression equation line of the MPS dependent variable on BVPS independent variable for EBL on the basis of past five year dada was obtained

Y=-2383.73+16.68

Similarly, the regression equation line of the MPS dependent variable on BVPS independent variable for SCBNL on the basis of past five year dada was obtained

Y=-6225.94+15.06X

Similarly, the regression equation line of the MPS dependent variable on EPS independent variable for NABIL on the basis of past five year dada was obtained

Y=-3753.02+59.08X

Similarly, the regression equation line of the MPS dependent variable on EPS independent variable for HBL on the basis of past five year dada was obtained

Y=-2267.35+64.08X

Similarly, the regression equation line of the MPS dependent variable on EPS independent variable for EBL on the basis of past five year dada was obtained

Y=-2258.79+59.45X

Similarly, the regression equation line of the MPS dependent variable on EPS independent variable for SCBNL on the basis of past five year dada was obtained

Y=4061.27+0.38X

Likewise, the regression equation line of the MPS dependent variable on DPS independent variable for NABIL on the basis of past five year dada was obtained

Y=391.51+34.51X

Similarly, the regression equation line of the MPS dependent variable on DPS independent variable for HBL on the basis of past five year dada was obtained

Y=964.96+21.51X

Similarly, the regression equation line of the MPS dependent variable on DPS independent variable for EBL on the basis of past five year dada was obtained

Y=1411.25+19.13X

Similarly, the regression equation line of the MPS dependent variable on DPS independent variable for SCBNL on the basis of past five year dada was obtained

Y=11936.68-75.17X.

The coefficient of determination was found to be 0.46, it indicated that 46% of the change in independent variable (BVPS) is reflected and explained in the dependent variable (MPS) in case of NABIL and the rest is determined by other unexplained variables.

The coefficient of determination was found to be 0.31, it indicated that 31% of the change in independent variable (BVPS) is reflected and explained in the dependent variable (MPS) in case of HBL and the rest is determined by other unexplained variables.

The coefficient of determination was found to be 0.94, it indicated that 94% of the change in independent variable (BVPS) is reflected and explained in the dependent variable (MPS) in case of EBL and the rest is determined by other unexplained variables.

The coefficient of determination was found to be 0.11, it indicated that 11% of the change in independent variable (BVPS) is reflected and explained in the dependent variable (MPS) in case of SCBNL and the rest is determined by other unexplained variables.

The coefficient of determination was found to be 0.28, it indicated that 28% of the change in independent variable (EPS) is reflected and explained in the dependent variable (MPS) in case of NABIL and the rest is determined by other unexplained variables.

The coefficient of determination was found to be 0.92, it indicated that 92% of the change in independent variable (EPS) is reflected and explained in the dependent variable (MPS) in case of HBL and the rest is determined by other unexplained variables.

The coefficient of determination was found to be 0.98, it indicated that 98% of the change in independent variable (EPS) is reflected and explained in the dependent variable (MPS) in case of EBL and the rest is determined by other unexplained variables.

The coefficient of determination was found to be 0.00001, it indicated that 0.001% of the change in independent variable (EPS) is reflected and explained in the dependent variable (MPS) in case of SCBNL and the rest is determined by other unexplained variables.

The coefficient of determination was found to be 0.08, it indicated that 8% of the change in independent variable (DPS) is reflected and explained in the dependent nt variable (MPS) in case of NABIL and the rest is determined by other unexplained variables.

The coefficient of determination was found to be 0.29, it indicated that 29% of the change in independent variable (DPS) is reflected and explained in the dependent variable (MPS) in case of HBL and the rest is determined by other unexplained variables

The coefficient of determination was found to be 0.03, it indicated that 3% of the change in independent variable (DPS) is reflected and explained in the dependent variable (MPS) in case of EBL and the rest is determined by other unexplained variables

The coefficient of determination was found to be 0.61, it indicated that 61% of the change in independent variable (DPS) is reflected and explained in the dependent variable (MPS) in case of SCBNL and the rest is determined by other unexplained variables

The average five-year market return for all the stocks in the market using the overall five year closing market indices was found to be just 38.07%. The overall market return was low due to lower trend of the prices of common stocks of most of the companies in the market except for few financial institutions, a handful of manufacturing, insurance and hydropower companies. The average risk-free rate of the five year period given by the rate of treasury bills issued by Nepal Rastra Bank was found to be average 4.39%. Similarly, the beta coefficients from the given figures of five year period were 1.28, 0.90, 0.4.9 and 0.59 for the banks NABIL, HBL, EBL and SCBNL respectively. This stated that the market sensitivity of stock prices of NABIL was the highest of all banks which means more aggressive to market changes as revealed by the highest beta coefficient. Likewise, the market sensitivity of the stocks of HBL was also higher than the other two banks. The sensitivity of stocks of SCBNL was also higher. However, the stocks of EBL were defensive one as compared to the other three Banks. The realized average rates of returns over the five year period of NABIL, HBL, EBL and SCBNL were obtained as 58.12%, 21.31% 49.91% and 39.35% respectively. In the same way, the equilibrium rates of returns given by the CAPM equation of the banks NABIL, HBL, EBL and SCBNL were calculated as just 43.11%, 34.70%, 19.55%, and 24.26% respectively. Since the required rates of returns for NABIL, EBL, and SCBNL banks were lower than the calculated average annualized rates of returns and HBL bank was higher required rates of returns, it can be clearly stated that the prices of the stocks of three commercial banks were under-valued and HBL was over valued. Therefore, the stock of NABIL, EBL and SCBNL are profitable for holding long position in the sense that they have a tendency to increase in the future rather the HBL.

Through the coefficient of variation analysis, it is found tat there is highest percent of unit risk for the stocks of HBL, Which is 0.9749. And others 0.5471, 0.3651, 0.3984 NABIL, EBL, and SCBNL respectively. Regarding the total risk, Himalayan Bank Limited consists of highest risk 97.49% of the total risk which is risky among the sample.

CHAPTER– V
SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter deals with the findings and conclusions derived from the study of share price movement of four sampled commercial banks. The chapter consists of three sections: the first section provides the summary of the study the second section draws the conclusions of the study and finally, the third section propose recommendations to deal the problems observed on the basis of the findings.

5.1 Summary

The study was conducted with the main objective to analyze the trend of share price movement and relationship between MPS, EPS DPS and BVPS of four commercial banks namely Standard Chartered Bank, Everest Bank Limited, Nabil Bank and Himalayan Bank. It is mainly focused to developed the model accordingly and its empirical test in previous chapter. The model consists of trend analysis along with correlation regression; standard deviations, coefficient of variation, beta coefficient and under and overpricing of shares were adopted as test methodologies.

The trend analysis of the sampled banks for the five year, that the prices of shares do not remain same. Due to various factors like internal and external the prices of the shares are fluctuate sometimes valued at higher and sometimes lower. Hence, it can be concluded that the market of the four sampled banks is unpredictable.

The required rate of return of the three banks is less than expected rate of return except HBL Hence; the share prices of all the banks except Himalayan Bank are undervalued.

Beside these test, other statistical tools such as standard deviation, coefficient of variations and beta coefficient are also calculated to examine the risk involved in the common stock of commercial banks. And to measure the relationship of MPS with EPS, DPS and BVPS coefficient of correlation is taken. Common stocks seem to be riskier than that of average stock; lots of investors are attracted in trading these stocks. This is due to the good track record of financial position, market penetration and continuous declarations of dividends, which encourage the potential investors to buy the shares of commercial banks.

5.2 Conclusion

The study of the five years price of the four sampled commercial banks suggested that the price of the commercial banks were at an increasing trend over the period, SCBNL's stock had the highest position in the market above all banks, that is they were trading at a higher market price. Similarly, NABIL's stocks price also occupied the second highest position in the market and the other bank's prices were also higher and they had the tendency of growing in the future. In sum, we can conclude that the demand of shares of commercial banks in the secondary market remained higher all the time above other sectors shares.

DPS, EPS and BVPS have direct role in forming the market prices (MPS). In other words, MPS is a function of DPS, EPS and BVPS. However, the positive correlation between profit and profitability of commercial banks also indicate that, these factors too also have a direct impact on determining prices of commercial banks in the stock market.

The study of the quantitative factors affecting share price suggests that there are also major determinant roles of other seen and unseen forces in the market that determine the shape of the stock prices, that means the quantitative factors studied here ate a part not all the factors that helps to determine the stock prices of commercial banks.

For all commercial banks, that realized rates of returns were too higher than the required or equilibrium rates of returns calculated using CAPM equation. This indicates that the prices of the stocks of commercial banks are nit correctly priced; they are under priced and hence rewarding for investment to the individual investors.

5.3 Recommendation

Based upon the above-mentioned issues, some recommendations have made. These recommendations are presented below:

- Correlation coefficient between MPS and DPS of NABIL, EBL and HBL has found positive but SCBNL has been found negative correlation during the study period. Therefore dividend may be the cause of declining in MPS in future. So SCBNL has to increase in DPS to increase in MPS.

- Most of the stocks are undervalued in the stock market. So the investors are recommended to buy these undervalued stocks by selling other overvalued stocks.

- In every financial institution external factors explain the significant portion of variation in MPS. Therefore, financial institutions should also focus on these factors so that it will work favorably to increase market price of share.

- Investors should be very careful and conscious before investing in shares of commercial banks in the secondary market. Wide range of information must be extracted, experts and brokers must be consulted and various techniques of analyzing the information should be applied before investing in the shares of the commercial banks

- Investor must analyze the risk and returns in the investment. The investors should not run after the whim of the market changes.

- Companies should play a decisive role in providing the genuine information to the public on a non-discrimination basis. The data and the information regarding the performance management policy and practices, etc should be provided to the public without making any kinds of manipulations. Then only the correct picture and the information can be generated.

- There should be clear cut policies, rules and regulations enough to cover up all the activities of the companies, regulatory bodies and market players. Stable government and all around peace and prosperity no doubt will assist in determining the prices of the banks stable in the market.

- The regulatory bodies should be watchful and alert all the time to cover up the issues of cartels, market makers, institutional investors and vested interests related with the shares and share prices. Public investors should be prioritized to invest.

- The price fluctuation is very high in the stock market. The regulatory body should impose effective provision to the exchange members to control such erratic price fluctuation.

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Appendix – A

Calculation of mean, standard deviation and variance of return of the four commercial banks

Appendix – A (I) NABIL

Year	MPS	DPS	X	Y	Z
2002/03	735	50	-	-	-
2003/04	1000	65	0.4286	-0.1526	0.0233
2004/05	1505	70	0.5700	-0.0112	0.000125
2005/06	2240	85	0.5549	-0.0263	0.00069
2006/07	5050	100	1.2900	0.7088	0.5024
2007/08	5275	60	0.0644	-0.5168	0.2671
n = 5			X X2.9079		Z X0.793615

Where,

X = R_j = yearly holding period return

Y = R_j Z $\bar{R}_j$

Z = $(R_j Z \bar{R}_j)^2$

$$R_j \text{ X} \frac{DPS \Gamma (MPS_{t\Gamma 1} \text{ Z } MPS)}{MPS}$$

$$R_{03/04} \text{ X} \frac{50 \Gamma (1000 \text{ Z } 735)}{735} \text{X} 0.4286 \text{ X} 42.86\%$$

$$R_{04/05} \text{ X} \frac{65 \Gamma (1505 \text{ Z } 1000)}{1000} \text{X} 0.5700 \text{ X} 57\%$$

$$R_{05/06} \text{ X} \frac{70 \Gamma (2240 \text{ Z } 1505)}{1505} \text{X} 0.5349 \text{ X} 59.43\%$$

$$R_{06/07} \text{ X} \frac{85 \Gamma (5050 \text{ Z } 2240)}{2240} \text{X} 1.29 \text{ X} 129\%$$

$$R_{07/08} \text{ X} \frac{100 \Gamma (5275 \text{ Z } 5050)}{5050} \text{X} 0.0644 \text{ X} 6.44\%$$

Expected return $(\bar{R}_j) \text{X} \frac{R_j}{n} \text{ X} \frac{2.9079}{5} \text{X} 0.5816$

Standard deviation $(\pm) \text{X} \sqrt{\frac{(Rj \text{ Z } \bar{R}_j)^2}{n}} \text{ X} \sqrt{\frac{0.793615}{5}} \text{ X} 0.3984$

Coefficient of variation $\frac{\pm_j}{\bar{R}_j} = \frac{0.3984}{0.5816} = 0.6850$

Appendix – A (II) HBL

Year	MPS	DPS	X	Y	Z
2002/03	836	1.32	-	-	-
2003/04	840	00	0.0064	-0.2067	0.0427
2004/05	920	11.58	0.0952	-0.1179	0.0139
2005/06	1100	30	0.2082	-0.0049	0.00024
2006/07	1740	15	0.6091	0.3960	0.1568
2007/08	1980	25	0.1466	-0.665	0.00442
n = 5			X 1.0655		Z 0.217844

Where,

X = R_j

Y = $R_j - \bar{R}_j$

Z = $(R_j - \bar{R}_j)^2$

$R_{03/04} = \frac{1.32 - (840 - 836)}{836} = 0.0064 = 0.64\%$

$R_{04/05} = \frac{00 - (920 - 840)}{840} = 0.0952 = 9.52\%$

$R_{05/06} = \frac{11.58 - (1100 - 920)}{920} = 0.2082 = 20.82\%$

$R_{06/07} = \frac{30 - (1740 - 1100)}{1100} = 0.6091 = 60.91\%$

$R_{07/08} = \frac{15 - (1980 - 1740)}{1740} = 0.1466 = 14.66\%$

Expected return $\bar{R}_j = \frac{R_j}{n} = \frac{1.0655}{5} = 0.2131$

Standard deviation $\pm = \sqrt{\frac{(Rj - \bar{R}_j)^2}{n}} = \sqrt{\frac{0.2178}{5}} = 0.2087$

Coefficient of variation $\frac{\pm_j}{\bar{R}_j} = \frac{0.2087}{0.2131} = 0.9794$

Appendix – A (III) EBL

Year	MPS	DPS	X	Y	Z
2002/03	445	20	-	-	-
2003/04	680	20	0.5381	0.0290	0.00084
2004/05	870	0	0.3088	-0.1903	0.0362
2005/06	1379	25	0.5851	0.0860	0.0074
2006/07	2430	10	0.7803	0.2812	0.6791
2007/08	3132	20	0.2930	0.2061	0.0425
n = 5			X X2.4953		Z X0.16604

Where,

X = R_j

Y = R_j Z$\bar{R}_j$

Z = $\sum R_j$ Z$\bar{R}_j$ Â

$R_{03/04}$ X$\frac{20\ \Gamma\ f680\ Z445A}{445}$X0.5281 X52.81%

$R_{04/05}$ X$\frac{20\ \Gamma\ f870\ Z680A}{680}$X0.3088 X30.88%

$R_{05/06}$ X$\frac{00\ \Gamma\ f1379870A}{870}$X0.5851 X58.51%

$R_{06/07}$ X$\frac{25\ \Gamma\ f2430\ Z1379A}{1379}$X0.7803 X78.03%

$R_{07/08}$ X$\frac{10\ \Gamma\ f3132\ Z2430A}{2430}$X0.2930 X29.30%

Expected return $\sum\bar{R}_j$ AX$\frac{R_j}{n}$ X$\frac{2.4953}{5}$ X0.4991

Standard deviation $\sum\pm$ AX$\sqrt{\frac{\sum Rj\ Z\bar{R}_j Â}{n}}$ X$\sqrt{\frac{0.1660}{5}}$ X0.1822

Coefficient of variation $c.v$AX$\frac{\pm_j}{\bar{R}_j}$ X$\frac{0.1822}{0.4991}$ X0.3651

Appendix – A (IV) SCBNL

Year	MPS	DPS	X	Y	Z
2002/03	1640	110	-	-	-

2003/04	1745	110	0.1311	-0.2624	0.0689
2004/05	2345	120	0.4069	0.0134	0.0002
2005/06	3775	130	0.6610	0.2675	0.0716
2006/07	5900	80	0.5974	0.2039	0.0416
2007/08	6830	80	0.1712	-0.2223	0.0494
n = 5			X X1.9676		Z X0.2317

Where,

X = R_j

Y = R_j Z $\overline{R}_j$

Z = $\left(R_j Z \overline{R}_j\right)^2$

$R_{03/04}$ X $\frac{110 \Gamma (1745 Z 1640)}{1640}$ X0.1311 X13.11%

$R_{04/05}$ X $\frac{110 \Gamma (2345 Z 1745)}{1745}$ X0.4069 X40.69%

$R_{05/06}$ X $\frac{120 \Gamma (3775 Z 2345)}{2345}$ X0.6610 X66.10%

$R_{06/07}$ X $\frac{130 \Gamma (5900 Z 3775)}{3775}$ X0.5974 X59.74%

$R_{07/08}$ X $\frac{80 \Gamma (6830 Z 5900)}{5900}$ X0.1712 X17.12%

Expected return $\left(\overline{R}_j\right)$ X $\frac{R_j}{n}$ X $\frac{1.9676}{5}$ X0.3935

Standard deviation ($\pm$) X $\sqrt{\frac{\left(Rj Z \overline{R}_j\right)^2}{n}}$ X $\sqrt{\frac{0.2317}{5}}$ X0.2153

Coefficient of variation (c.v) X $\frac{\sigma_j}{\overline{R}_j}$ X $\frac{0.2153}{0.3935}$ X0.5471

Appendix – B

Calculation of average rate of return, variance and standard deviation of market returns

Year	NEPSE Index	(Rm)	$\left(R_m Z \overline{R_m}\right)$	$\left(R_m Z \overline{R_m}\right)^2$

2002/03	204.36	-z		
2003/04	222.04	0.0865	-0.2942	0.0866
2004/05	286.87	0.2920	-0.0887	0.0079
2005/06	386.83	0.3485	-0.0322	0.0010
2006/07	683.95	0.7681	0.3874	0.1501
2007/08	963.36	0.4085	0.0278	0.0008
Total		**1.9036**		**0.2464**

Where,

$\int Rm$ X Annual market return

$\overline{Rm}$ X Average market return

$\pm m^2$ X Variance of return

$\pm m$ X Standard deviation of market

$$Rm \text{ X} \frac{ending \quad index \text{ Z} begning \quad index}{begning \quad index}$$

$$Rm_{04} \text{ X} \frac{222.04 \text{ Z} 204.36}{204.36} \text{ X} 0.0866 \text{ X} 8.65\%$$

$$Rm_{05} \text{ X} \frac{286.87 \text{ Z} 222.04}{222.04} \text{ X} 0.2920 \text{ X} 29.20\%$$

$$Rm_{06} \text{ X} \frac{386.83 \text{ Z} 286.87}{286.87} \text{ X} 0.3485 \text{ X} 34.85\%$$

$$Rm_{07} \text{ X} \frac{683.95 \text{ Z} 386.83}{386.83} \text{ X} 0.7681 \text{ X} 76.81\%$$

$$Rm_{08} \text{ X} \frac{963.36 \text{ Z} 683.95}{683.95} \text{ X} 0.4085 \text{ X} 40.85\%$$

$$\overline{Rm} \text{ X} \frac{Rm}{n} \text{ X} \frac{1.9036}{5} \text{ X} 0.3807 \text{ X} 38.07\ \%$$

$$\pm m^2 \text{ X} \frac{\int Rm \text{ Z} \overline{Rm}^2}{n} \text{ X} \frac{0.2464}{5} \text{ X} 0.0493$$

$$\pm m \text{ X} \sqrt{\frac{\int Rm \text{ Z} \overline{Rm}^2}{n}} \text{ X} \sqrt{\frac{0.2464}{5}} \text{ X} 0.2220 \text{ X} 22.20\%$$

Appendix – C

Calculation of covariance between market and sampled bank

Appendix – C (I)

Covariance between market and Nabil bank

Year	$(R_m - \overline{R_m})$	$(R_j - \overline{R}_j)$	$(R_m - \overline{R_m})(R_j - \overline{R}_j)$
2003/04	-0.2942	-0.1526	0.0449
2004/05	-0.0887	-0.0112	0.0010
2005/06	-0.0322	-0.0263	0.0085
2006/07	0.3874	0.7088	0.2746
2007/08	0.0278	-0.5168	-0.0144
Total			**0.3144**

$$Cov(Rm \& R_j) = \frac{(Rm - \overline{Rm})(R_j - \overline{R}_j)}{n} = \frac{0.3144}{5} = 0.0629$$

Appendix – C (II)

Covariance between market and HBL

Year	$(R_m - \overline{R_m})$	$(R_j - \overline{R}_j)$	$(R_m - \overline{R_m})(R_j - \overline{R}_j)$
2003/04	-0.2942	-0.2067	0.0608
2004/05	-0.0887	-0.1179	0.0105
2005/06	-0.0322	-0.0049	0.0002
2006/07	0.3874	0.396	0.1534
2007/08	0.0278	-0.0665	-0.0018
Total			**0.2231**

$$Cov(Rm \& R_j) = \frac{(Rm - \overline{Rm})(R_j - \overline{R}_j)}{n} = \frac{0.2231}{5} = 0.0446$$

Appendix – C (III)

Covariance between market and EBL

Year	$(R_m - \overline{R_m})$	$(R_j - \overline{R}_j)$	$(R_m - \overline{R_m})(R_j - \overline{R}_j)$
2003/04	-0.2942	0.0290	-0.0085
2004/05	-0.0887	-0.1903	0.0169
2005/06	-0.0322	0.0860	-0.0028
2006/07	0.3874	0.2812	0.1089
2007/08	0.0278	0.2061	0.0057
Total			**0.1202**

$$Cov(Rm \& R_j) = \frac{(Rm - \overline{Rm})(R_j - \overline{R}_j)}{n} = \frac{01202}{5} = 0.0.0240$$

Appendix – C (IV)

Covariance between market and SCBNL

Year	$(R_m - \overline{R_m})$	$(R_j - \overline{R}_j)$	$(R_m - \overline{R_m})(R_j - \overline{R}_j)$
2003/04	-0.2942	-0.2624	0.0772
2004/05	-0.0887	0.0134	-0.0012
2005/06	-0.0322	0.2675	-0.0086
2006/07	0.3874	0.2039	0.0790
2007/08	0.0278	-0.2223	-0.0004
Total			**0.1460**

$$Cov(Rm \& R_j) = \frac{(Rm - \overline{Rm})(R_j - \overline{R}_j)}{n} = \frac{0.1460}{5} = 0.0292$$

Appendix – C (V)

Calculation of beta coefficient (β) of selected bank

$$_{NABIL}\ X\frac{Cov\left[Rm\ \&\ R_j\right]}{\pm m^2}X\frac{0.0629}{0.0493}X1.28$$

$$_{HBL}\ X\frac{Cov\left[Rm\ \&\ R_j\right]}{\pm m^2}X\frac{0.0446}{0.0493}X0.90$$

$$_{EBL}\ X\frac{Cov\left[Rm\ \&\ R_j\right]}{\pm m^2}X\frac{0.0240}{0.0493}X0.49$$

$$_{SCBNL}\ X\frac{Cov\left[Rm\ \&\ R_j\right]}{\pm m^2}X\frac{0.0240}{0.0493}X0.59$$

Appendix – D

Computation of average treasury bills for risk free rate (Rf)

Fiscal year	risk free rate(Rf)
2003/04	3.81%
2004/05	4.79%
2005/06	4.04%
2006/07	4.00%
2007/08	5.32%
Total	21.96%
Average	4.39%

Sources: www.nrb.org.com

Appendix – D (I)

Calculation of required rate of return $E[R_j]$ of selected Bank

$$E[R_j]=Rf+\beta_j\left(\overline{Rm}-Rf\right)$$

$E(R_{NABIL}) = 4.39 + (38.07\% - 4.39\%) \times 1.28 = 43.11\%$

$E(R_{HBL}) = 4.39 + (38.07\% - 4.39\%) \times 0.90 = 34.70\%$

$E(R_{EBL}) = 4.39 + (38.07\% - 4.39\%) \times 0.49 = 19.55\%$

$E(R_{SCBNL}) = 4.39 + (38.07\% - 4.39\%) \times 0.59 = 24.26\%$

Appendix – E

Appendix – E (I)

No of share listed in NEPSE

year	2003/04	2004/05	2005/06	2006/07	2007/08
NABIL	4916544	4916544	4916544	4916544	6892160
HBL	5362500	6435000	7722000	8108100	10135125
EBL	3150000	3150000	3780000	3780000	4914000
SCBNL	3746404	3746404	3746404	4132548	6207840

Sources: www.sebonp.com

Appendix E (II)

Yearly stock closing price

Fiscal year	NABIL	HBL	EBL	SCBNL
2003/04	1000	840	680	1745
2004/05	1505	920	870	2345
2005/06	2240	1100	1379	3775
2006/07	5050	1740	2430	5900
2007/08	5275	1980	3132	6830

Sources: www.nepalstockexchange.com